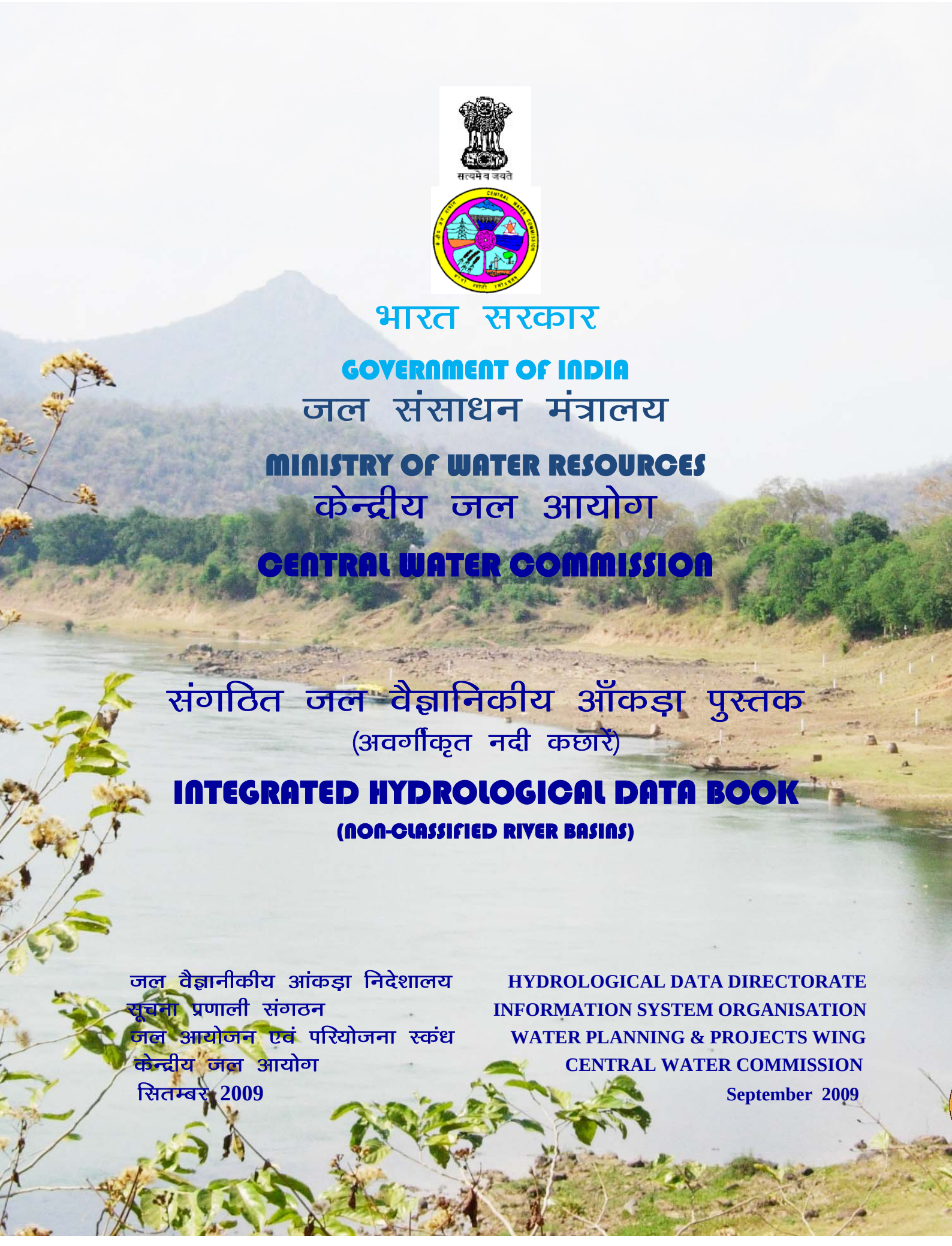

भारत सरकार

GOVERNMENT OF INDIA

जल संसाधन मंत्रालय

MINISTRY OF WATER RESOURCES

केन्द्रीय जल आयोग

CENTRAL WATER COMMISSION

संगठित जल वैज्ञानिकीय आँकड़ा पुस्तक

(अवर्गीकृत नदी कछारें)

INTEGRATED HYDROLOGICAL DATA BOOK

(NON-CLASSIFIED RIVER BASINS)

जल वैज्ञानीकीय आंकड़ा निदेशालय
सूचना प्रणाली संगठन
जल आयोजन एवं परियोजना स्कंध
केन्द्रीय जल आयोग

सितम्बर 2009

HYDROLOGICAL DATA DIRECTORATE
INFORMATION SYSTEM ORGANISATION
WATER PLANNING & PROJECTS WING
CENTRAL WATER COMMISSION

September 2009

सरकारी प्रयोग के लिए
For Official Use

संगठित जल वैज्ञानिकीय आँकड़ा पुस्तक

(अवर्गीकृत नदी कछारें)

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INFORMATION SYSTEMS ORGANISATION
WATER PLANNING & PROJECTS WING
CENTRAL WATER COMMISSION
NEW DELHI
September 2009

Foreword

Water Resources planning requires time series data on hydrological aspects. The hydrological observation divisions of CWC collect and process the basic hydrological data on gauge, discharge, silt, sedimentation and water quality on a regular basis for onward transmission to the CWC regional field offices, who document it in the form of Water Year Book, Sediment Year Book and Water Quality Year Books. Integrated Hydrological Data Book is a compendium of important hydrological information of major basins consolidated at the national level.

The present issue of the data book provides updated basin/site-wise data covering all non-classified basins covering aspects such as location, drainage area, population, temperature, average runoff, seasonal water flow, historical water levels, average sediment load, water quality parameters and land use statistics. The data book has been printed and uploaded on the CWC website http://www.CWC.gov.in.

It is expected that the information would be of use to planners, researchers, policy makers and the public at large.

30/9/09

(A K Bajaj)
Chairman
Central Water Commission

New Delhi
September 2009

Preface

The designing and execution of water resources projects require time series data on hydrological aspects. The basic hydrological data on gauge, discharge, silt, sedimentation and water quality are regularly collected at hydrological observation stations of CWC and processed. Thereafter the authenticated data is transmitted to the CWC regional field offices who document it in the form of Water Year Book, Sediment Year Book and Water Quality Year Book. At macro level a centralized computerized databank of important hydrological data of twelve non-classified basins is being maintained by CWC. This publication is intended to provide consolidated information on important hydrological water quality parameters.

The publication presents salient features of all non-classified basins relating to location, drainage area, population, soil characteristics, type of industries, principal minerals, rainfall, temperature, type of climate, average annual run off, seasonal water flow, historical water levels, live storage capacity, annual flow of water into river basin, dependable flow of water in different river basins, ten daily & monthly sediment load for different river basins, critical absolute values of water quality parameter, land use statistics etc. in four Sections. This compilation contains up-to-date data on above aspects.

The collection, compilation and collation of the data and finalisation of the publication were undertaken by the Hydrological Data Directorate of Information System Organisation in WP&P Wing of Central Water Commission. Shri S.K. Das, Director, Shri R.K. Gupta, Dy. Director, Shri O.P. Saini, Assistant Director assisted by staff members of the Hydrological Data Directorate have done excellent job under able guidance of Shri D.P. Mondal, Adviser (ISO) in preparation of this publication and giving it a presentable shape. Thanks are also due to Field Organisations for their cooperation in supplying the data.

While every care has been taken to include updated information and ensure accuracy of data, the possibility of errors and omissions in such a voluminous publication cannot altogether be ruled out.

Suggestion for improvement of the contents and presentation of the publication will be highly appreciated.

Indra Raj

(INDRA RAJ) 30/9/09
Member (WP&P)
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New Delhi
September 2009

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Abbreviations

-	:	Anion
+	:	Cation
^{0}C	:	Degree Centigrade
BCM	:	Billion Cubic Meter
BOD	:	Bio-Chemical Oxygen Demand
cumec	:	Cubic Meter per Second
CWC	:	Central Water Commission
DO	:	Dissolved Oxygen
G	:	Gauge Sites
GD	:	Gauge & Discharge sites
GDQ	:	Gauge, Discharge and Water Quality Sites
GDS	:	Gauge, Discharge & Sediment sites
GDSQ	:	Gauge, Discharge, Sediment and Water Quality Sites
m	:	Meter
m.e./litre	:	Milli equivalent per Litre
max	:	Maximum
MCM	:	Million Cubic Meter
mg/l	:	Milligram per Litre
mhos/cm	:	Micro mhos per Centimeter
min	:	Minimum
mm	:	Millimeters
MPN	:	Most Probable Number
N.A.	:	Not Applicable
NF	:	No flow
pH	:	Negative logarithm of hydrogen ion concentration
ppm	:	Part per million
Q	:	Water Discharge per Second
RD	:	River Dry
RSC	:	Residual Sodium Carbonate
SAR	:	Sodium Absorption Ratio
SNR	:	Sample Not received
Sod % age	:	Sodium percentage
Sq Km	:	Square Kilometers
TDS	:	Total Dissolved Solids
W YEAR	:	Water Year
WQ	:	Water Quality

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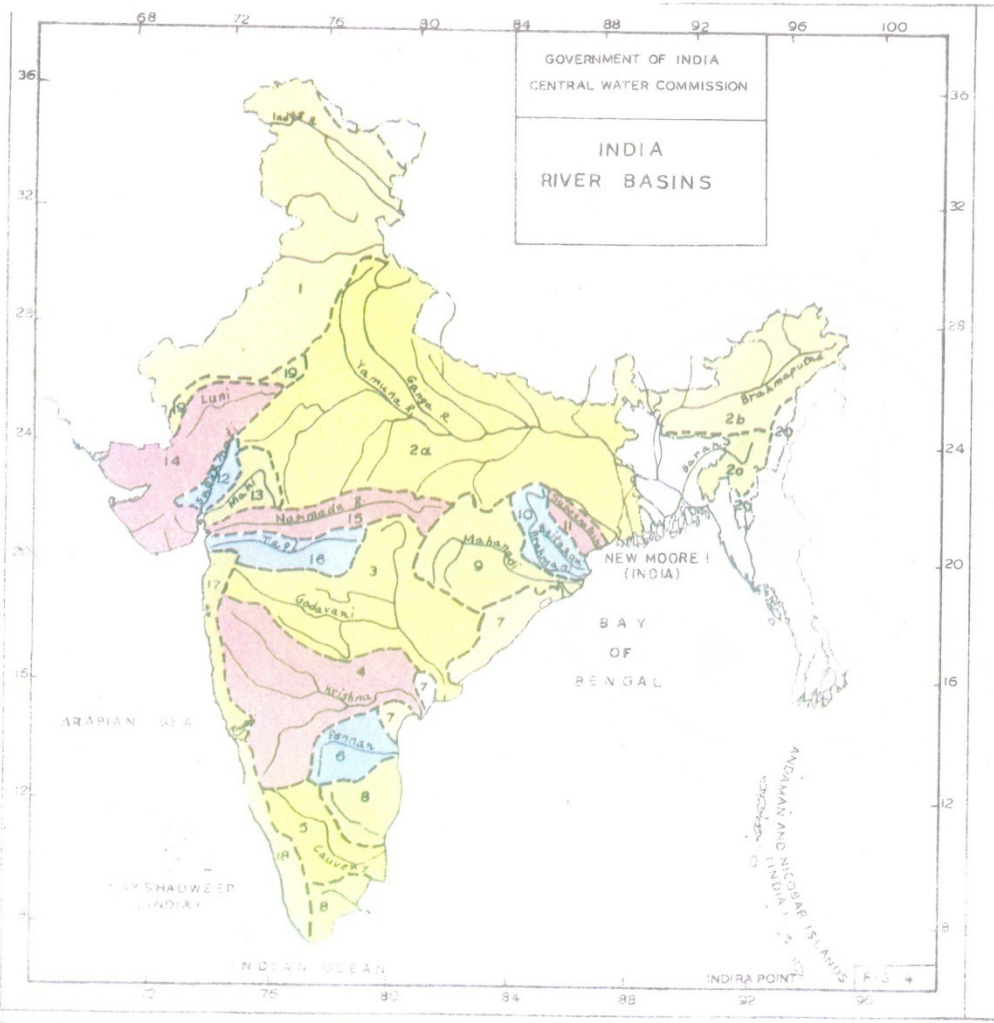

S.NO	NAME OF BASIN
1.	INDUS
2.	(a) GANGA (UP TO BORDER)
	(b) BRAHMAPUTRA (UP TO BORDER)
	(c) BARAK ETC. (UP TO BORDER)
3	GODAVARI
4	KRISHNA
5.	CAUVERY
6	PENNAR
7	EAST FLOWING RIVERS BETWEEN KRISHNA & PENNAR AND BETWEEN MAHANADI & GODAVARI
8.	EAST FLOWING RIVERS BETWEEN PENNAR AND KANYAKUMARI
9.	MAHANADI
10.	BRAHMANI & BAITARANI
11.	SUBERNAREKHA
12.	SABARMATI
13	MAHI
14	WEST FLOWING RIVERS OF KUTCH & KATHIAWAR INCLUDING LUNI
15	NARMADA
16	TAPI
17	WEST FLOWING RIVERS FROM TAPI TO TADRI
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19	AREA OF INLAND DRAINAGE IN RAJASTHAN DESERT
20	MINOR RIVER BASINS DRAINING TO BANGLADESH & BURMA

Chapter 1

Introduction

1.0 The Annual precipitation including snowfall is the main source of water in India and is estimated to be of the order of 4000 cu km. The total water resource potential of the country, which occurs as natural run off in the rivers is estimated at 1869 cu km considering both surface and groundwater into account. Due to various constraints of topography, uneven distribution of resource over space and time, it has been estimated that only about 1123 cu km be put to beneficial use – out of which only 690 cu km is surface water. However, 370 cu km of estimated utilizable surface water comes from the non-classified river basins.

1.1 As per the distribution of water resources potential in the country, the national per capita annual availability of water is 1731 cu m (estimated as on 1st March 2004). The average availability in Brahmaputra and Barak basin is as high as 14057 cu m while it is as low as 308 cu m in Sabarmati basin in 2000. Brahmaputra and Barak basin with 7.6 % of geographical area and 5.2 % of population of all the basins in the country has 31 % of the annual water resources. Per capita annual availability for rest of the country excluding Brahmaputra and Barak basin works out to about 1345 cu m. An availability of less than 1000 cu m per capita is considered by international agencies as scarcity condition. Cauvery, Sabarmati, East flowing rivers and west flowing rivers are some of the basins which fall into this category.

1.2 Background

1.2.1 Central Water Commission (CWC), an apex organization in the country in the field of Water Resources came into existence as "Central Waterways, Irrigation and Navigation Commission" in 1945. It was merged with the "Central Electricity Commission (CEC)" in 1951 and separated from CEC in 1974. At present Central Water Commission functions as an "Attached Office" of the Ministry of Water Resources.

1.2.2 Information System Organisation (ISO) of Water Planning & Projects Wing (WP&P) in CWC is a statistical unit of CWC entrusted in compiling data collected by CWC field offices and bringing out publications for backing up data for planning and policy formulation and researchers relating to water resources. Among these publications the present one is on Hydrological data entitled "Integrated Hydrological Data Book". The first issue of this publication was brought out in 2002. The current one is the fourth in the series.

1.2.3 River management is one of the key issues for political and economical affairs of the country. For designing and execution of water resource projects in the country, planners and policy makers require a comprehensive and reliable time series data on hydrological aspects. The primary objective of this data book is to provide those data.

1.3 In the country there are altogether 15 river basins. They are listed below.

1. Indus
2. Ganga, Brahmaputra and Barak
3. Minor river draining into Myanmar and Bangladesh
4. Mahanadi
5. Subarnarekha, Burhabalang & Baitarani
6. Brahmani
7. Rushikulya, Vamsadhara, Sarada & Nagavali
8. Godavari
9. Krishna
10. Cauvery
11. East Flowing Rivers between Mahanadi to Kanyakumari
12. West Flowing Rivers from Kanyakumari to Tapi
13. Tapi
14. Narmada
15. Mahi, Sabarmati & other West Flowing

Out of these river basins first 3 are classified and the rest are non-classified. This data book is based on the data pertaining to non-classified river basins only. The physical features of these non-classified basins are described in Chapter 2.

1.4 The nation-wide data collection network of CWC is spread over 878 hydrological observation stations covering both classified and non-classified river basins. Out of these, 282 operational sites are located in non-classified river basins. The distribution of the sites by river basin has been presented in Table 3. The data here are restricted to non-classified river basins only. In these sites hydrological data on gauge, discharge, silt, sedimentation, water quality and water flow are collected regularly.

1.5 Based on the data collected in the field, three water year books for gauge and discharge, sediment and water quality are prepared by CWC field office at divisional level. All these books along with some relevant land use statistics collected by the Ministry of Agriculture are integrated in this data book.

1.6 This book contains data for 2006-07. Wherever time series data are presented, it covers a period of ten years from 1996-97 to 2006-07. However, there are some basins for which latest data are not available due to unavoidable reasons. The data are provided up to 2003-04 or 2004-05 or 2005-06 as the case may be.

1.7 Content of this Publication: In this report, Chapter 1 gives the introduction while Chapter 2 describes the physical features of river basins. Chapter 3 deals with water and related Statistics covering storage capacity, salient features and flow of water. Chapter 4 presents the data on sedimentation. In Chapter 5, the water quality parameters are given. And, in Chapter 6, summery of land use statistics related to non-classified river basins are provided.

Chapter 2

Description of different river basins

2.0 There are fifteen river basins of which three river basins are classified and rest are non-classified. This chapter gives a detailed account of non-classified river basins. It covers salient features like geographical location, topology, topography, major tributaries, soil characteristics, availability of minerals, major industries, urban centres and important irrigation projects including observation sites.

2.1 Mahanadi Basin

2.1.1 Location: The basin is physically bounded in the North by Central India hills, in the South and East by the Eastern Ghats and in the West by Maikala hill range. The Chiroli Hills form the watershed dividing the Wainganga valley from the Mahanadi Basin, the upper portion of which is designed as the Chhattisgarh Basin. The Mahanadi basin lies encompassed within geographical co-ordinates of $80^0$30' to $86^0$50' east longitudes and $19^0$20' to $23^0$35' of north latitudes running a total length of about 851 km. The total catchment area of the basin is 141600 sq km.

2.1.2 The river Mahanadi is one of the major inter-state east flowing rivers in peninsular India. It originates at an elevation of about 442 m above Mean Sea Level (msl) near Pharsiya village near Nagri town in Raipur district of Chhattisgarh. During the course of its traverse, it drains fairly large areas of Chhattisgarh and Orissa and comparatively small area in the state of Jharkhand and Maharashtra. The total length of the river from its origin to confluence at the Bay of Bengal is about 851 km, of which 357 km is in Chhattisgarh and the balance 494 km in Orissa. During its traverse, a number of tributaries join the river on both the banks. There are 14 major tributaries of which 12 are joining upstream of Hirakud reservoir and 2 downstream of it.

2.1.3 On the Left Bank six tributaries namely the Seonath, the Hasdeo, the Mand, the Ib, the Kelo and Borai drain into main channel upstream of Hirakud reservoir. The drainage system in upstream of Hirakud reservoir is more extensive on the left bank of Mahanadi as compared to that on the Right Bank. On the Right Bank six tributaries namely the Pairi, the Jonk, the Sukha, Kanji, the Lilar and the Lath join upstream of Hirakud reservoir and two tributaries namely Tel and Ong join downstream of it. The three major tributaries namely the Seonath and the Ib on the Left Bank and the Tel on the Right Bank together constitute nearly 46.63% of the total catchment area of the river Mahanadi. The Seonath, which is the largest tributary of Mahanadi, rises in village Kotgai, District Durg (Chhattisgarh) and cater irrigation need of three districts of Chhattisgarh namely Durg, Rajnandgaon and Bilaspur. The Tel, which is the

second largest tributary of Mahanadi River, rises in village Jorigam of Koraput district of Orissa and drains four districts of Orissa namely Koraput, Kalahandi, Balangir and Phulbhani. The Ib, which is the third largest tributary of Mahanadi, rises in village Pandrapat, District Raigarh (Chhattisgarh) and drains Raigarh district of Chhattisgarh and two districts of Orissa, namely Sundergarh and Sambalpur.

2.1.4 Irrigation Projects: The Major Projects namely Tandula, Mahandi main Canal, Kharang Tank, Manairi Tank, Hasdeo Bengo Right Bank Canals, Tairi and Kodar are in the State of Chhattisgarh. Hirakund Dam Project, Mahandi Delta, Salaki, Mahanadi Birupa Barrage and Ong Diversion are the Major Irrigation Projects in the State of Orissa. There are 17 Medium Irrigation Projects each in the States of Chhattisgarh and Orissa respectively in the catchment areas of the Mahanadi river basin. The Major Projects namely Mand Diversion Project, Ib Diversion Scheme and Sunder Dam are also falls in the catchment areas of the river basin.

2.1.5 Urban Centres: Three important urban centres in the basin are Raipur, Durg & Cuttack.

2.1.6 Industries: Mahanadi, because of its rich mineral reserve and adequate power resource, has a favorable industrial climate. The important industries presently existing in the basin are iron & steel plant at Bhilai, aluminum factories at Hirakund and Korba paper mill near Cuttack and cement industries at Sundargarh. Other industries based primarily on agricultural produce are sugar, textile and oil mills. Mining of coal, iron and manganese are other industrial activities.

2.1.7 Hydrological Sites: The Central as well as State Governments carried out hydrological observations. The CWC maintains 20 gauge discharge sites in the basin and in 13 of these stations sediment observations are also made.

2.2 Subarnarekha, Burhabalang, & Baitarni basin

2.2.1 Subarnarekha

2.2.1.1 Location: The Subarnarekha is one of the longest east flowing inter-state rivers. It covers large areas of Bihar and some parts of West Bengal and Orissa. The basin lies between north latitudes of 21^0-33' to 23^0-32' and east longitudes of 85^0-09' to 87^0-27' situated in the northeast corner of the peninsular India. It is bounded on the northwest by the Chhotanagpur Plateau, in the south west by Brahmani Basin, in the south by Burhabalang basin and in the south-east by the Bay of Bengal. This river originates near Nagri village in Ranchi district of Jharkhand at an elevation of 600 m. The total length of the river is about 395 km. Its principal tributaries are Kanchi, Kharkai and Karkari.

2.2.1.2 Irrigation Projects: Subarnarekha Multipurpose Project is inter-State project in Jharkhand, West Bengal and Orissa. Kanchi Irrigation Schemes is other state Major Project and ten Medium Irrigation Projects of Jharkhand are in the catchment areas of the river basin.

2.2.1.3 Urban Centres: The important cities/ towns in the basin are Jamshedpur, Ranchi and Muri.

2.2.1.4 Industries: Important industries in the basin are tobacco products in Chakradharpur, cement, asbestos sheets, glass and ceramics at Chaibasa. Locomotives and coaches, automobiles, agricultural equipment, wires and cables, iron and steel machinery, metal tubes and conduits, copper and brass, chemicals (acids) and caustics, fertilizers and Soaps at Jamshedpur.

2.2.1.5 Minerals: The important minerals found in the basin are copper, uranium, chromium, gold, vanadium, limestone, dolomite, asbestos, china clay, talc and building stones besides iron and aluminum.

2.2.1.6 Hydrological Sites: Water quality observation is also being done along with gauge & discharge and sedimentation observation at three sites Ghatsila, Jamshedpur and Adityapur. At Muri only gauge & discharge and water quality observation are made.

2.2.2 Burhabalang

2.2.2.1 Location: The Burhabalang is one of the east flowing medium rivers situated in the northern part of Orissa State. It is bounded by the geographical co-ordinates of north latitudes between 21^0 22' to 22^0 20' and east longitudes 86^0 20' to 87^0 05'. It drains parts of the areas in Mayurbhanj and Balasore districts of Orissa with a total catchment area of 4800 sq km. This is a flashy river having a source at an elevation of 800 m and drops into the sea after traversing a total distance of 125 km.

2.2.2.2 Urban Centres: The important towns in the basin are Baripada and Balasore.

2.2.2.3 Industries: The basin has no large industry. Recently some medium and small scale industries have been established in and around Balasore and Baripada.

2.2.2.4 Minerals: The basin has no significant mineral resources. Iron ore, china clay, quartz and soap stone are found in limited areas in the Mayurbhanj portion of the basin. Limestone is seen in the Similipal hill ranges.

2.2.2.5 Hydrological Sites: Gauge discharge, sedimentation and water quality observations are made at Govindpur station.

2.2.3 Baitarni

2.2.3.1 Location: The Baitarani is one of the important east flowing rivers of peninsular India, flowing eastward and joining the Bay of Bengal. The river raises in the hill ranges of Keonjhar District of Orissa near Mankarancho village at an elevation of about 900m above msl. On its way, many tributaries join the river from both banks. The total catchment area of this basin is 10,982 sq km. The basin is situated approximately between east longitudes of 85^0-10' to 87^0-03' and between north latitudes of 20^0-35' to 22^0-15'. The basin is surrounded by the Brahmani on the South and West, the Subernarekha on the north, the Burhabalang and the Bay of Bengal on the east. The river is flashy in nature having a total length of 355 km with the upper reach up to Anandpur is in the hilly region. There is a considerable fall in geographical gradient from RL 367m at Champua to RL 28m at Anandpur.

2.2.3.2 Irrigation Projects: The Baitarni System, Akhuapada Irrigation System, Salandi, Anandpur Barrage and Kanpur Irrigation System are the Major Irrigation Projects and another

15 Medium Irrigation Projects of Orissa are in the catchment Area of the Baitarni River Basins.

2.2.3.3 Urban Centres: The important towns in the basin are Joda, Champua, Karanjia, Keonjhar, Anandpur and Jaipur.

2.2.3.4 Industries: The basin is backward from the industrial point of view. There are three medium scale industries in the basin viz. (i) Ferro-Manganese Plant (ii) The sponge Iron Plant at Joda and (iii) The Orissa Sponge Iron Plant. There are few small scale industries also in the basin.

2.2.3.5 The basin is rich in mineral wealth. Iron ore, copper, chromites, asbestos, manganese, atomic minerals, china clay and soap stone are available in Cuttack, Keonjhar and Mayurbhanj districts of Orissa and in the Singhbhum district of Bihar.

2.2.3.6 Hydrological Sites: Water Quality, Gauge & Discharge and Sedimentation observation are done at Anandpur and Champua sites.

2.3 Brahmani Basin

2.3.1 Location: The Brahmani is the major inter-state east flowing river among the peninsular rivers in India. This basin is situated within the geographical co-ordinates of north latitude 20^0 -28' to 23^0 - 35' and east longitude 83^0-52' to 87^0-03' approximately. This basin is bounded in the north by Chhotanagpur plateau, in the west and south by Mahanadi basin and in the east by the Bay of Bengal. The basin covers Bihar, Jharkhand, Madhya Pradesh and Orissa States and its catchment area is 39033 sq km.

The Brahmani is known as the South Koel in the upper reaches. It originates near Nagri village in Ranchi District of Bihar at an elevation of about 600m. The total length of its run is about 799 km. The principal tributaries of this river are Sankh, Tirka and Karo.

2.3.2 **Irrigation Projects**: There is no major project but ten medium irrigation projects were completed and four medium irrigation projects are ongoing in the catchment areas of the river basin.

2.3.3 Urban Centres: The important towns of the basin are Rourkela, Talcher, Angul, Dhenkanal, Jajpur and Rajgangpur.

2.3.4 Industries: It has two prominent industrial belts, one at Rourkela and the other at Talcher. At Rourkela, besides the Steel Plant, there exist a number of other industries like fertilizers, cement, explosives, chemicals and machine tools. The Talcher industrial area has the National Aluminum Company at Angul, the Fertilizer Plant and other small industries. The basin is rich in mineral resources like coal, iron ore, copper, bauxite, chromites, limestone, manganese, dolomites, lead, fire-clay and china clay, etc.

2.3.5 Hydrological Sites: Gauge-Discharge, Sedimentation and Water Quality observation are being conducted at six sites namely Jenapur, Gomlai, Panposh, Jaraikela and Tilga.

2.4 Rushikulya, Vamsadhara, Sarada & Nagavali Basin

2.4.1 Rushikulya

2.4.1.1 Location: The Rushikulya River is one of the medium sized east flowing rivers in peninsular India. It is an important river of Orissa state and covers entire catchment area in the districts of Phulbani and Ganjam. The river flows through Purushottampur, Pratappur and joins with the Bay of Bengal at Ganjam district. The river Rushikulya originates at an elevation of about 1000 m near Matabarhi village of Phulbani district and lies within the geographical co-ordinates of 19^0 07' to 20^0 19' north latitude and 84^0 01' to 85^0 06' east longitude. The total catchment area is 7700 sq km.

2.4.1.2 Irrigation Projects: The Rushikulya Irrigation System is the only Major Irrigation Project and another 11 Medium Irrigation Projects of Orissa are in the catchment area of the Rushikulya River Basins.

2.4.1.3 Urban Centres: Berhampur is the only city situated in the basin and other important towns are Chhatrapur, Ganjam, Aska, Bhajanagar and Sarada.

2.4.1.4 Industries: A number of large scale industries have been set up in the basin. Among them are M/s Jayashree Chemical Industries, Aska Co-operative Sugar Industries Ltd., Aska Spinning Mills, Monorama Chemical Works Ltd., Orissa Tubes Pvt. Ltd., etc. There are about 3360 numbers of small scale industries of different categories mainly food and allied, forest & wood based, rubber and plastic products and glass and ceramics. There is enough scope for setting up forest based industries. A major steel plant is proposed near Gopalpur.

2.4.1.5 Minerals: The basin is rich in mineral wealth. The major economic minerals are clay, lime stone, manganese, sand talc, black sand and grinding materials.

2.4.1.6 Hydrological Sites: Gauge Discharge, sediment and water quality observation are made at Purushottampur observation station.

2.4.2 Vamsadhara

2.4.2.1 Location: The Vamsadhara River is an important east flowing river between Mahanadi and Godavari. The river originates near Lanjigarh village in Kalahanadi district and traverses a total distance of about 254 km before it joins the Bay of Bengal at Kalingapatnam. A number of tributaries join the river on both the sides. Most of its catchment area falls on the left. The basin is narrow and full of undulations. It is situated within the geographical co-ordinates of 18^0 15' to 19^0 55' north latitudes and 83^0 20 to 84^0 20' east longitudes. The total catchment area of this basin works out to 10830 Sq km.

2.4.2.2 Urban Centres: Srikakulam, Narasannapeta, Patapatnam, Tekkali, Palasa, Sompeta, Parlakhemundi, Gunupur, Kashinagar, Bissam and Cuttack are the important towns in the basin.

2.4.2.3 Industries: There is no large scale industry in the basin but there are a number of agro and forest based small scale industries in Srikakulam district of Andhra Pradesh and Koraput & Kalahandi district of Orissa.

2.4.2.4 Minerals: The important minerals found in the Vamsadhara basin are manganese, graphite, quartz, limestone, mica and bauxite besides building materials. Manganese ore is available extensively in Srikakulam and Koraput districts.

2.4.2.5 Hydrological Sites: Water quality, Gauge discharge and sediment observations are done at Kashinagar station. Gauge discharge observation is also made at Gunupur.

2.4.3 Sarada

2.4.3.1 Location: The Sarada River, an east flowing medium sized river, lies in the district of Visakhapatnam of Andhra Pradesh. The geographical co-ordinates of the river are north latitude 17^0 25' to 18^0 17' and east longitude 82^0 32' to 83^0 06'. The basin is surrounded by Nagavali in the north, Gostari, Gambi Ramgedda, Megadnigedda in the east, Bay of Bengal in the South and Machhkund sub-basin of the Godavari in the west. The catchment area of the basin is 2665 sq km. It rises at an elevation of 1000 m and traverses a distance of 122 km before joining the sea.

2.4.3.2 Urban Centres: Visakhapatnam is the main important town in the basin.

2.4.3.3 Industries: There are many large scale industries like Visakhapatnam Steel plant, Bharat Heavy Plates and Vessels Limited, Hindustan Shipyard Ltd. etc.

2.4.3.4: Minerals: Important minerals found in the basin are manganese, quartz, graphite, mica, bauxite, aluminums and fire clay.

2.4.3.5 Hydrological Sites: Gauge & discharge observations are made at Anakapali observation station.

2.4.4 Nagavali

2.4.4.1 Location: The Nagavali river is a medium sized east flowing river in peninsular India and lies within the geographical co-ordinates of north latitude 18^0 10' to 19^0 44' and east longitudes of 82^0 53' and 84^0 05'. It is surrounded by Vamsadhara in the north, Champavathi and Peddagedda in the south, Godavari in the west and the Bay of Bengal in the east. It drains parts of the districts of Kalahandi, Rayagada, Koraput of Orissa and Srikakulam, Vijayanagaram and Visakhapatanam of Andhra Pradesh state. The total catchment area is 9510 sq km.

The Nagavali originates near the Lakhbahal in Kalahandi district at an elevation of about 1300m. The total length of the river run is 256 km out of which the first 161 km are in Orissa and the rest in Andhra Pradesh. The important tributaries are Barha, Baldiya, Satklnala, Sitagurha, Srikona, Janjhvati, Gumidigedda, Vottigedda, Suvarnamukhi, Vonigedda, Vagavathi and Relligedda.

2.4.4.2 Irrigation Projects: The Thotapally, Narayanpuram and Jaiyavathi are the major projects besides another one medium irrigation projects in the catchment areas of the river basin.

2.4.4.3 Urban Centres: The important towns in the basin are Amadalavalasa, Rayagada, Parvatipuram, Palkonda, Veeragattam and Bobbili.

2.4.4.4 Industries: The basin has no large industry. The existing small scale industries are mostly oriented to forest and agricultural produce and are located in the Srikakulam.

2.4.4.5 Minerals: Manganese, quartz, mica, graphite, limestone, bauxite and construction materials are found in abundance in the Basin.

2.4.4.6 Hydrological Sites: Gauge discharge, sediment and water quality observations are made at Srikakulum observation station.

2.5 **Godavari Basin**

2.5.1 Location: The Godavari River, the largest of the peninsular rivers and third largest in India, covers drains about 10% of India's total geographical area. The catchment area of the river is 3,12,812 sq km and is spread in the States of Maharashtra (48.6%), Andhra Pradesh (23.4%), Madhya Pradesh (10.0%), Chhattisgarh (10.9%), Orissa (5.7%) and Karnataka (1.4%). The basin lies in the Deccan Plateau and is situated between latitude 16^0 16' North and 22^0 36' North and longitude 73^0 26' East and 83^0 07' East. The Godavari river rises in the Nasik district of Maharashtra, about 80 km from the Arabian sea at an elevation of 1,067 m after flowing for about 1,465 km in a generally south-east direction, through Maharashtra and Andhra Pradesh it falls into the Bay of Bengal. The Godavari basin is bounded on the north by the Satmala Hills, the Ajantha Range and the Mahadeo Hills on the south and the Eastern Ghats on east and the Western Ghats on the west. The basin is roughly triangular in shape and the main river itself runs practically along the base of the triangle.

2.5.2 The western edge of the basin is an almost unbroken line formed by the Sahyadri range of the Western Ghats, from 600 to 2100 m height. It has the heaviest rainfall and the dampest climate in the basin. Hardly 50 to 60 km east of the Western Ghats lie the sparsely cultivated and undulating plains of the Deccan, with a dry climate.

2.5.3 About 64 km from its source, the Godavari receives the waters from Dharna, on its right bank and short distances lower down the Kadana joins it from the left. The combined waters of the Pravara and Mula which rise in the hills of Akola join the river about 217 km from its source, About 338 km lower down, while still in Maharashtra, the river receives the combined waters from the Purna and Dudhna rivers and after a further 138 km at the border of Maharashtra and Andhra Pradesh, the waters of the Majira river joins it from the south. At this point, Godavari flows at an elevation of about 329 m.

2.5.4 The Pranhita river, conveying the combined waters of the Penganga, the Wardha and Wainganga, which drain Nagpur and southern slopes of the Satpura ranges, falls into Godavari about 306 km below its confluence with the Majira. Forty eight km lower, the waters of the Indravathi join the river. Both the Pranhita and the Indravathi are major rivers in their own right. The last major tributary is the Sabari from Orissa, which falls into the Godavari, 100 km above Rajahmundry.

2.5.5 The largest tributary of the Godavari is the Pranhita with about 34.9% coverage of drainage area. The Pravara, Manjira and Maner are notable right bank tributaries covering about 16.1%, the Purna, Pranhita, Indravathi and Sabari are important left bank tributaries, covering nearly 59.7% of the total catchment area of the basin. The Godavari in the upper, middle and lower reaches make up for the balance of 24.2%.

2.5.6 Irrigation Projects: The Sriram Sagar and Kaddam Major Irrigation Project and 13 Medium Irrigation Projects of Andhra Pradesh are in the catchment area of Godavari Basin. The Wainganga Canal and Sarathi System Major Irrigation Projects and 17 Medium Irrigation Projects of Madhya Pradesh are also in the catchment area of Godavari Basin. The Kodwa, Godavari (Darna), Pravara, Purna, Girna, Pus, Gangapur Stage-I & II, Bagh Pench, Kalisara and Mula Major Projects and 129 Medium Irrigation Projects of Maharashtra are in the catchment area of Godavari Basin. There are several prominent Major Irrigation Projects like Waghed, Ozarkhed, Karanjawan, Pallakhed and Madmeswar, Jayakwadi Stage-1, Bhandaradara, Maner, Adhole, SRS Projects Stage-I, Nizamsagar, Lower Maner, Maner Project, Manjira, Dhuti weir, Idiadoh, Cotton Barrage, Puma and Lakhnavaram are also in the catchment areas of the river basin. There are three Medium Irrigation Projects of Chhattisgarh also in the catchment areas of the river basin. This basin is working since pre-independence era and a number of interstate agreements exist among basin states on sharing of water of the basin and very often court cases arise on this issue.

2.5.7 Urban Centre: Nagpur is the most important urban centre in the basin. Other important towns are Nasik, Aurangabad, Warangal, Rajahmundry, Akola, Amravati, and Ahmednagar.

2.5.8 Industries: Rich in forests, agricultural and mineral resources and the industrial potential of the Godavari basin is high. A small part of the enormous forest wealth of the basin is at present utilized as timber and in the manufacture of paper and other timber products. Industries based on agricultural produce are the processing of agricultural commodities like rice milling, cotton ginning, pressing, spinning and weaving, manufacture of sugar, manufacture of textiles, extraction of oil from groundnut and other oil seeds. Mining of coal, manganese and other ores are important activity in the districts rich in minerals. Most of the ores are at present being exported. Small engineering industries are spread all over the area.

2.5.9 **Minerals**: The Godavari basin has a rich variety of mineral wealth spread over vast areas. The principal minerals found are bauxite, manganese, iron ore and coal. Other minerals like lead, zinc, corundum, refractory minerals and kaolin are also found in small quantities in different parts of the basin.

2.5.10 Hydrological Sites: There are 18 water quality measurement sites on the basin and as many as 17 of them are for sediment measurements also. In addition, there are 28 gauge discharge observation stations in the basin.

2.6 Krishna Basin

2.6.1 Location: The Krishna basin extends over an area of 2,58,948 Sq km out of which 26.8% is in Maharashtra, 43.7% is in Karnataka and 29.5% falls in Andhra Pradesh. The basin lies between east longitudes 73^0 21' to 81^0 09' and north latitudes 13^0 07' to 19^0 25' in the Deccan plateau. The Krishna rises in the Western Ghats at an altitude of 1337 m just north of Mahabaleshwar, about 64 km from the Arabian Sea and flows from west to east through the States of Maharashtra, Karnataka and Andhra Pradesh to join the Bay of Bengal. The total length of the river from the sources to its outfall in the sea is about 1,400 km of which 612 km are in Andhra Pradesh, 306 km in Maharashtra and 483 km in Karnataka. Together with its tributaries, the river drains about 708 km of the Western Ghats, which is its chief source of

supply. The Ghataprabha, the Malaprabha, the Bhima, the Tungabhadra and Musi are the principal tributaries. The Krishna Basin's predominant land use is agriculture.

2.6.2 The Krishna basin is bounded in the north by the ridge separating it from the Godavari basin in the south and in east by the Eastern Ghats and in the west by the Western Ghats. The basin is roughly triangular in shape with its base along the Western Ghats, the apex at Vijayawada and the Krishna itself forming the median. All the major tributaries draining the base of the triangle fall into the river in the upper two-thirds of its length.

2.6.3 The interior of the basin is a plateau, the greater part of which is at an elevation from 300 to 600 m. Its general slope is eastwards. Great undulating plains, divided from each other by flat-topped ranges of hills are the main characteristics of this plateau. To the south of the Krishna, the Eastern Ghats comprises parallel ranges, which are the successive outcrops of an ancient series of stratified rocks. The delta of the Krishna formed by deposits at the mouth of the river over the ages consists of a wide belt of river-borne alluvium. The process of silt deposition at the mouth of the river is still continuing and the delta is gradually extending into the sea.

2.6.4 About 137 km from the source, it receives the Koyna a main tributary from the western side of the Mahabaleshwar hills. Lower down, the river Yerla falls into the Krishna from the left and then the Varna, the Panchganga and the Dudhganga from the right. Just near its confluence with Dudhganga and about 306 km from its source, the Krishna enters Karnataka State. At this point, the bed level of the river at an altitude of about 533 m and the river has emerged from the heavy rainfall zone of the Western Ghats. After flowing for 201 km in Karnataka territory, the Krishna receives water of the Ghataprabha from its right, and 35 km lower down, those of the Malaprabha. Both these tributaries have their sources in the Western Ghats.

2.6.5 A short distance downstream of its confluence with the Malaprabha, the Krishna drops about 122 m from the tableland of the Deccan plateau to the alluvial lands of Raichur. The Krishna receives its two major tributaries, the Bhima and the Tungabhadra, the former on its left at 789 km from its source and the 129 km further downstream near Kurnool from its right. Both the Bhima and the Tungabhadra drain large area of the Western Ghats and both are major rivers in its own right.

2.6.6 From a short distance below its confluence with the Tungabhadra, the Krishna runs in a deep gorge through a series of hills, for nearly 290 km before emerging into the coastal belt a pulichintala, at an elevation of about 37 m above sea level. Beyond this point, the river flows for about 80 km before it spreads into the delta. Vijayawada is at the head of the delta. The Dindi and the Musi join the Krishna from its left between Kurnool and Pulichintala and two more tributaries namely Palleru and Muneru also from the left, fall into the river between Pulichintala and Vijayawada.

2.6.7 Irrigation projects: Radhanagari, Ghod, Khadakwasla Stage-I, Vir Dam, Konya Dam, Tungabhadra, Bhadra, Ghataprabha Stage-I and Stage-II, Upper Krishna, Musi Project, Nagarjuna Sagar, Sri Sailam, P.D.Jurala and Prakashan Barrage are the major projects in the catchment areas of the river basin. Krishna Barrage, Kurnool Cuddaph Canal, Tungabhadra Right Bank Lower Level Canal, Tungabhadra High Level Stage-I and Rajouli Bunda Diversion major projects and fifteen other minor irrigation project of Andhra Pradesh are in the catchment areas of the river basin. Similarly Vijaynagar Channels, Vanivilas Sagar, Ghataprabha Stage-I and Stage-II, Tungabhadra RBC & LBC and Bhadra LBC Major

Irrigation projects and 29 other medium irrigation projects of Karnataka are also in the catchment areas of the river basin. Neera RBC & LBC, Ghod, Vir, Radhanagari and Tulsi major irrigation projects and 39 other minor irrigation projects of Maharashtra are in the catchment areas of the river basin.

2.6.8 Urban Centres: The major cities in the basin are Pune, Hyderabad and Vijayawada.

2.6.9 Industries: There are many large, medium and small-scale industries in the catchment. The main industries in the catchment are Textiles, Sugar, Chemical, Cement factories, Automobiles, Engineering goods, Extraction of Gold, Indian Aluminums Company Belgaum, Bharat Heavy Electrical Limited (Hyderabad), Hindustan Machine Tools Limited (Hyderabad), Nuclear Fuel Complex (Hyderabad), Hindustan Cables Limited (Hyderabad), Indian Drugs and Pharmaceuticals Limited (Hyderabad), Bharat Dynamics Limited (Hyderabad), Bharat Electricals Limited (Hyderabad), etc. Among the small-scale industries, engineering works, ferrous and non-ferrous foundries and cotton ginning are important. There are also cottage industries like weaving, carpentry, leather, rope making, tiles, pottery, copper and brass works in the catchment.

2.6.10 **Minerals**: The important minerals found in the catchment are gold, bauxite, lime stone, iron ore, manganese ore, quartz, copper, red oxide, soapstone, etc.

2.6.11 Hydrological Sites: At Present there are 23 water quality observation stations in the basin. Sediment observations are also made at 10 stations. In addition, there are 13 gauge discharge observation stations in the basin.

2.7 Cauvery Basin

2.7.1 Location: The Cauvery river originates at Talakaveri in Coorg District of Karnataka in Brahmagiri Range of hills in the Western Ghats at an elevation of 1,341 m and drains a total of 81,155 Sq km area of which 34,273 Sq km lies in Karnataka, 43,856 sq km in Tamil Nadu, 2,866 sq km in Kerala and 160 sq km in the Union Territory of Pondicherry. The Cauvery basin is bounded by Tungabhadra sub-basin of Krishna basin in the northern side and Palar sub-basin in the Southern side. The Western Ghats from the Western boundary, the Nilgiris hills an offshore of Western Ghats, extend eastwards to the Eastern Ghats and divide the basin into two natural and political regions i.e. Karnataka plateau in the North and the Tamil Nadu plateau in the South. In Tamil Nadu, the Eastern part of the basin is in the elevation range of 0 to 150 m sloping gently up from the sea.

2.7.2 At Shivanasamudram, the river branches off into two parts and falls through a height of 91 m. in a series of falls and rapids. The falls at this point is utilised for power generation. The power station at Shivanasamudram was built as early as 1902. The two branches of the river join after the falls and flows through a wide gorge which is known as "Mekedatu" (Goats leap) and continues its journey and forms the boundary between Karnataka and Tamil Nadu States for a distance of 64 km. At Hogennekkal Falls, it takes southernly direction and enters the Mettur Reservoir, which was constructed in 1934. A tributary called Bhavani joins Cauvery on the right bank about 45 km below Mettur Reservoir, thereafter it takes easterly course to enter the plains of Tamil Nadu. Two more tributaries Noyil and Amaravathi join on the right bank and here the river widens with sandy bed and flows as "Akhanda Cauvery".

2.7.3 Immediately after crossing Tiruchirappalli district, the river divides into two parts, the northern branch being called "The Coleron" and southern branch remains as Cauvery and from here the Cauvery Delta begins. After flowing for about 16 km, the two branches join again to form "Srirangam Island". On the Cauvery branch a Grand Anicut is said to have been constructed by a Chola King in 1st Century AD. Below the Grand Anicut, the Cauvery branch splits into two, Cauvery and Vennar. These branches are divided and sub-divided into small branches and forms a network all over the delta.

2.7.4 The total length of the river from the origin to its outfall into the sea is 800 km of which 320 km is in Karnataka, 416 km in Tamil Nadu and 64 km form the common border between the Karnataka and Tamil Nadu states. The Cauvery basin is fan shaped in Karnataka and leaf shaped in Tamil Nadu. The run-off does not drain off quickly because of its shape and therefore no fast raising floods occur in the basin. The basin receives rainfall mainly from the South West Monsoon and partially from North East Monsoon in the Karnataka. The basin in Tamil Nadu receives good flows from the North- East Monsoon.

2.7.5 The Cauvery river system consists of 21 principal tributaries each with catchment area exceeding 250 sq km. The largest of all of them of Catchment area are Shimsha, lying wholly in Karnataka, the Amaravathi rising in Kerala but lying mostly in Tamil Nadu and the Kabini rising in both Kerala and Tamil Nadu but lying mostly in Karnataka. The Bhavani is the fourth largest and the second longest rises in Kerala and Karnataka but lies mostly in Tamil Nadu. The longest tributary, the Hemavathi (245 km) is the fifth largest river in catchment area and lies wholly in Karnataka. From the point of view of flow contribution to the system, apart from the head reach of the Cauvery main, the most important tributaries are i) the Hemavathi, ii) the Kabini and iii) the Bhavani. There are disputes in sharing of this river water among states.

2.7.6 Irrigation Projects: Krishnaraja Sagar, Hemavathi, Mettur, Bhawani Sagar Reservoir and Kabini are the major projects in the catchment areas of the river basin. The Cauvery Anicut channels and Vanivilas Sagar major irrigation projects and 9 medium irrigation projects of Karnataka are in the catchment area of Cauvery basin. The Mettur Dam, Cauvery Delta, Cauvery Grand Anicut, Kalingirayan Anicut, Kodivery Anicut, Lower Coleroon Anicut, Kattalai major projects and 46 other Minor irrigation projects of Tamil Nadu are in the catchment area of Cauvery river basin.

2.7.7 Urban Centre: Important cities on the basin are Coimbatore, Bangalore & Tiruchirapalli.

2.7.8 Industries: Some of the main industries in the basin are Paper mills, Sugar mills, Chemical Factories, Cotton mills, Steel & Cement factories. Mining activity in the basin includes Stone mining for building construction works.

2.7.9 Hydrological Sites: There are 30 Water Quality observation stations in the basin. Sediment observations are also made at 14 of these stations. In 33 sites gauge & discharge observation are also made.

2.8 East flowing rivers Basin

2.8.1 **Location**: The basin of east flowing rivers consists of all small independent rivers of peninsular India lying to the south of Krishna basin except Cauvery basin. It lies within 8^0 12'

to 15^0 56' north latitude & 77^0 29' to 79^0 59' east longitude. All these rivers are draining into the Bay of Bengal.

2.8.2 The basin of East flowing rivers covers large areas in the states of Andhra Pradesh, Tamil Nadu and a small area in the state of Karnataka. There are eleven river sub-basins of which the Palar and Ponniar are more important. Other river sub-basins are the Pellar, Vellar, the Vaigai, the Vaippar, and the Tambraparani. Brief descriptions of these river basins are given below.

2.8.3 Gundalakamma: The Gundalakamma river rises near Iskagundam village in Kurnool district at an elevation of 600m from the eastern slopes of the Nallamala hills at north latitude 15^0 $38^{'}$ and east longitude 78^0 $47^{'}$ and flows in a north-east, east and southern direction for a total length of 220 km to join the Bay of Bengal. The total area drained by this river is 8,494 sq km. The Kandleru is its important left bank tributary.

2.8.4 Paleru: The Paleru river rises near Gogulapalle village in Nellore District at an elevation of 325m at North Latitude 15^0 17' and East Longitude 79^0 $13^{'}$ and flows in an easterly direction for a total length of 104 km to join into the Bay of Bengal. The Paleru drains an area of 2,483 sq km.

2.8.5 Pennar: The Pennar River is one of the major East Flowing rivers in Southern India. It rises in the Chennakesava hill of the Nandidurg range in Karnataka, flows in the north westerly direction through Kolar and Tumkur districts of Karnataka; it enters Andhra Pradesh in the Hindupur taluk of Anantapur district, runs eastwards before draining into the Bay of Bengal near Nellore. The Basin lies between east longitude 77^0 $04^{'}$ to 80^0 $10^{'}$ and north latitude 13^0 $16^{'}$ to 15^0 $52^{'}$. The Somashila is the only major project in the catchment area of the river basin.

2.8.6 **Swarnamukhi:** The Swarnamukhi is an East Flowing river basin having a small catchment Area of 3,225 sq km. It rises at an elevation of 300 m in the Eastern Ghat ranges near Pakala village in Chittur district of Andhra Pradesh at North latitude 13^0 $28^{'}$ and east longitude 79^0 09'. It runs generally in north eastern direction passing through the famous Tirupati hills before joining into the Bay of Bengal. Its total length is 130 km. This Independent river has no major tributaries and therefore its flow depends only on rainfall in its upper catchment.

2.8.7 **Kalingi:** The Kalingi River is one of the East flowing rivers in Andhra Pradesh. It originates near Kalashasti in Andhra Pradesh and drains completely in Andhra Pradesh and joins in Pulicat lake after Sulurpeta. The catchment area of Kalingi River is 5,927 sq km and the length is 76 km. The important tributary is Kalleru river which joins Kalingi River after Sulurpet town. At present there are two medium irrigation projects in this basin namely (1) Kalingi Reservoir and (2) Thanyali Anicut which irrigate an area of 4,650 acres and 10,000 acres respectively.

2.8.8 **Palar:** The Palar basin is an important basin among the 12 basins lying between the Pennar and the Cauvery basin. This basin is divided into three major topographical divisions namely, (i) the hill ranges of Eastern Ghats (ii) the plateau region and (iii) the coastal plains. Though most of the drainage area lies in Tamil Nadu, its drainage area extends to cover the southeast and southwest parts of Karnataka and Andhra Pradesh respectively. The shape of the basin is rhombus and lies approximately between 12^0 $15^{'}$ and 13^0 $38^{'}$ north latitudes. The basin finds its outlet into Bay of Bengal. The Palar drains an area of 17,871 sq km out of

which nearly 57 percent lies in Tamil Nadu and the balance in the states of Karnataka and Andhra Pradesh.

2.8.9 Ponniar: The Ponniar basin is the second largest interstate East Flowing river basin among the 12 basins lies between the Pennar and the Cauvery basins. It covers a large area in the state of Tamil Nadu, besides the areas covered in the states of Karnataka and Andhra Pradesh. It lies between the east longitudes 77^0 33' to 79^0 47' and north latitudes 11^0 45' to 13^0 30'. This basin is bounded in the northwest and south by various ranges of the Eastern Ghats like the Velikonda range, the Nagari hills, the Javadu hills, the Shevaroy hills, the Chitteri hills and the Kalrayan hills and in the east by the Bay of Bengal. The Ponniar basin is elongated in shape and finds its outlet into the Bay of Bengal. The Ponniar drains an area of 16,019 Sq km out of which nearly 77 percent lies in Tamil Nadu. The Ponniar or the Dakshina Pinakini river rises near Hongashenhalli village at an elevation of about 900m above msl at north latitude 13^0 25' and east longitude 77^0 58' in the Kolar district of Karnataka state. From its origin, the river Ponniar generally flows in the southern direction through Kolar and Bangalore districts of Karnataka to a length of 79 km before entering the Dharmapuri district of Tamil Nadu. The river flows another 247 km generally in the south east direction in the districts of Dharmapuri, Vellore, Tiruvannamalai, Cuddalore and Villupuram districts. Then, the river flows in the eastern direction below the Tirukoyilur anicut for another 70 km before finding its way into the Bay of Bengal. The river Ponniar branches into two, the Gadilam near Cuddalore and the Ponniar near the Union Territory of Pondicherry. On its way, the river Ponniar receives a number of small streams and rivulets. Krishnagiri and Sathanur Reservoir are the major projects in the catchment areas of the river basin.

2.8.10 Vellar: The Vellar River rises at an elevation of 900 m near the village of Tumba in the Chittori hills, of the Eastern Ghats in the Salem district of Tamil Nadu. It flows generally in an easterly direction for a total length of 210 Km through Salem and Cuddalore districts in Tamil Nadu and finally out falls into the Bay of Bengal near Porto Nova in Cuddalore district. It drains a total catchment area of about 8,922 sq km. The catchment area lies entirely in Tamil Nadu. The Gomukinadhi and Manimukthanadi are the important left bank tributaries and Swetanadhi and Chinnar are the right bank tributaries of the Vellar.

2.8.11 Vaigai

2.8.11.1 The Vaigai basin is an important basin among the 12 basins lying between the Cauvery and Kanyakumari. The basin is bounded by the Varushanadu hills, the Andipatti hills, the Cardaman hills and the Palani hills on the west and the Palk Strait and Palk Bay on the east. The basin lies between 9^0 17' to 10^0 22' north latitudes approximately. This basin is divided into two major topographical divisions namely (i) the hilly areas and (ii) the plains. The basin is elongated in shape and drains into the Palk Bay. The Vaigai drains an area of 7,741 sq km which entirely lies in the state of Tamil Nadu.

2.8.11.2 The Vaigai river on the western slopes of the Varushanadu hills at an elevation on 1,200m above msl near Kottamalai in the Madurai district at a north latitude 9^0 32' and east longitude 77^0 23' and flows in the northernly and north easternly directions up to its confluence with the Varushanadhi and then takes a turn towards east and south east to flow through Madurai, Sivakangai and Ramanathapuram districts. After traversing about 258 km, the river Vaigai discharges into Ramnad big tank and some other tanks. The surplus water from the tanks finally discharges into the Palk Bay near Mandapam. On its way, the Vaigai receives two important tributaries namely the Suruliyar and the Manjalar on its left bank,

besides a large number of small streams and rivulets. The river has been dammed downstream of its confluence with the Suruliyar.

2.8.11.3 The Suruliyar and the Manjalar, the two important left bank tributaries together account for nearly 20 percent of the total catchment area of the Vaigai. The Suruliyar is the principal tributary of the Vaigai also rises in the eastern slopes of the Varushanadu hills and flows in the north and north eastern direction. It receives Theniar on its left bank just before its confluence with the Vaigai. The Manjalar another major tributary rises in the Palani hills and flows generally in the easterly direction before joining the Vaigai below the Vaigai dam. The Vaigai also receives another minor tributary namely the Varshanadhi on its left bank below the Vaigai dam. The Vaigai Reservoir is the only major project in the catchment area of the river basin.

2.8.12 Vaipar: The Vaipar River rises on the eastern slopes of the Varushanadu hill ranges of the Western Ghats near Sivagiri in Thirunelveli district in Tamilnadu at an elevation of about 900m. It flows generally in an easterly direction for a length of about 125 km through Thirunelveli, Virudhunagar and Tuticorin districts in Tamilnadu and joins the Gulf of Mannar near Kalattur. The river basin is located on south of Vaigai. It drains a total catchment area of 5,069 sq km. The catchment area lies entirely in Tamilnadu. The Arjuna-nadhi and Vijanadhi are the important tributaries on the left bank. There are four anicut in the basin. No large storages exist in this basin.

2.8.13 Tambraparani: The Tambraparani river rises on the eastern slopes of the Western Ghats at an elevation of about 1,400m at north latitude 8^0 46' and east longitude 77^0 15' near Alwarkurichi village in Thirunelveli district of Tamilnadu to flow in a generally easterly direction for a total length of 130 km and joins the Gulf of Mannar. The Chittar and Manimuthar are the left & right bank tributaries of this river. The total area drained by the Tambraparani is 5,482 sq km. There are number of anicuts across this river of which the more important are the Marudur and the Srivaikuntam anicut systems. Papanasam Hydro Electric Project and Manimuthar Dam are two important storages in this river.

2.8.14 Industries: Agriculture based industries are located on this basin area.

2.8.15 Hydrological Site: There are 24 water quality observation stations in the basin. Sediment observations are also made at 9 of these stations. In addition, three gauge discharge observation station is also there in the basin.

2.9 West flowing rivers Basin

2.9.1 **Location**: The basin of West flowing rivers consists of all small independent river basins of peninsular India lying to the south of Krishna basin, except Cauvery basin. There are about 22 rivers basins and they are located within 8^0 43' to 19^0 10' North latitude and 73^0 15' to 76^0 51' East longitude. These rivers are draining into the Arabian Sea.

2.9.2 The basin of the West Flowing Rivers located in the South West corner of the peninsular India covers areas in the states of Maharashtra, Karnataka, Tamilnadu and Kerala. There are a number of medium and minor river basins in this region. All the rivers originate from the high mountains of the Western Ghats and exhibit similar characteristics. They have steep high banks, which rarely overflow or cause floods.

2.9.3 Important west flowing river sub-basins are described as under.

2.9.3.1 Ulhas: The Ulhas River is one of the West Flowing rivers in Maharashtra falling into the Arabian Sea. The boundary of the basin consists of the main Sahyadri hills on the east, western off shoots on the north and south and on the west, a narrow opening at the end leading to the sea. The Ulhas basin lies between north latitudes of 18^0 44' to 19^0 42' and east longitudes of 72^0 45' to 73^0 48'. The Ulhas drains an area of 4,637 sq km and lies completely in Maharashtra. The Thane, Raigad and Pune districts fall in the basin. The Ulhas rises from Sahyadri hill ranges in the Raigad district of Maharashtra at an elevation of 600m above msl. The total length of the Ulhas from its origin to its outfall in to the Arabian Sea is 122 km. The important tributaries of the Ulhas River are Pej, Barvi Murbari, Kalu, Shari, Bhasta, Salpe, Poshir and Shilar. The Kalu and Bhasta are the major right bank tributaries which together accounts for 55.7% of the total catchment area of Ulhas. There are mainly two completed projects on the tributaries of the Ulhas River on Bhivapuri and on Barvi. Two ongoing projects are on Bhasta and Poshir.

2.9.3.2 **Netravathi:** The Netravathi rises between Kudermukh and Ballalaryan Durga in the Dakshina Kannada district of Karnataka at an elevation of about 1000m at 75^0 20' East longitude and 30^0 10' North latitude flows generally in north-south direction for 40 km up to Gohattu, where it takes a turn towards the west and flow in east-west direction practically up to its outfall into the Arabian Sea near Mangalore. The Kumaradhara, a major left-bank tributary joins it near the village Uppinangadi. The total length of the Netravathi is 103 km from its source to the outfall. The river drains an area of 3,657 sq km. No major project is in existence in this basin. However, the investigations for the project titled multi-purpose Netravathi Anicut Scheme have been completed.

2.9.3.3 **Valapatanam:** The Valapatanam river rises south of Ammatti village in the district of Coorg in Karnataka State at 75^0 52' east longitude 12^0 13' north latitude at an elevation of 900 m above msl. The river has a total length of 101 km from its source to its fall into the Arabian Sea. The river drains an area of 1,867 sq km of which 546 sq km lies in Karnataka and rest in Kerala. The Kattampally multipurpose project at Kattampally, and Pazhassi project at Valiambra are the main irrigation Projects in this basin. The Kattampally project has been planned in two stages. The stage I will not only prevent saline water intrusion and reduction of flood but also provide irrigation benefits to an area of 1,280 ha. The second stage of the project is expected to irrigate an additional area of 1,650 hectares. The Pazhassi project is proposed to irrigate 16,110 hectares of land.

2.9.3.4 **Chaliyar:** The Chaliyar, known in the lower reaches as the Beypore, is one of the major rivers of Kerala. The main river starts from the Elambalari hills at an altitude of 2,067m above msl. It is formed by the confluence of numerous streams and rivers. Its important tributaries are the Cherupuzha, the Kurumbanpuzha, the Kanhirapuzha, The Punnapuzha, the Karimpuzha, the Vadapurampuzha and the Chaliyarpuzha. The Chaliyar flowing for a total length of about 169 km and finally joins the Arabian Sea at Beypore. The river drains a total area of about 2,933 sq km of which 388 sq km lies in Tamilnadu.

2.9.3.5 **Bharathapuzha:** The Bharathapuzha River is the second longest west flowing river that drains into the Arabian Sea in Kerala State. This basin is bounded in the east by the Cauvery basin and in the west by the Arabian Sea. The basin lies approximately between 10^0 26' and 11^0 13' north latitudes and 75^0 53' to 77^0 13' east longitudes. Its drainage area is spread in Tamilnadu and Kerala states. The basin is elongated in shape and finds its outlet into the

Arabian Sea. The total drainage area of the basin is 6,186 sq km out of which nearly 71 percent lies in the Kerala State.

2.9.3.6 **Chalakudi:** The Chalakudi River has its origin in the Annamalai hills of Western Ghats. It is formed by the confluence of five streams namely the Parambikulam, the Kuriarkutty, the Sholayar, the Karappara and the Anakayam. The river has a length of 130 km. The total drainage area of the river is 1,704 sq km of which 300 sq km lies in Tamilnadu and the rest are in Kerala. The Chalakudi river diversion scheme with a weir across the Chalakudi river at Thumburmuzhi is the only Major irrigation scheme in existence in the basin. Presently the project is irrigating an area of 13,500 hectares of land and has a potential to irrigate 19,696 hectares ultimately in the Karuvannur, Chalakudi and Periyar basins. Next to the Periyar and Pamba basin the Chalakudi basin offers the maximum scope for hydel power development.

2.9.3.7 Periyar: The Periyar River is 244 km in length and the longest river of Kerala and drains an area of 5,398 sq km. It rises at the forest land Sivagiri peak 80 km south of Devikulam at an elevation of 2,438m above msl and traverses the steep mountainous terrain before it is joined by the Mullaiyar, 16 km downstream. The river then turns west and continues to flow in the direction for about 16 km in a sandy bed. After a winding course of about 13 km, the river reaches Vandiperiyar and passes through a second narrow gorge below which the Perumthura joins it. Further down, it is joined by six tributaries of which the important tributary Edmala joins the Periyar. Passing Malayattur and thereafter taking a meandering course, the river reaches Alwaye where it divides itself into two branches. The upper branch joins the Chalakudi River at Punthenvelikara and then expands into a broad sheet of water at Munambham. The other branch taking a southerly course is broken up into a number of small channels, which fall into the Vembanad Lake as Varapuzha.

2.9.3.8 Pamba: The Pamba, 176 km in length, is the third longest river in Kerala. It is formed by the confluence of the Pamba Aar, Kaki Aar, Arudhai Aar, Kakkad Aar and Kall Aar. The Pamba Aar rises in the Peermedu Plateau at an elevation of 1,670m. The Kaki Aar, which forms the major tributary of the Pamba River, is a much larger stream at the beginning than the main river. The Pamba River, after receiving the Kaki Aar, flows in a Westerly direction till the Arudhai Aar joins it. At Narayanamuzhi, it turns and follows a south-eastern direction until the Kakkad Aar joins it. Beyond the confluence, the river flows in a southerly direction up to Vadasserikkara where it is joined by the Kall Aar, which has its origin in the Valanjakkatti Malai. The catchment area of the river is 2,235 sq km. At Pandanad, the river bifurcates and one branch taking a western course. The Manimala joins the Pamba in its Neeretupuram branch. The river thereafter flows northwards and falls into the Vembanad Lake through several branches. At present there are two completed structures in Pamba basin.

2.9.3.9 **Kallada:** The Kallada River is formed by the three rivers i.e. Kulathupuzha, Chendurni and Kalthuruthy joining together near Parappar. The river has its origin in Papanasam range south of Kulathupuzha in Quilon district of Kerala State at an altitude of 900 m above msl. The river has a length of 121 km and drains an area of 1,699 sq km before confluence with the Ashtamudilake. The Kallada irrigation project is the one existing major project in the basin. The releases from Kallada dam are used to generate electricity. There are other small 13 river basins on west flowing rivers and their drainage area varies from 165 sq km to 1,550 sq km.

2.9.4 Irrigation Projects: The Anjunem in the sub-basin of Mandovi, Swarna Dam in the sub-basin of Swarna, Kattampally & Pazhassi in the sub-basin of Valapatanam, Malampuzha,

Chitturpuzha and Kanhirapuzha Reservoir in the sub-basin of Bharathapuzha, Chalakudi River Diversion Scheme stage-I & II, Sholayar, H.E.S & Peringilkuthu Left Bank Scheme in the Sub_basin of Chalakudi, Periyarvalley Project, Edamalayar & Idukky Hydel Project are in the Sub-basin of Periyar, Pamba Hydel Project in the Sub-Basin of Pamba, Kalada Irrigation Project in the Sub-basin of Kallada are the major projects in the catchment areas of the river basin. Other major projects like Peechi, Chinmony and 7 Medium Irrigation projects of Kerala are also in the catchment area of the river basin.

2.9.5 Industries: Mainly agriculture based industries are located in these basins.

2.9.6 Hydrological Sites: There are 31 Water Quality observation stations in west flowing river basin. Sediment observations are also made at 18 of these stations. In addition, there are seven gauge discharge observation stations in the basin.

2.10 Tapi Basin

2.10.1 Locaton: The Tapi River is the second largest westward draining interstate river basin. It covers a large area in the State of Maharashtra besides areas in the states of Madhya Pradesh and Gujarat. The Tapi Basin is the northern-most basin of the Deccan plateau and is situated between latitudes 20^0 N to 22^0 N approximately. The Satpura range forms its northern boundary whereas the Ajanta and Satmala hills form its southern extremity. Mahadeo hills form its eastern boundary. The basin finds its outlet in the Arabian Sea in the west. Bounded on the three sides by the hill ranges, the river Tapi, along with its tributaries, more or less flows over the plains of Vidharbha, Khandesh and Gujarat. The Tapi River drains an area of 65,145 sq km out of which nearly 80 percent lies in Maharashtra state.

2.10.2 The Tapi river originates near Multai in Betul district at an elevation of 752 m above msl. The total length of this west flowing river from its origin to its out fall into the sea is 724 km. For the first 282 km the river flows in Madhya Pradesh, out of which 54 km forms the common boundary with Maharashtra State. It flows for 228 km in Maharashtra before entering Gujarat. Traversing a length of 214 km in Gujarat, the Tapi River joins Arabian Sea in the Gulf of Cambay after flowing past the Surat city. The river receives tidal influence for a length of about 25 km upstream from the mouth.

2.10.3 The Tapi river receives several tributaries on both the banks. There are 14 major tributaries having a length more than 50 km. On the right bank, 4 tributaries namely the Vaki, Gomai, Arunavati and Aner join the Tapi River. On the left bank, 10 important tributaries namely the Nesu, Amaravati, Buray, Panjhra, Bori, Girna, Waghur, Purna, Mona and Sipna drain into the main channel. The drainage system on the left bank of the Tapi river is, therefore, more extensive as compared to the right Bank area.

2.10.4 The Purna and the Girnma, the two important left bank tributaries together account for nearly 45 percent of the total catchment area of the Tapi River. The Purna is the principal tributary of the Tapi River originating in Betul district in Gawilgarh hills of the Satpura range, mostly drains the three districts Amravati, Akola and Buldhana of Vidharbha Region. The Girna, another major tributary, rises in the Western Ghats and drains Nasik and Jalgaon districts of Maharashtra.

2.10.5 **Irrigation Projects**: The Ukai Dam, Kate Purna, Nalganga, Girna and Kakrapar Weir are the major projects in the catchment areas of the river basin. There are 3 medium projects of Gujarat, 2 medium projects of Madhya Pradesh and 28 medium projects of Maharashtra are in the catchment area of Tapi river basin.

2.10.6 Urban Centres: Surat is the most important city in the area. Other cities are Amravati, Malegaon, Akola, and Jalgaon.

2.10.7 Industries: Important industries in the basin are textile factories in Surat and newsprint factory at Nepanagar. Other industries are machine tools, drugs & pharmaceuticals, plastics, paper & sugar mills, Dal, Oil & Shaw Mills.

2.10.8 **Hydrological Sites:** There are 3 Water Quality observation sites are in the basin. Sediment observations are also made at these stations.

2.11 Narmada basin

2.11.1 Location: The Narmada is the largest west flowing and seventh largest river of India. It drains an area of 98,796 sq km out of which nearly 87% lies in Madhya Pradesh besides some areas in the states of Maharashtra and Gujarat. The Narmada basin lies between east longitudes 72^0 32' to 81^0 45' and north latitudes $21^0$20' to $23^0$45'. It flows through Deccan trap in between Vindhya and Satpura ranges of hills before flowing into the Gulf of Cambay in the Arabian Sea.

2.11.2 The Narmada rises from a Kund (spring) at an elevation of 1057m at Amarkantak in the Maikal hill in Shahdol district of Madhya Pradesh and flows through Madhya Pradesh, Maharashtra and Gujarat between Vindhya and Satpura hill ranges before falling into the Gulf of Cambay in the Arabian Sea about 10 km north of Bharuch district of Gujarat. The total length of this west flowing river from its origin to its outfall into the Sea is 1,312 km. For the first 1,079 km, it runs in Madhya Pradesh and thereafter it forms the common boundary between Madhya Pradesh & Maharashtra for 35 km and Maharashtra & Gujarat for 35 km. In Gujarat State, it stretches for 159 km. There are 41 important tributaries to the Narmada River. Significant among them are Burhner, Banjar, Hiran, Tawa, Chhota Tawa, Orsang and Kundi which are major tributaries having catchment area of more than 3,500 sq km each. The remaining tributaries are having catchment areas ranging from 500 to 2,500 sq km.

2.11.3 Irrigation Projects: Sardar Sarover, Karjan, Sukhi, Indira Sagar. Onkareshwar, Jobat, Man, Upper Beda, Maheshwar, Narmada Sagar, Sukta, Kolar, Tawa, Varna, Bargi, Samrat Ashoksagar (Halali), Matiyari and Thanwar are the major projects in the catchment areas of the river basin. There are 2 medium irrigation projects of Gujarat and 21 medium irrigation projects of Madhya Pradesh in the catchment area of Narmada basin.

2.11.4 Urban Centres: Jabalpur town is the main city in this basin. The second largest urban pocket in the Narmada Basin is Bharuch of Gujarat. Other urbanized centers are Khandawa and Dewas of Madhya Pradesh.

2.11.5 Industries: There are about 40 large scale and 70 small-scale industries in the area. But compared to other basins, industrialization is thin in this area.

2.11.6 **Minerals**: Important minerals found in the basin are Bauxite, Clay, coal, dolomite, graphite, iron ore, manganese, talc & limestone, etc.

2.11.7 Hydrological Sites: There are 18 Water Quality observation sites in the basin. Sediment observations are also made at 14 of these stations. Further, there are 31 gauge and discharge sites being maintained by State Government of Gujarat in Narmada basin.

2.12 Mahi, Sabarmati, Luni and other West Flowing River Basins

2.12.1 West flowing river basins consist of 14 rivers namely Mahi, Sabarmati, Luni and other small river basins, excluding those of Narmada & Tapi basins. The salient features of major 8 basins are explained below.

2.12.1.1 **Mahi:** The Mahi River is one of the major west flowing interstate rivers of India, draining into the Gulf of Cambay. The basin is bounded on the North and the North - West by Aravalli hills, on the East by the ridge separating it from the Chambal Basin, on the South by the Vindhyas and on the West by the gulf of Cambay. The basin has a maximum width of about 250 km. The river Mahi originates on the Northern slope of Vindhyas at latitude 22^0 $35^{'}$ N and longitude 74^0 $58^{'}$ E near the village of Sardarpur in the Dhar District of Madhya Pradesh at an elevation of 500 m above msl. Its length is 583 km and it traverses through states of Madhya Pradesh, Rajasthan and Gujarat. The river Mahi drains an area of 34,842 sq km. Initially the river flows Northwards through Dhar and Jhabua districts of M.P. and then turns left and passes through the Ratlam district of M.P., then turning to North - West, it enters the Banswara district of Rajasthan and flows in South-West directions and thereafter enters the Panchmahal district of Gujarat state. Then the driver continues to flow in the same direction through Kheda district of Gujarat and finally falls into Gulf of Cambay in Arabian Sea. The Mahi Bajaj Sagar, Kadana Reservoir, Wanakbari Weir, Panam, Bhadar, Jakham and Somkamlamba major projects and 94 Medium irrigation projects are in the catchment areas of the Mahi sub-basin.

2.12.1.2 **Sabarmati:** The Sabarmati River is one of the major West flowing interstate rivers in India, draining into the Gulf of Cambay. The basin is bounded by Aravalli hills in the North and North-east. The ridge separating it from basins of minor streams and draining into Rann of Kutchh and Gulf of Cambay in West and by Gulf of Cambay in South. The basin has a maximum length of 300 km and maximum width of 105 km. It is triangular in shape with the main river as the base and the source of the Watrak as the apex point. It originates in the Aravalli hills at latitude 24^0 $40^{'}$ N and longitude 73^0 $20^{'}$ E in the Rajasthan State at an elevation of 762 m above ms1. The river Sabarmati drains an area of 21,674 sq km with a total length of 371 kms. The Sabarmati River, with its origin in Rajasthan, flows generally in south west direction. It enters the Gujarat State and passes through the plains and continues to flow in the same direction and joins the Gulf of Cambay in the Arabian Sea. The Dharoi Dam, Watrak, Meshwa Reservoir, Meshwa Canal, Sabarmati, Moti fatewati and Hathmati major projects and 1 medium project are in the catchment areas of Sabarmati sub-basin.

2.12.1.3 **Luni:** The Luni is the only significant river basin in Western Rajasthan which forms the bulk of arid zone. Luni originates from Western slopes of the Aravalli ranges at an elevation of 772 m above msl near Ajmer flowing in South West direction and traversing a course of 511 km in Rajasthan before it finally flows into the Rann of Kutchh. Its total catchment area falls in Rajasthan. Luni basin is situated in between 24^0 $11^{'}$ to 26^0 $43^{'}$ North

latitude and 70^0 $37^{'}$ to 74^0 $39^{'}$ East longitude approximately. The peculiarity of this river is that it tends to increase its width rather than deepening the bed because the banks are of soils which are easily erodable whereas beds are of sand. The floods develop and disappear so rapidly that they have no time to scour the bed. The Aravalli ranges forms its East boundary whereas main course of river in Barmer district itself forms North boundary and mostly Banas and initial reach of Chambal River form its Southern boundary. Luni receives all the main tributaries on its left bank except one i.e. Jojari (Mithri) on the right bank. Luni receives ten tributaries namely Lilari, Guhiya, Bandi (Hemawas), Sukri (Hemawas), Sukri, Mithri, Jawai, Khari Bandi, Sukri Bandi and Sugi. Hence the drainage on the left bank of Luni is, therefore, more extensive than on Right Bank. The Luni drains an area of 32,879 sq Km in Rajasthan State only.

2.12.1.4 **Banas:** The river Banas originates from Aravalli hills and descends in a South-Western direction through Rajasthan state and travels through Banaskantha and Mehsana district of Gujarat before it drains into little Rann of Kutchh. The Banas basin is the Northern basin and is situated between 23^0 $30^{'}$ & 24^0 $55^{'}$ north latitudes and 71^0 $15^{'}$ to 73^0 $15^{'}$ east longitudes approximately. Saraswati and Luni basins form the Southern and Northern boundaries of this basin. The Aravalli hills form its eastern extremity. The Banas drains an area of 8,674 sq km out of which nearly 37.69% lies in Rajasthan state and remaining 62.31% falls in Gujarat state. The Banas River rises near Pindwara of Sirohi district of Rajasthan at an elevation of 372.51m above msl. Little Rann of Kutchh is the outfall of Banas river. Sipu is the only right bank tributary of Banas River which drains into the main channel. There are 6 tributaries on the left bank of Banas River namely the Batria, the Sukli, the Sewaran, the Suket, the Balaram and the Khari which drain into the main channel. Hence the draining system on the left bank of the Banas River is more extensive as compared to the right bank area. The Sipu and the Khari are the two important right and left bank tributaries which together drain nearly 37% of the total catchment area of Banas. The Sipu Dam, Panam and Dantiwada Dam are the major projects in the catchment areas of Banas sub-basin.

2.12.1.5 **Shetrunji:** The Shetrunji is one of the major rivers of Saurashtra. The Shetrunji basin is the Eastern most basin of Saurashtra and is situated in between 21^0 $00^{'}$ to 21^0 $47^{'}$ North latitude and 70^0 $50^{'}$ to 72^0 $10^{'}$ East longitude. The river Shetrunji originates at Chechai hills in Gir forest of Junagadh district at R.L. 380 m above msl and flows towards East direction till its confluence with Gulf of Cambay near Santhrampur port. The river Shetrunji fertile the Amerli and Bhavanagar districts and a small area of Junagadh district of Saurashtra. The Shetrunji drains an area of 5,514 sq km out of which more than 50% is in Amerli district. The total length of the river from its origin to the outfall into the Gulf of Cambay is 182 km. This river receives tidal influence for a length of 5 km from mouth. The Shetrunji receives several tributaries on both banks. There are 9 tributaries having lengths more than 15 km out of which Safara, Shel, Khari and Talaji are the 4 tributaries on the right bank of Shetrunji and the remaining 5 tributaries namely Stali, Thebu, Gagadia, Rajwal and Kharo are on left bank. The drainage system on left bank of Shetrunji is more extensive as compared to the right bank area. The Stali, Thebu and Gagadia are important tributaries feeding from left bank of Shetrunji and drain nearly 34% of total catchment area of river Shetrunji. The Shetrunji Irrigation Scheme is the only major project in the catchment areas of the river basin.

2.12.1.6 **Bhadar:** Bhadar is one of the major rivers of Saurashtra and it drains about $1/7^{th}$ of the area of Saurashtra. The Bhadar basin is the South Western basin and situated between 21^0 $25^{'}$ to 22^0 $10^{'}$ North latitude and 69^0 $45^{'}$ to 71^0 $20^{'}$ East longitude. The river Bhadar originates at an elevation of 261 m above msl in Vaddi about 26 km North-West of Jasdan in Rajkot district and flows towards South upto Jasdan village and then turns towards South-West upto

village Jetpur and finally changes its direction towards West till its confluence with Arabian sea at Navibandar (Porbandar). The Bhadar River, from Jetpur to Porbandar, fertiles Rajkot, Jamnagar, Amreli and Junagadh district of Saurastra. The river drains an area of 7,094 sq km out of which 706 sq km is in hill and the rest in plain regions of Saurashtra. The total length of this South West flowing river from its origin to its outfall into the sea is 198 km. For the first 150 km, the river flows in Rajkot district and the rest of 48 km in Junagadh district. The river receives tidal influence for a length of about 26 km from mouth in Junagadh district. The river Bhadar receives several tributaries on both the banks. There are 9 major tributaries having a length of more than 25 km out of which 6 tributaries namely Gondali, Chapparwadi, Phopal, Utawali, Moj and Venu are feeding from right and the remaining 3 tributaries namely Vasavadi, Surwa and Galolia from left. The drainage system on the right bank of river Bhadar is more extensive as compared to the left bank. The Bhadar Irrigation Scheme is the only major project in the catchment areas of the river basin.

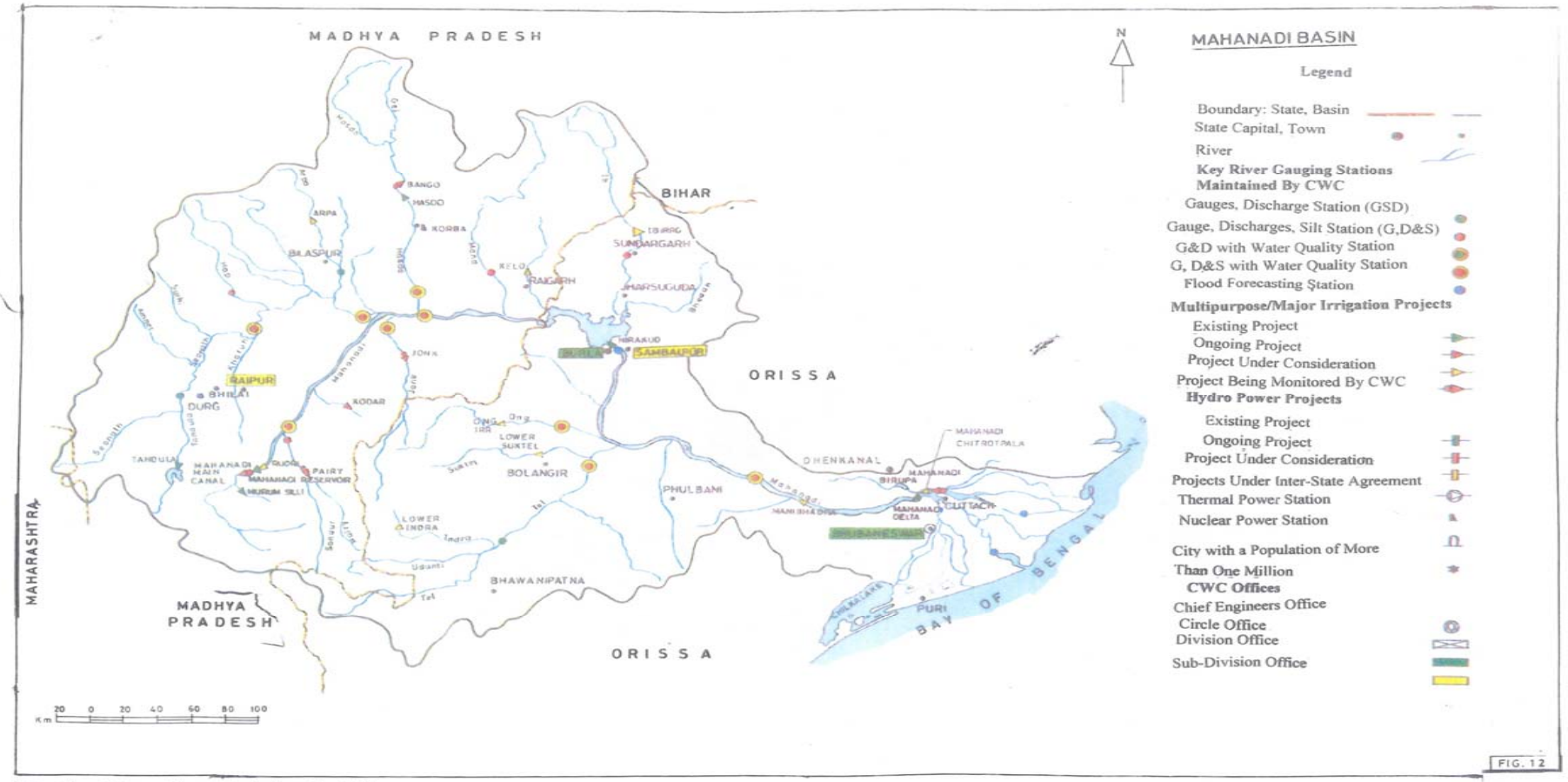
2.12.1.7 Vaitarna: The Vaitarna River originates from hilly terrains of Maharashtra at Trimbak, district Nasik. After running for 120 km in Maharashtra towards West, it falls in the Arabian Sea. The Catchment area of the basin is 3637 sq km. The complete catchment area is located between East longitude of 72^0 45' to 73^0 35' and North latitude of 19^0 30' to 20^0 20'. The main tributaries of this river are Pinjal, Ganjal, Surya, Daharji and Tansa.

2.12.1.8 Dhadar: The Dhadar River is one of the West flowing rivers in Gujarat state. It originates from Pavagadh hills of Gujarat state and flows through Vadodara and Bharuch districts. The river Dhadar, after flowing 87 km, receives Vishwamitri tributary from right bank at Pingalwada village. After flowing 55 km it falls into the Gulf of Cambay. The total catchment area of Dhadar basin is 3,423 sq km. It lies between east longitude 72^0 30' and 72^0 45' and north latitude 21^0 45' and 22^0 45'. The important tributaries of Dhadar are Vishwamitri and Rangav. The Damanganga Reservoir & Madhuban Dam Major projects are in the sub-basin of Damanganga and Watrak major project is in the sub-basin of Watrak River basin.

2.12.2 Urban Centre: Ahmadabad & Vadodara are two important cities on west flowing rivers basin.

2.12.3 Industries: In addition to agriculture based industries, there are important industries of textile, leather & leather goods, plastic, rubber goods, paper, newsprint, automobile, machine tools, drugs, Pharmaceuticals etc.

2.12.4 Hydrological Sites: There are 19 Water Quality observation centers in this basin. Sediment observations are also made at 14 of these stations. In addition there are 6 gauge discharge observation stations in the basin.



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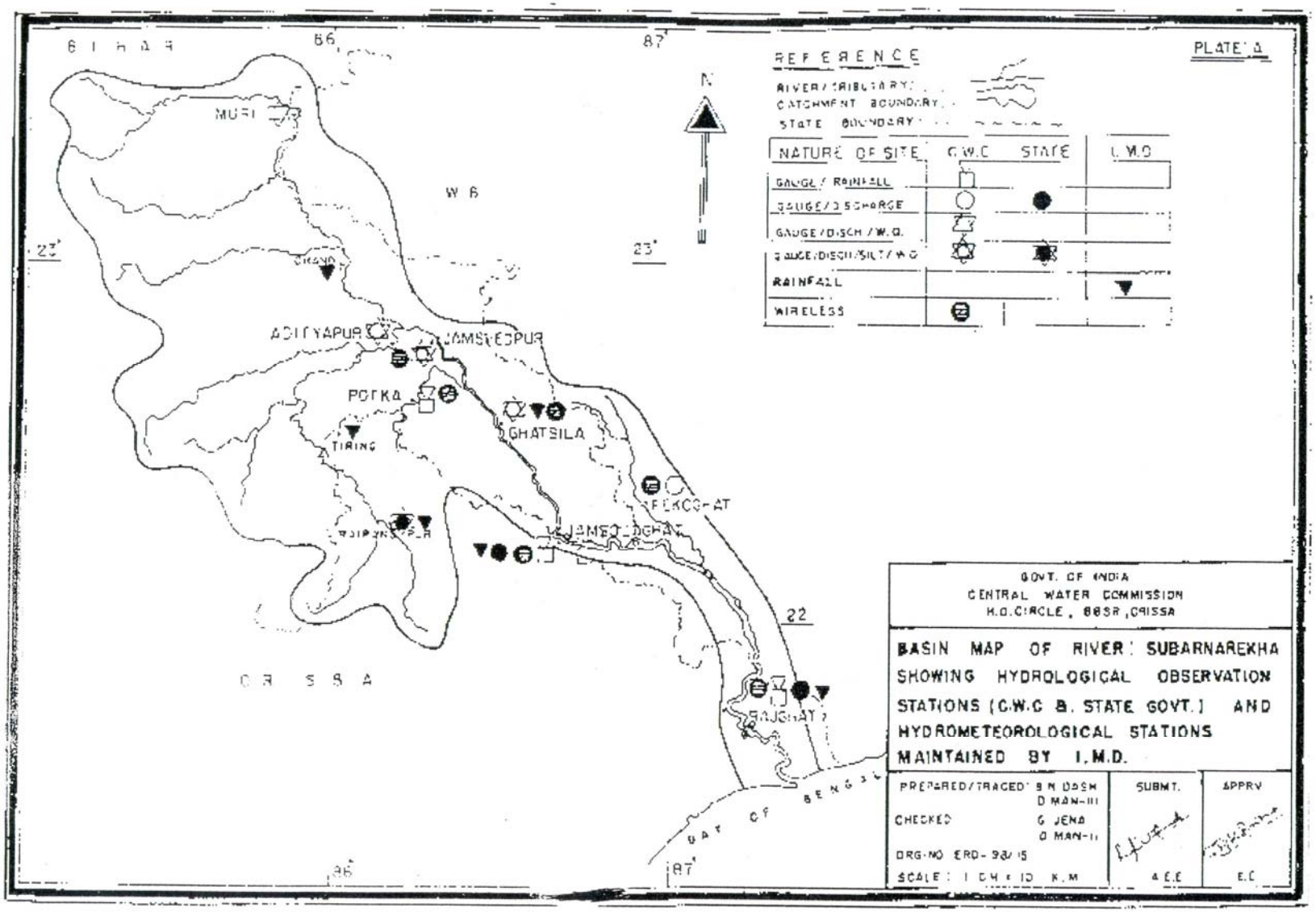
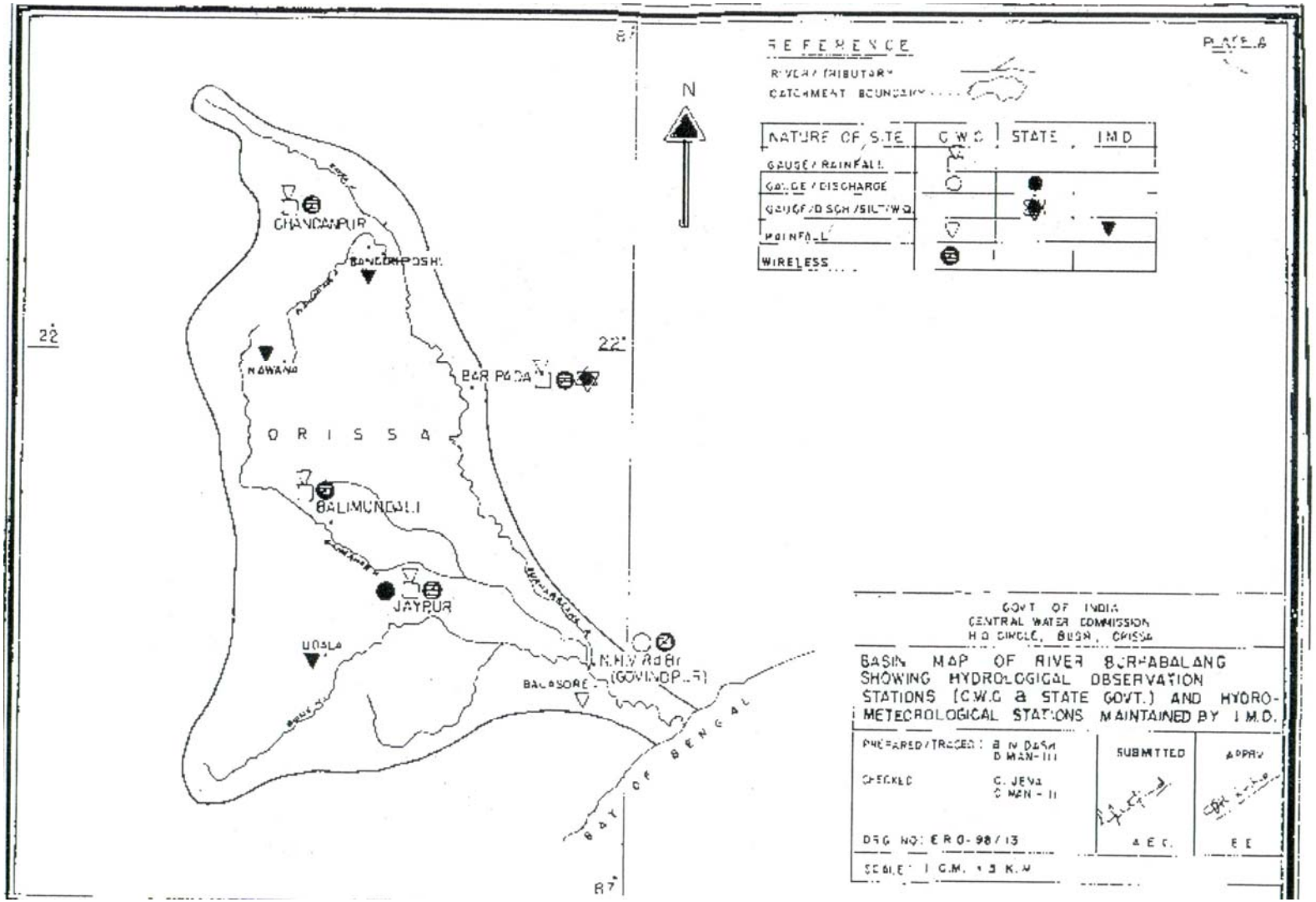
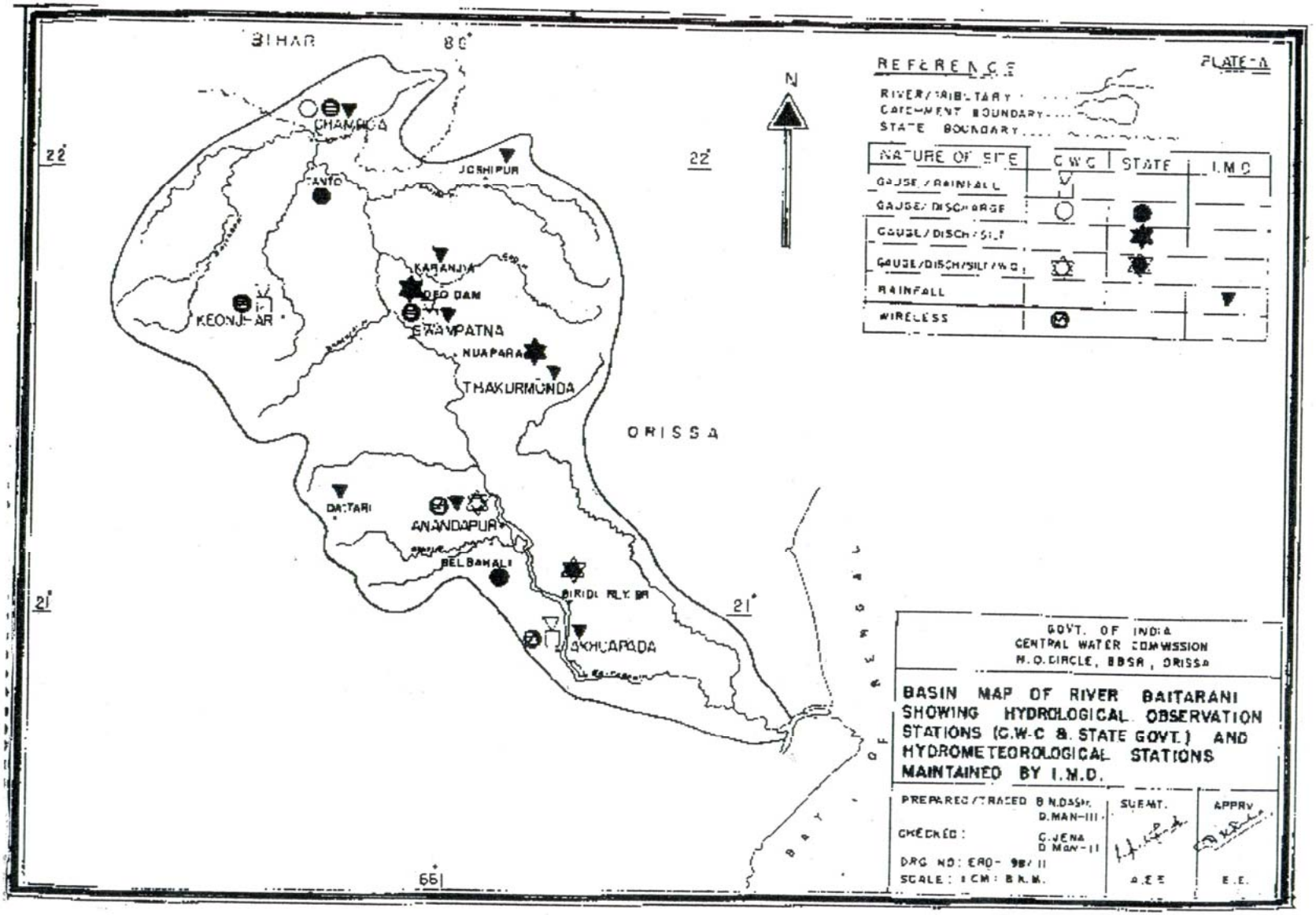


PLATE A
REFERENCE
RIVER/TRIBUTARY
CATCHMENT BOUNDARY
STATE BOUNDARY
NATURE OF SITE
C.W.C
STATE
I.M.D
GAUGE / RAINFALL
GAUGE/DISCHARGE
GAUGE/DISCH./W.Q.
GAUGE/DISCH./SILT/W.Q.
RAINFALL
WIRELESS
BIHAR
W B
ORISSA
BAY OF BENGAL
MURI
ADITYAPUR
JAMSHEDPUR
POTKA
GHATSILA
TIRING
JAMSOLAGHAT
RAJGHAT
GOVT. OF INDIA
CENTRAL WATER COMMISSION
H.O.CIRCLE, BBSR, ORISSA
BASIN MAP OF RIVER: SUBARNAREKHA SHOWING HYDROLOGICAL OBSERVATION STATIONS (C.W.C & STATE GOVT.) AND HYDROMETEOROLOGICAL STATIONS MAINTAINED BY I.M.D.
PREPARED/TRACED: B N DASH D MAN-III
CHECKED G JENA D MAN-II
ORG-NO ERD-98/15
SCALE: 1 CM = 10 K.M
SUBMT.
APPRV
A.E.E
E.E


REFERENCE
RIVER / TRIBUTARY
CATCHMENT BOUNDARY
NATURE OF SITE
C.W.C.
STATE
I.M.D.
GAUGE / RAINFALL
GAUGE / DISCHARGE
GAUGE / DISCH. / SILT / W.Q.
RAINFALL
WIRELESS
N
CHANDIPUR
BANGRIPOSHI
NAWANA
BAR PADA
ORISSA
BALIMUNDALI
JAYPUR
UDALA
BALASORE
BAY OF BENGAL
22°
87°
PLATE 6
GOVT OF INDIA
CENTRAL WATER COMMISSION
H.Q. CIRCLE, BHUBANESWAR, ORISSA
BASIN MAP OF RIVER SUBARNAREKHA SHOWING HYDROLOGICAL OBSERVATION STATIONS (C.W.C & STATE GOVT.) AND HYDRO-METEOROLOGICAL STATIONS MAINTAINED BY I.M.D.
PREPARED / TRACED
CHECKED
SUBMITTED
APPRV
DRG. NO: ERO-98/13
A.E.C.
E.E.
SCALE: 1 C.M. = 5 K.M.


BIHAR
80°
22°
21°
66°
N
CHAMPOA
JOSHIPUR
TANTO
KARANJIA
DEO DAM
KEONJHAR
SWAMPATNA
NUAPARA
THAKURMUNDA
ORISSA
DAITARI
ANANDAPUR
BELBAHALI
BIRIDI RLY. BR
AKHUAPADA
BAY OF BENGAL
REFERENCE
PLATE-A
RIVER/TRIBUTARY
CATCHMENT BOUNDARY
STATE BOUNDARY
NATURE OF SITE
C.W.C
STATE
I.M.D
GAUGE/RAINFALL
GAUGE/DISCHARGE
GAUGE/DISCH/SILT
GAUGE/DISCH/SILT/W.Q.
RAINFALL
WIRELESS
GOVT. OF INDIA
CENTRAL WATER COMMISSION
N.O. CIRCLE, BBSR, ORISSA
BASIN MAP OF RIVER BAITARANI SHOWING HYDROLOGICAL OBSERVATION STATIONS (C.W.C & STATE GOVT.) AND HYDROMETEOROLOGICAL STATIONS MAINTAINED BY I.M.D.
PREPARED/TRACED B.N.DASH, D.MAN-III
CHECKED: C.JENA D.MAN-II
DRG NO: ERO-98/II
SCALE: 1 CM: 8 K.M.
SUBMT.
A.E.E
APPRV
E.E.

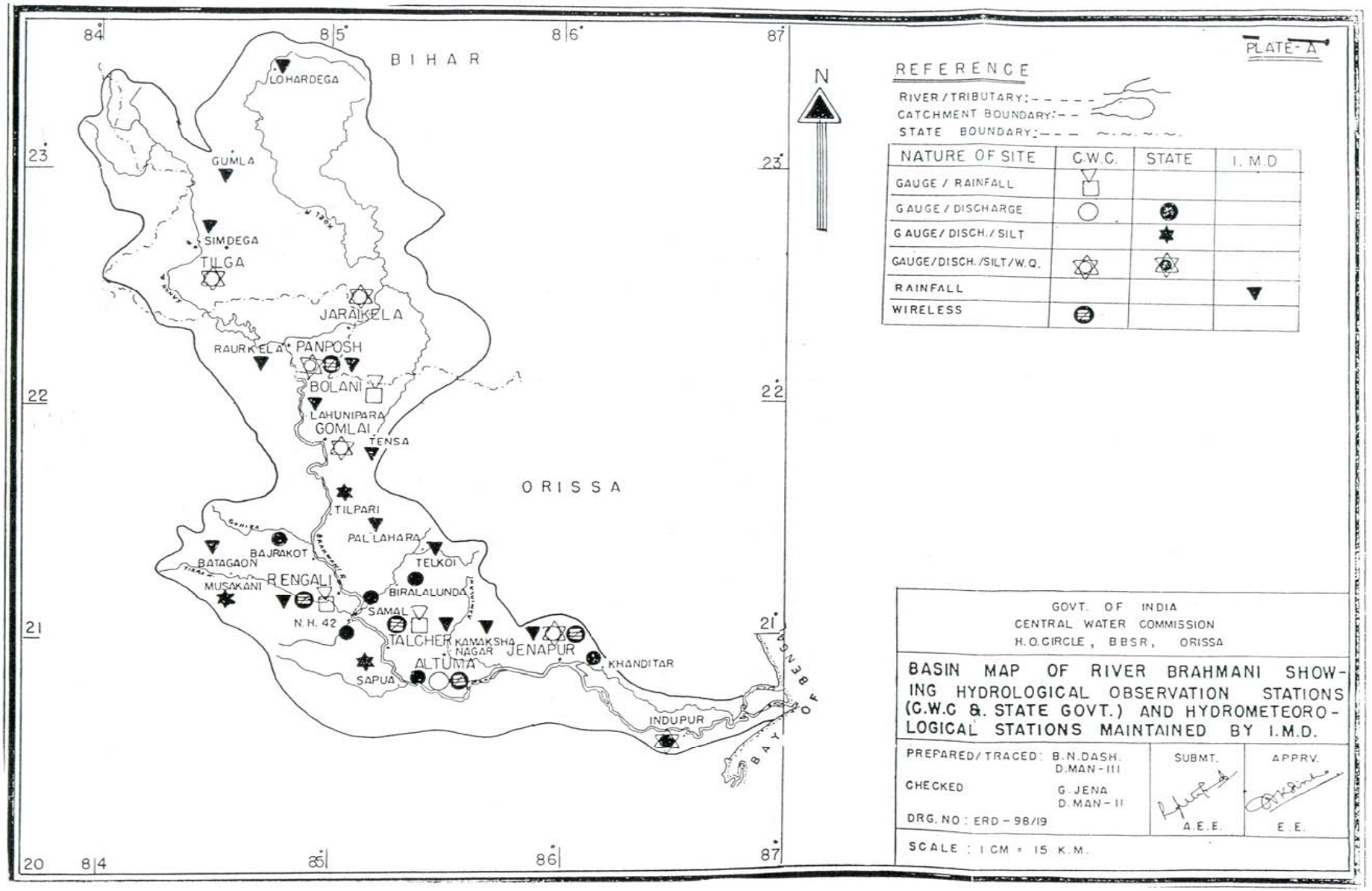
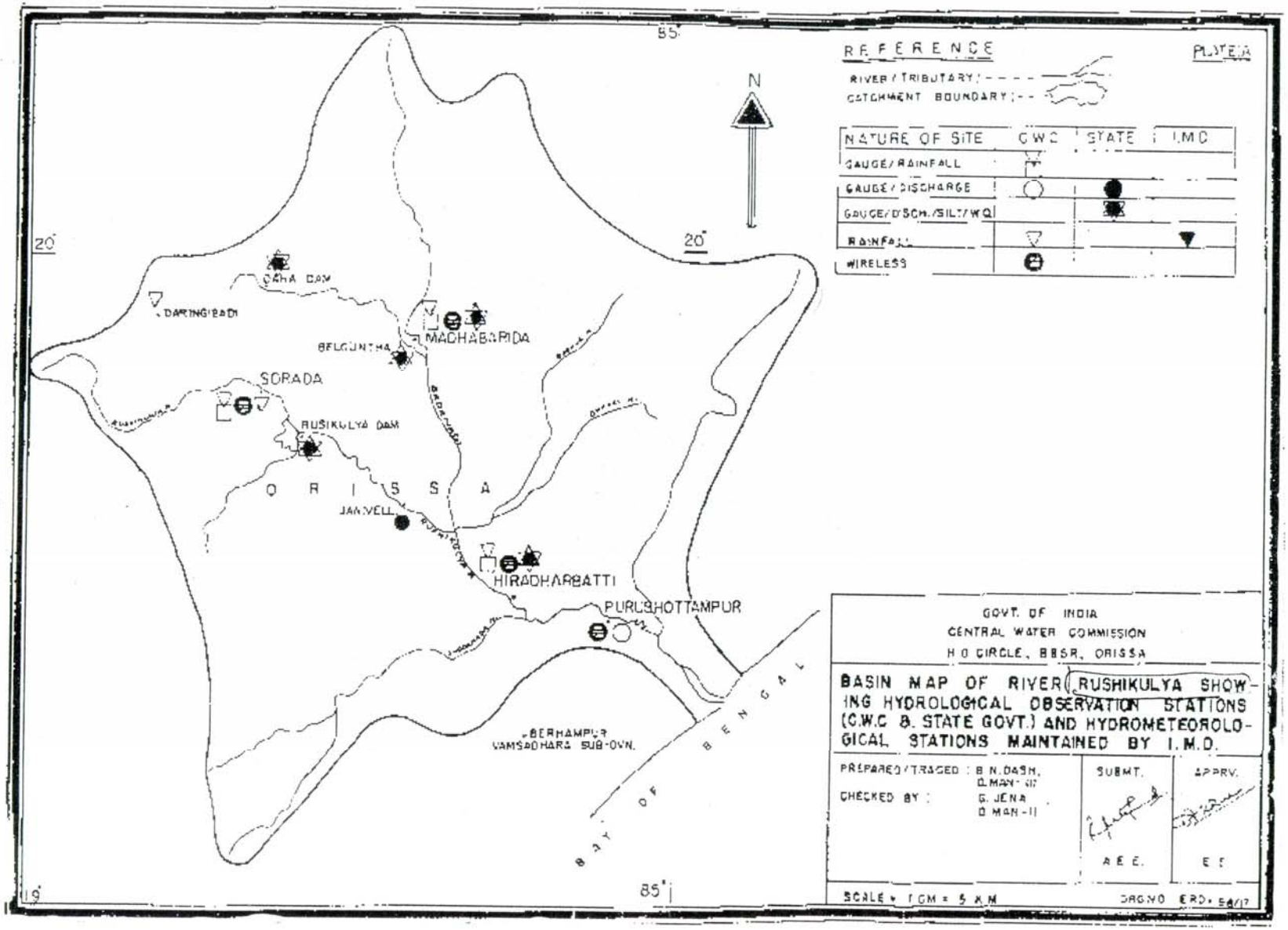


PLATE-A
REFERENCE
RIVER / TRIBUTARY:
CATCHMENT BOUNDARY:
STATE BOUNDARY:
NATURE OF SITE | C.W.C. | STATE | I.M.D
GAUGE / RAINFALL
GAUGE / DISCHARGE
GAUGE / DISCH. / SILT
GAUGE/DISCH./SILT/W.Q.
RAINFALL
WIRELESS
N
BIHAR
ORISSA
LOHARDEGA
GUMLA
SIMDEGA
TILGA
JARAIKELA
RAURKELA
PANPOSH
BOLANI
LAHUNIPARA
GOMLAI
TENSA
TILPARI
PALLAHARA
BAJRAKOT
BATAGAON
TELKOI
MUSAKANI
RENGALI
BIRALALUNDA
SAMAL
N.H. 42
TALCHER
KAMAKSHA NAGAR
JENAPUR
KHANDITAR
ALTUMA
SAPUA
INDUPUR
BAY OF BENGAL
84
85
86
87
20
21
22
23
GOVT. OF INDIA
CENTRAL WATER COMMISSION
H.O.CIRCLE, BBSR, ORISSA
BASIN MAP OF RIVER BRAHMANI SHOWING HYDROLOGICAL OBSERVATION STATIONS (C.W.C & STATE GOVT.) AND HYDROMETEOROLOGICAL STATIONS MAINTAINED BY I.M.D.
PREPARED/ TRACED: B.N.DASH. D.MAN-III
CHECKED: G.JENA D.MAN-II
DRG. NO: ERD-98/19
SUBMT. A.E.E.
APPRV. E.E.
SCALE : 1 CM = 15 K.M.


REFERENCE
PLATE A
RIVER / TRIBUTARY
CATCHMENT BOUNDARY
NATURE OF SITE
C.W.C
STATE
I.M.D
GAUGE/RAINFALL
GAUGE/DISCHARGE
GAUGE/DISCH./SILT/W.Q.
RAINFALL
WIRELESS
N
85°
20°
19°
DAHA DAM
DARINGIBADI
MADHABARIDA
BELGUNTHA
SORADA
RUSIKULYA DAM
O R I S S A
JANIVELL
HIRADHARBATTI
PURUSHOTTAMPUR
BERHAMPUR
VAMSADHARA SUB-DVN.
BAY OF BENGAL
GOVT. OF INDIA
CENTRAL WATER COMMISSION
H.O. CIRCLE, BBSR, ORISSA
BASIN MAP OF RIVER RUSHIKULYA SHOWING HYDROLOGICAL OBSERVATION STATIONS (C.W.C & STATE GOVT.) AND HYDROMETEOROLOGICAL STATIONS MAINTAINED BY I.M.D.
PREPARED/TRACED : B.N. DASH, D.MAN-III
CHECKED BY : G. JENA D.MAN-II
SUBMT.
APPRV.
A.E.E.
E.E.
SCALE = 1 CM = 5 K.M

16

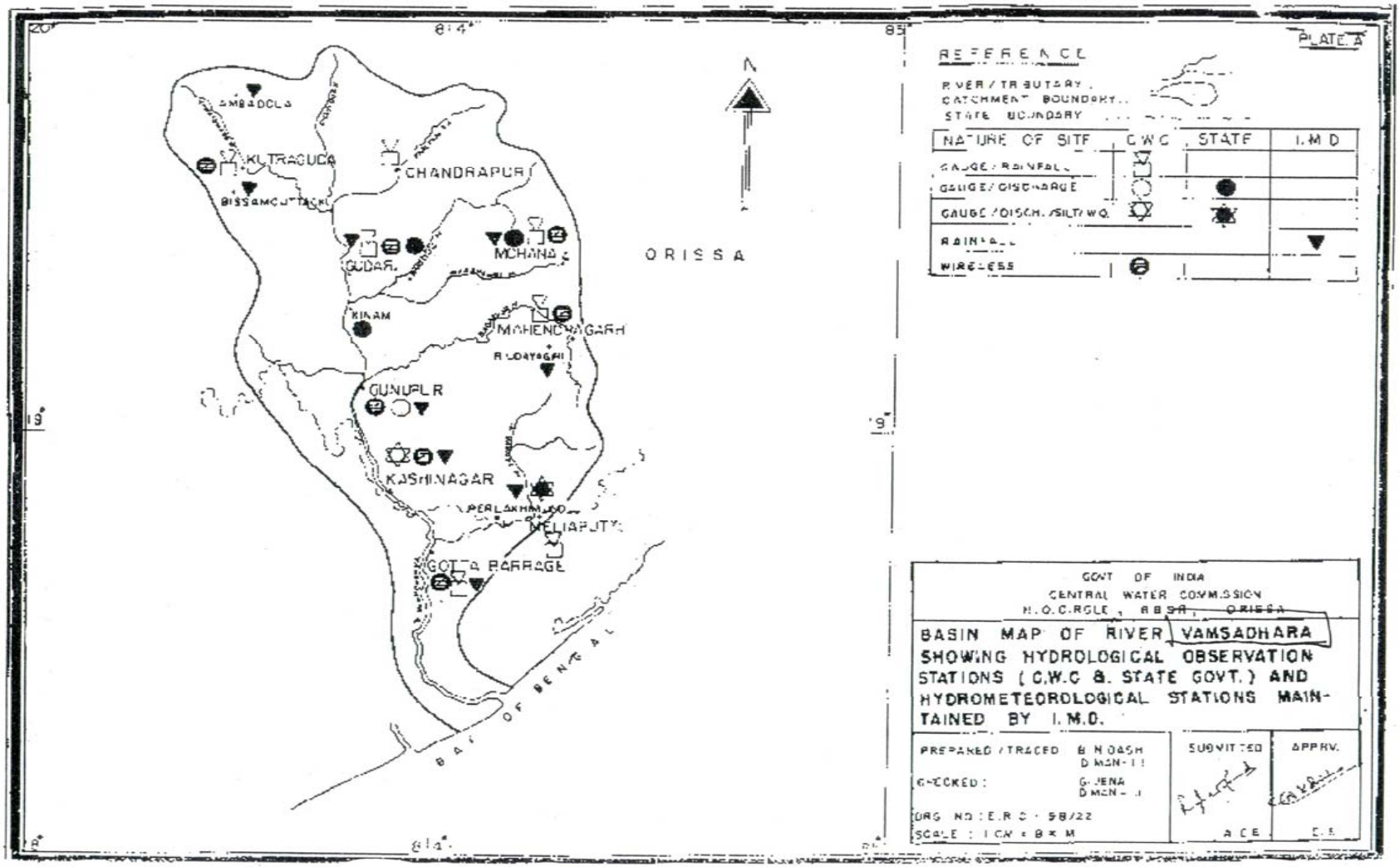
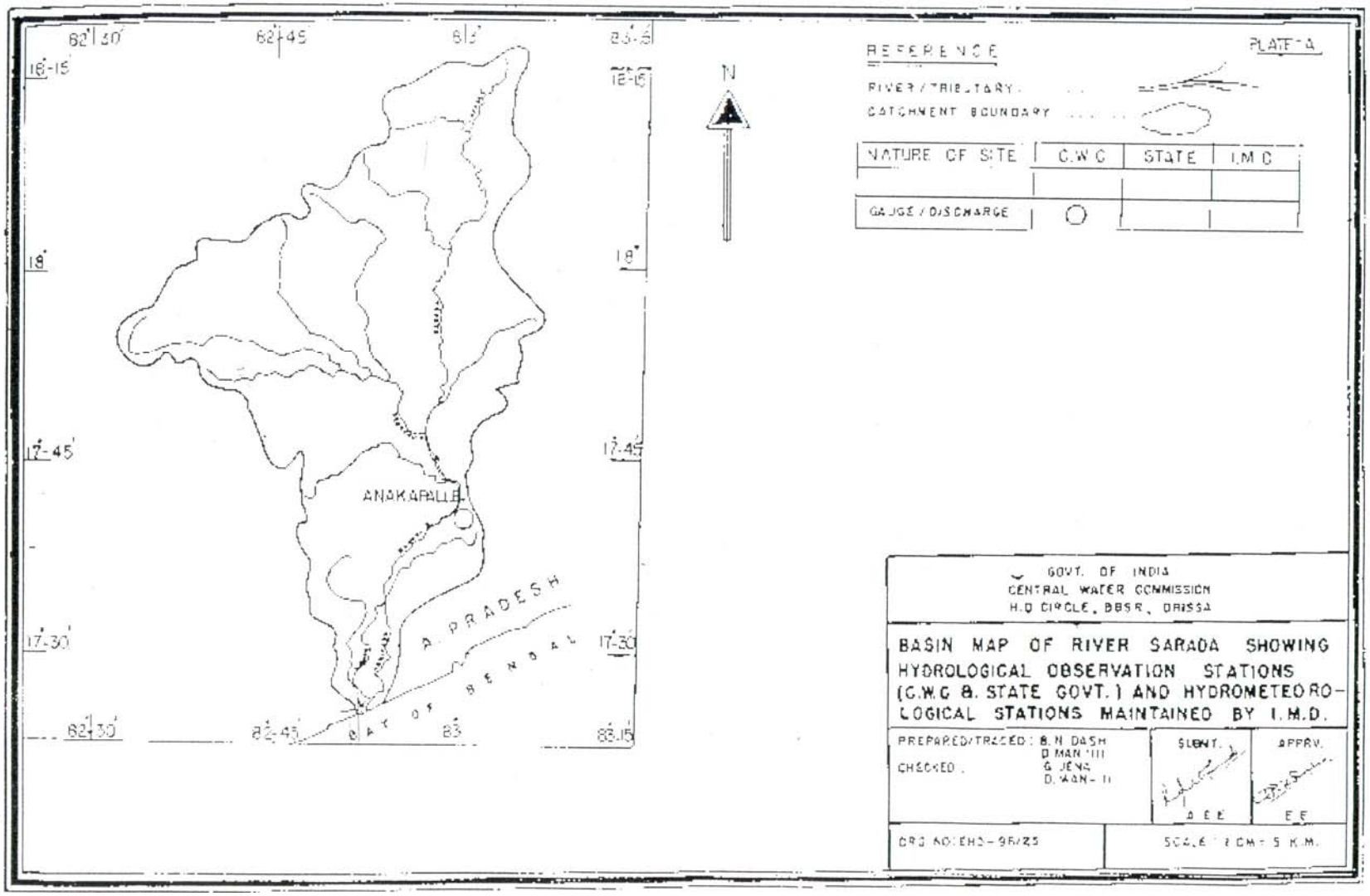


PLATE A
REFERENCE
RIVER / TRIBUTARY
CATCHMENT BOUNDARY
STATE BOUNDARY
NATURE OF SITE
C.W.C
STATE
I.M.D
GAUGE / RAINFALL
GAUGE / DISCHARGE
GAUGE / DISCH. / SILT / W.Q.
RAINFALL
WIRELESS
ORISSA
AMBADOLA
KUTRAGUDA
BISSAMCUTTACK
CHANDRAPUR
GUDAR
MOHANA
KIRAM
MAHENDRAGARH
RUDAYAGIRI
GUNUPUR
KASHINAGAR
PERLAKHEMUNDI
MELIAPUTTI
GOTTA BARRAGE
BAY OF BENGAL
GOVT OF INDIA
CENTRAL WATER COMMISSION
N.E.C.REGION, BHUBANESWAR, ORISSA
BASIN MAP OF RIVER VAMSADHARA SHOWING HYDROLOGICAL OBSERVATION STATIONS (C.W.C & STATE GOVT.) AND HYDROMETEOROLOGICAL STATIONS MAINTAINED BY I.M.D.
PREPARED / TRACED
B.N.DASH
DMAN-II
CHECKED :
G.JENA
DMAN-I
SUBMITTED
APPRV.
DRG. NO : E.R.D - 58/22
SCALE : 1 CM = 8 KM
A.C.E
S.E.


REFERENCE
PLATE-A
RIVER / TRIBUTARY
CATCHMENT BOUNDARY
NATURE OF SITE
C.W.C
STATE
I.M.D
GAUGE / DISCHARGE
N
ANAKAPALLE
A. PRADESH
BAY OF BENGAL
GOVT. OF INDIA
CENTRAL WATER COMMISSION
H.D CIRCLE, BBSR, ORISSA
BASIN MAP OF RIVER SARADA SHOWING HYDROLOGICAL OBSERVATION STATIONS (C.W.C & STATE GOVT.) AND HYDROMETEOROLOGICAL STATIONS MAINTAINED BY I.M.D.
PREPARED/TRACED: B.N DASH
D MAN 'III
CHECKED: G JENA
D. MAN- II
SUBMT.
APPRV.
A E E
E E
SCALE 1 CM = 5 K.M.

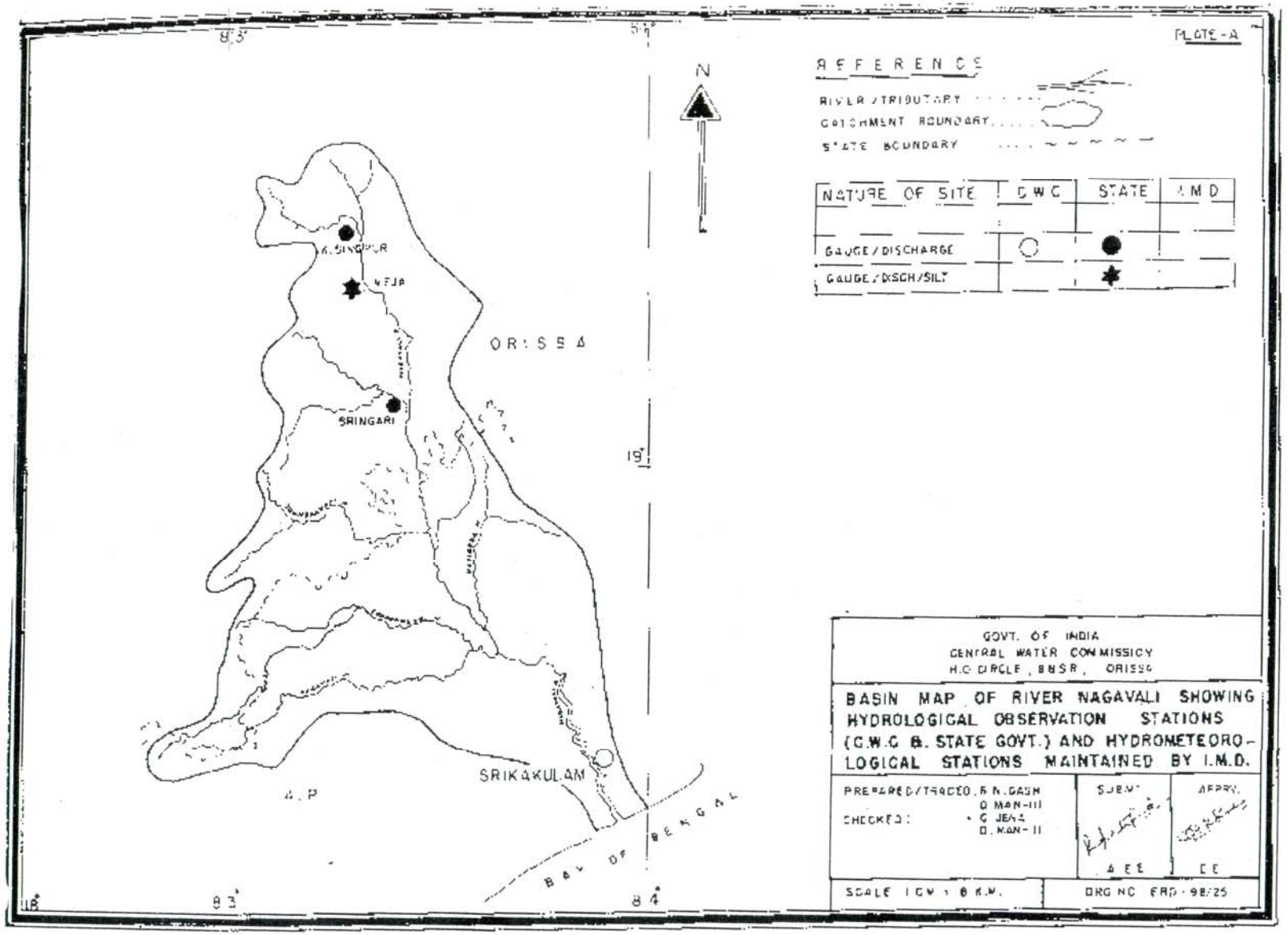
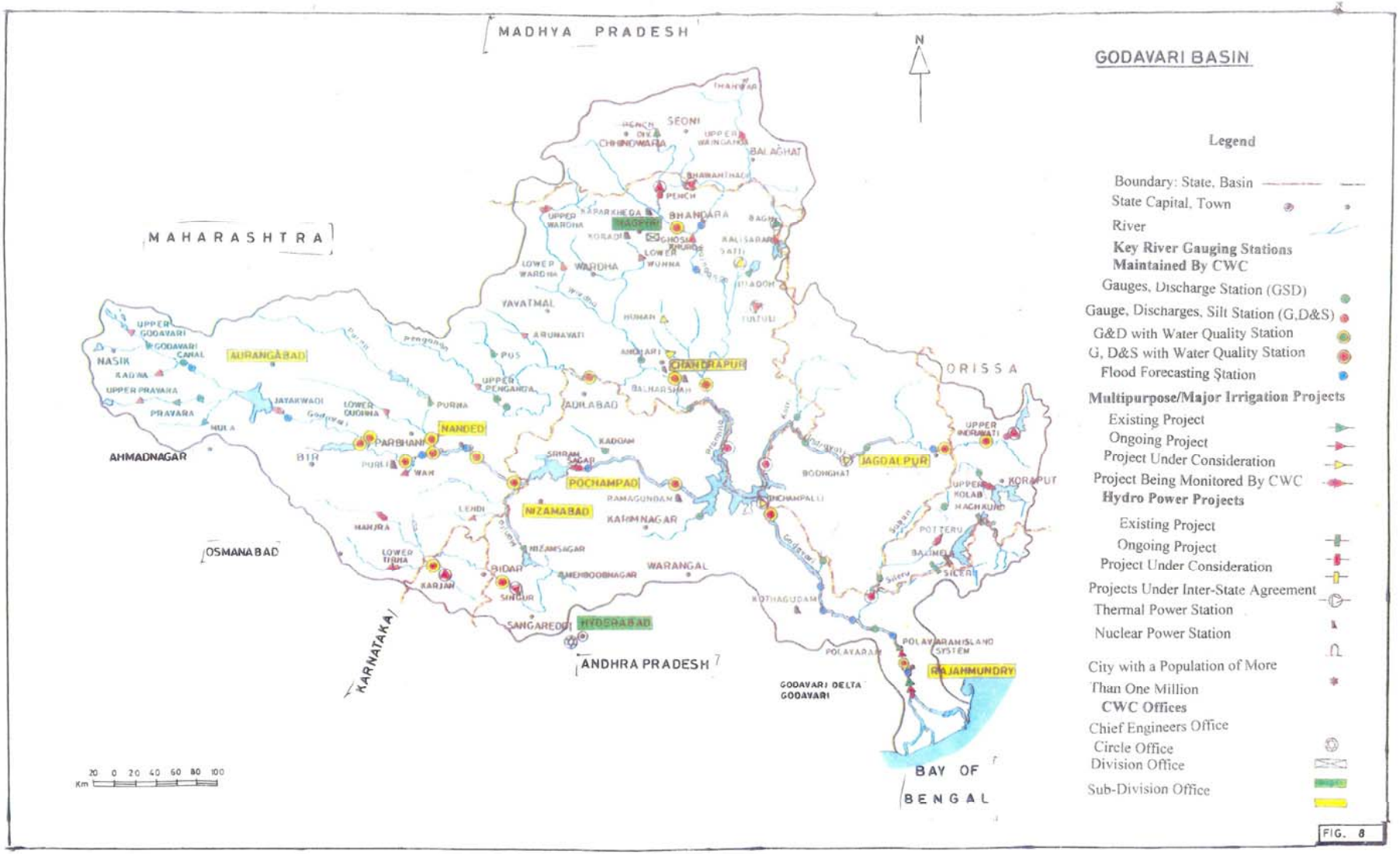


PLATE-A
REFERENCE
RIVER/TRIBUTARY
CATCHMENT BOUNDARY
STATE BOUNDARY
NATURE OF SITE
C.W.C
STATE
I.M.D
GAUGE/DISCHARGE
GAUGE/DISCH/SILT
N
ORISSA
SRINGARI
SRIKAKULAM
A.P
BAY OF BENGAL
GOVT. OF INDIA
CENTRAL WATER COMMISSION
H.O CIRCLE, B&SR, ORISSA
BASIN MAP OF RIVER NAGAVALI SHOWING HYDROLOGICAL OBSERVATION STATIONS (C.W.C & STATE GOVT.) AND HYDROMETEOROLOGICAL STATIONS MAINTAINED BY I.M.D.
PREPARED/TRACED: B.N. DASH
D. MAN-III
CHECKED: G. JENA
D. MAN-II
SUBMT.
APPRV.
A.E.E
D.E
SCALE 1 CM = 8 K.M.
DRG NO ERD-98/25



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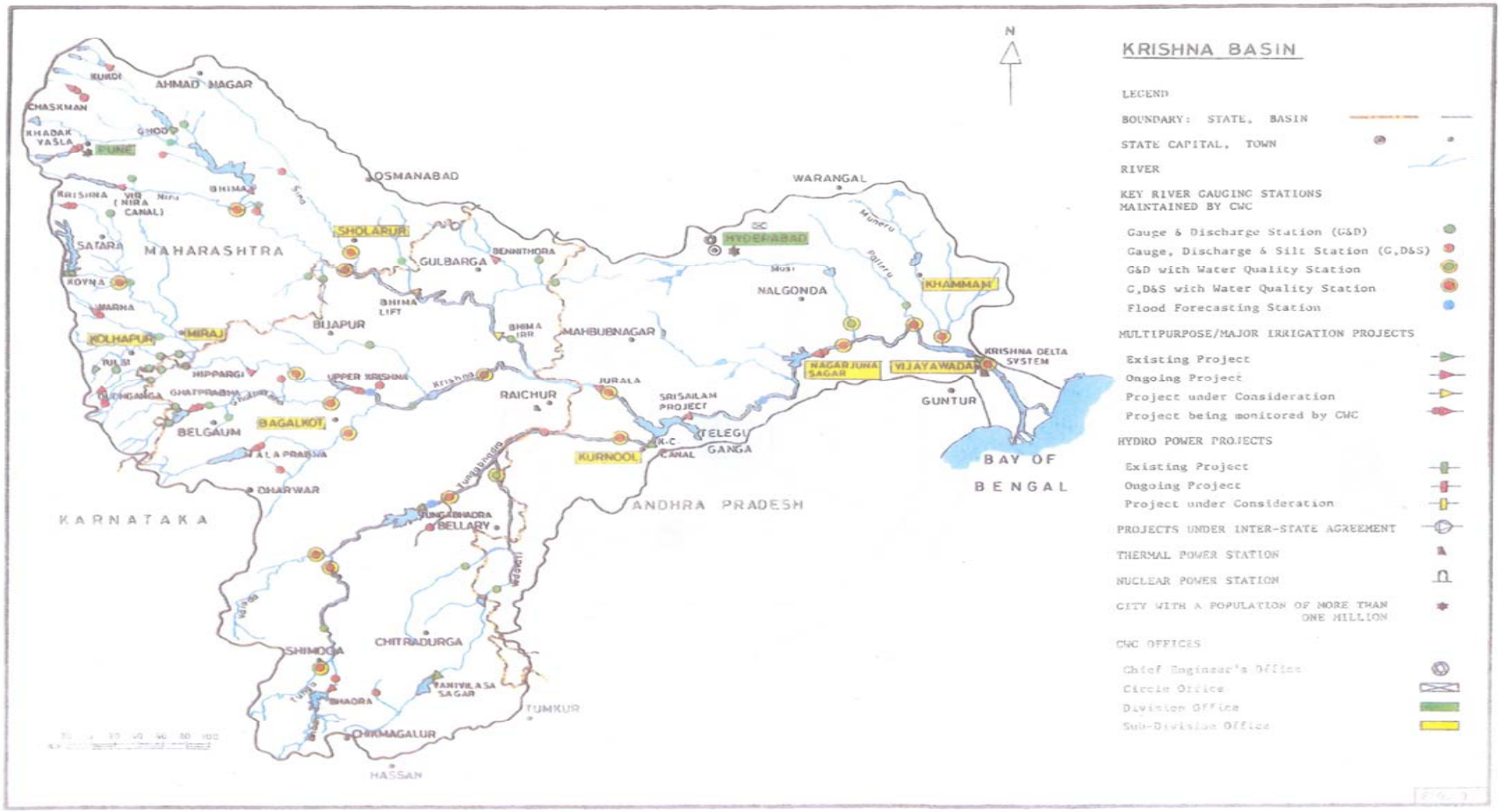
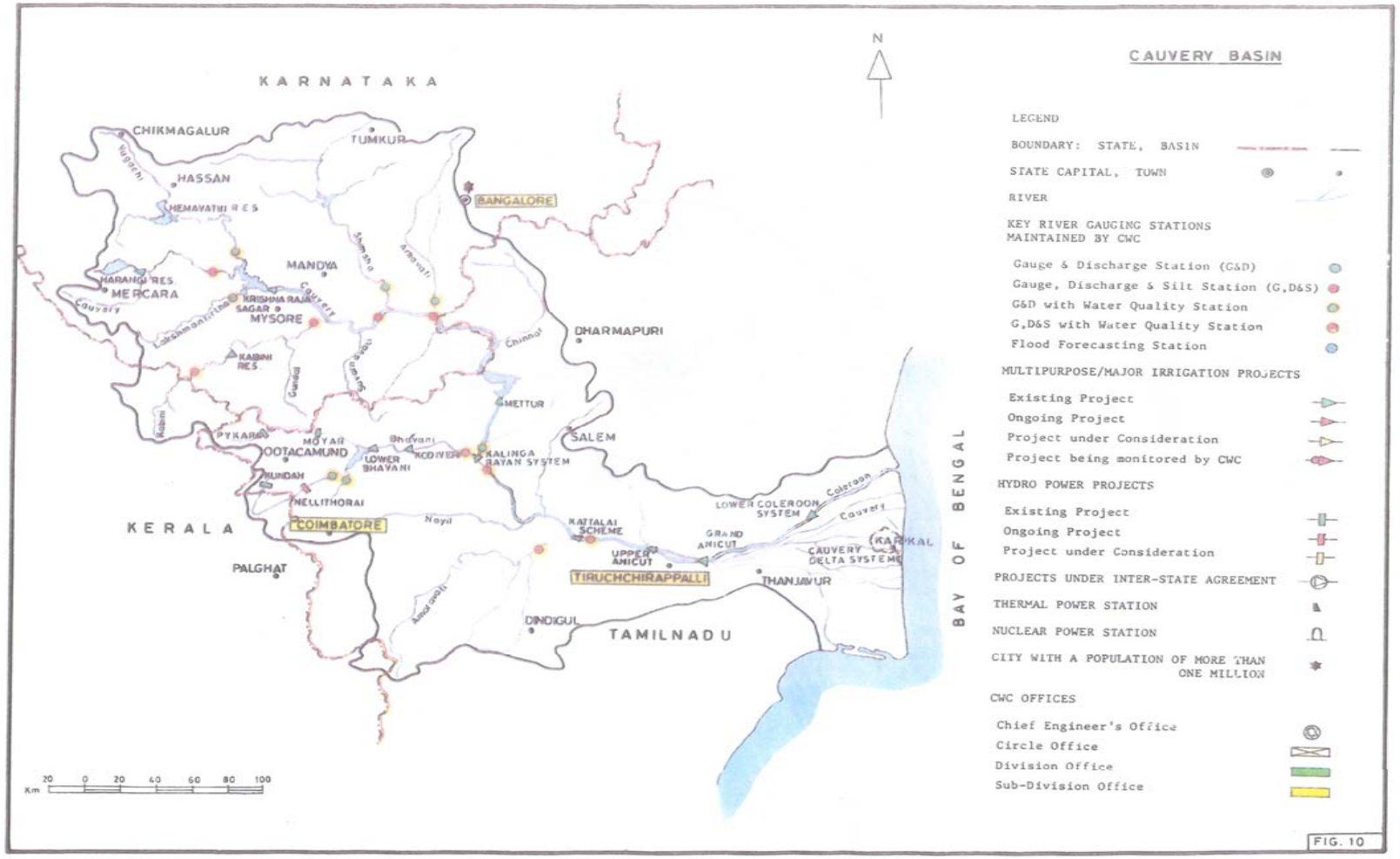

KRISHNA BASIN
LEGEND
BOUNDARY: STATE, BASIN
STATE CAPITAL, TOWN
RIVER
KEY RIVER GAUGING STATIONS MAINTAINED BY CWC
Gauge & Discharge Station (G&D)
Gauge, Discharge & Silt Station (G,D&S)
G&D with Water Quality Station
G,D&S with Water Quality Station
Flood Forecasting Station
MULTIPURPOSE/MAJOR IRRIGATION PROJECTS
Existing Project
Ongoing Project
Project under Consideration
Project being monitored by CWC
HYDRO POWER PROJECTS
Existing Project
Ongoing Project
Project under Consideration
PROJECTS UNDER INTER-STATE AGREEMENT
THERMAL POWER STATION
NUCLEAR POWER STATION
CITY WITH A POPULATION OF MORE THAN ONE MILLION
CWC OFFICES
Chief Engineer's Office
Circle Office
Division Office
Sub-Division Office
N
MAHARASHTRA
KARNATAKA
ANDHRA PRADESH
BAY OF BENGAL
AHMAD NAGAR
OSMANABAD
WARANGAL
HYDERABAD
NALGONDA
KHAMMAM
SHOLAPUR
GULBARGA
BENNITHORA
BIJAPUR
MAHBUBNAGAR
KOLHAPUR
MIRAJ
BELGAUM
BAGALKOT
RAICHUR
JURALA
SRISAILAM PROJECT
TELEGI
GANGA
KURNOOL
NAGARJUNA SAGAR
VIJAYAWADA
KRISHNA DELTA SYSTEM
GUNTUR
DHARWAR
BELLARY
CHITRADURGA
SHIMOGA
TUMKUR
CHIKMAGALUR
HASSAN
PUNE
SATARA
KOYNA
WARNA
KRISHNA
BHIMA
UPPER KRISHNA
BHIMA LIFT
BHIMA IRR
K.C. CANAL
TUNGABHADRA
BHADRA
VANIVILASA SAGAR
KUKDI
CHASKMAN
KHADAK VASLA
GHOD
VIR (NIRA CANAL)
Nira
Sina
Krishna
Musi
Muneru
Palleru
Tungabhadra
Hagari
Tunga
Bhadra


CAUVERY BASIN
N
KARNATAKA
KERALA
TAMILNADU
BAY OF BENGAL
CHIKMAGALUR
TUMKUR
HASSAN
HEMAVATHI R E S
BANGALORE
MANDYA
HARANGI R E S
MERCARA
KRISHNA RAJA SAGAR
MYSORE
KABINI R E S
DHARMAPURI
METTUR
SALEM
PYKARA
MOYAR
OOTACAMUND
LOWER BHAVANI
KALINGA RAYAN SYSTEM
KUNDAH
METTHORAI
COIMBATORE
PALGHAT
KATTALAI SCHEME
UPPER ANICUT
GRAND ANICUT
LOWER COLEROON SYSTEM
CAUVERY DELTA SYSTEME
KARAIKAL
TIRUCHCHIRAPPALLI
THANJAVUR
DINDIGUL
Sugavati
Hemavathi
Shimsha
Arkavati
Cauvery
Lokkamanahalla
Kabini
Gundal
Bhavani
Noyil
Amaravati
Coleroon
LEGEND
BOUNDARY: STATE, BASIN
STATE CAPITAL, TOWN
RIVER
KEY RIVER GAUGING STATIONS MAINTAINED BY CWC
Gauge & Discharge Station (G&D)
Gauge, Discharge & Silt Station (G,D&S)
G&D with Water Quality Station
G,D&S with Water Quality Station
Flood Forecasting Station
MULTIPURPOSE/MAJOR IRRIGATION PROJECTS
Existing Project
Ongoing Project
Project under Consideration
Project being monitored by CWC
HYDRO POWER PROJECTS
Existing Project
Ongoing Project
Project under Consideration
PROJECTS UNDER INTER-STATE AGREEMENT
THERMAL POWER STATION
NUCLEAR POWER STATION
CITY WITH A POPULATION OF MORE THAN ONE MILLION
CWC OFFICES
Chief Engineer's Office
Circle Office
Division Office
Sub-Division Office
20 0 20 40 60 80 100
Km
FIG. 10

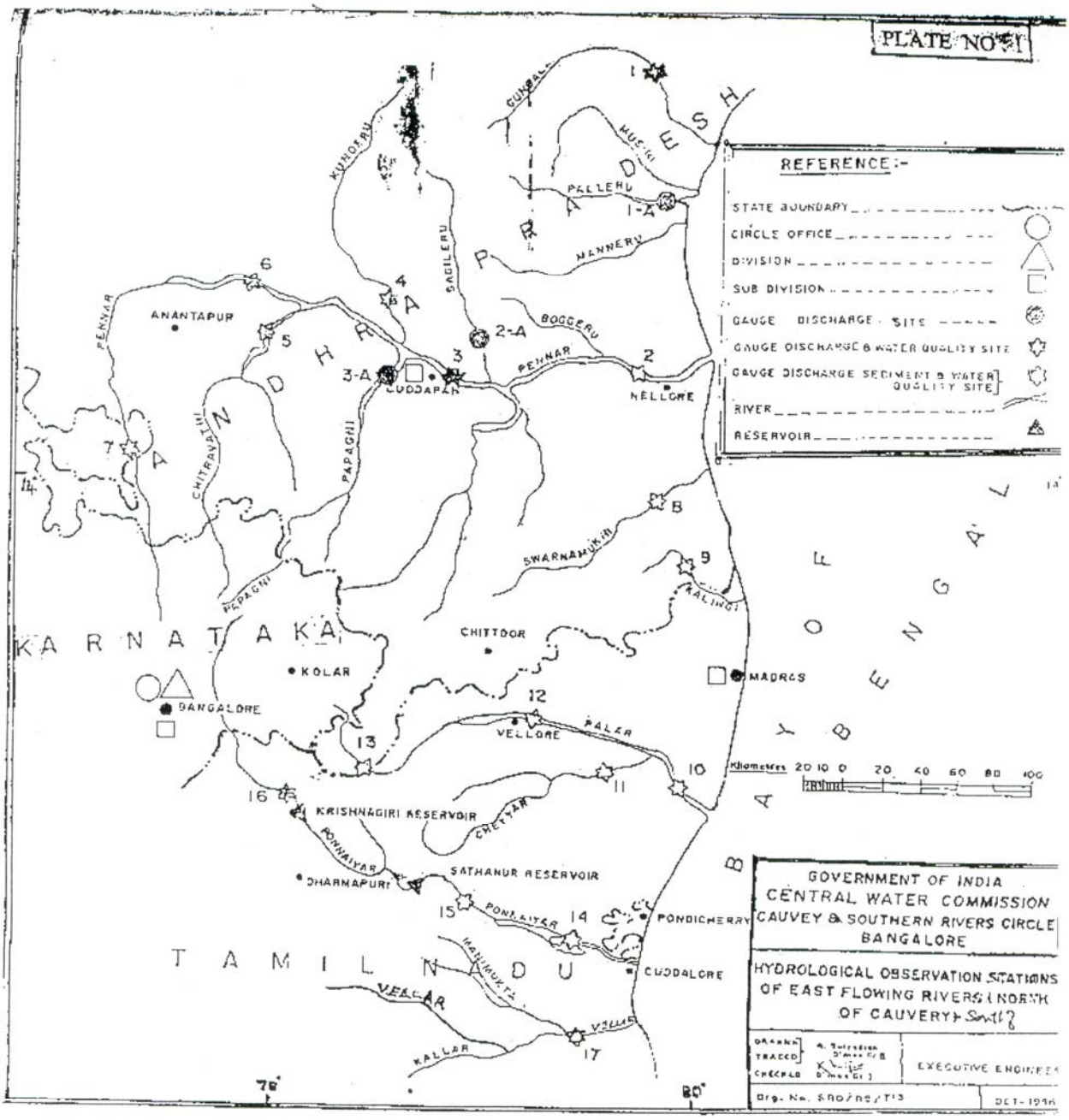
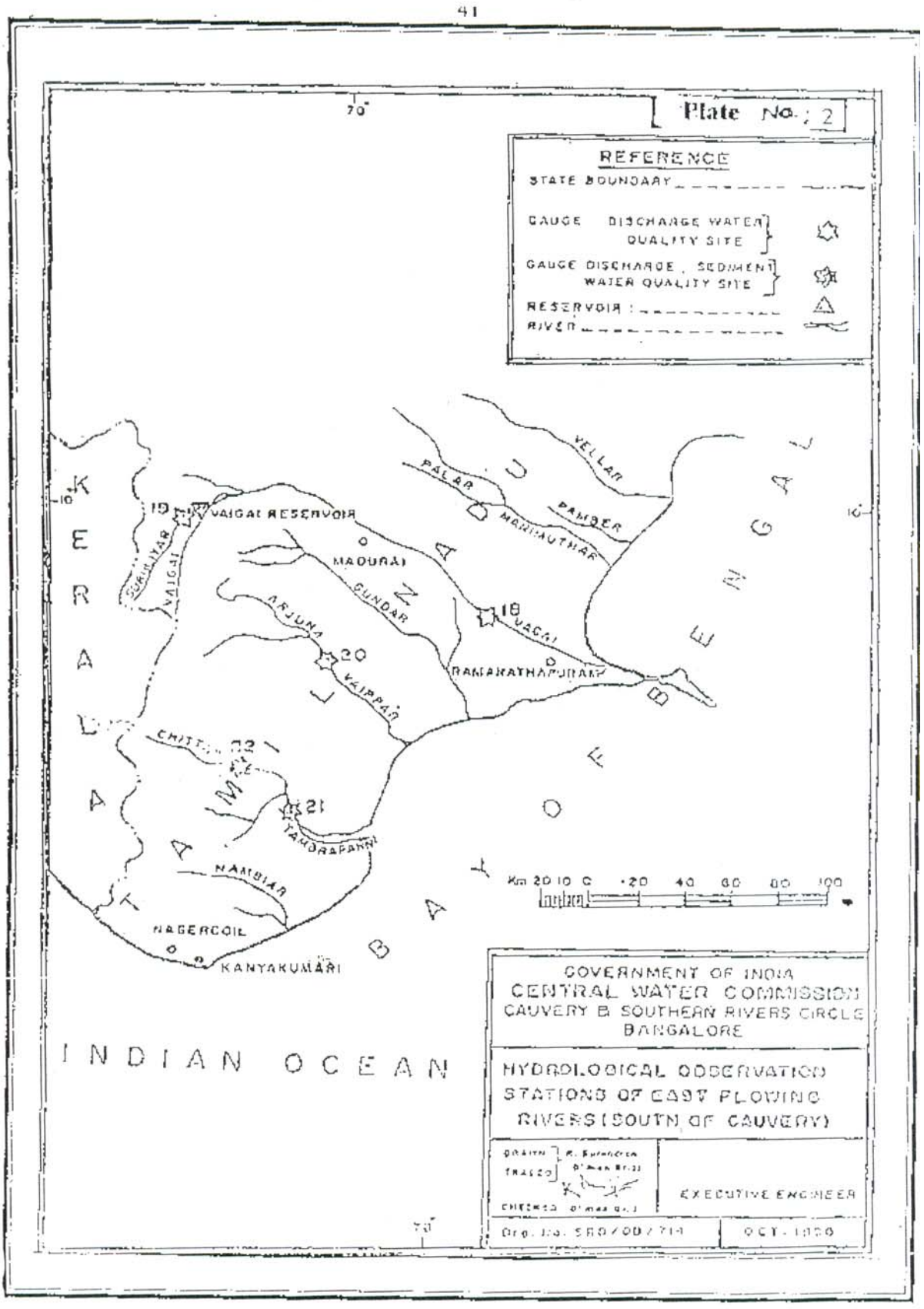
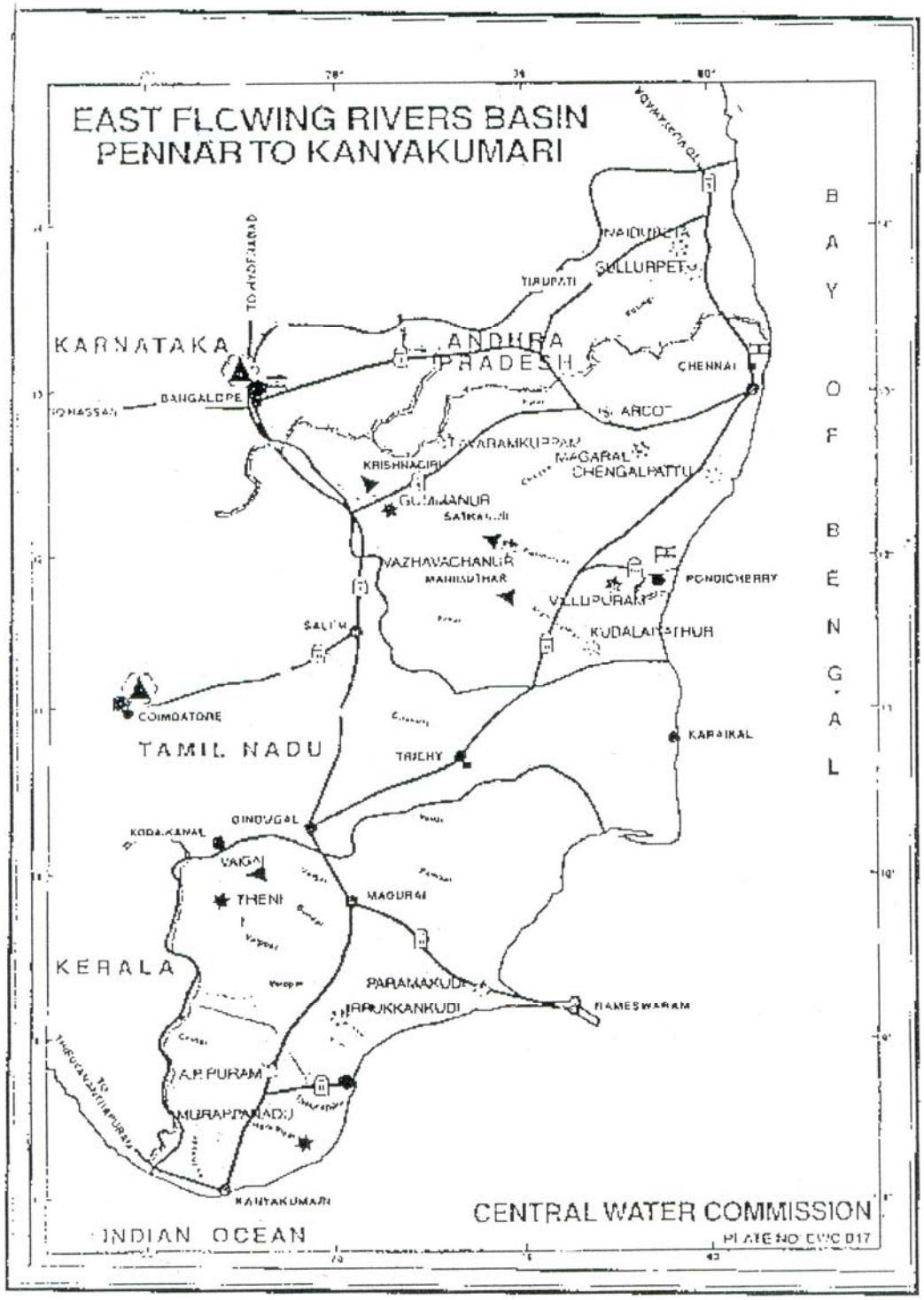
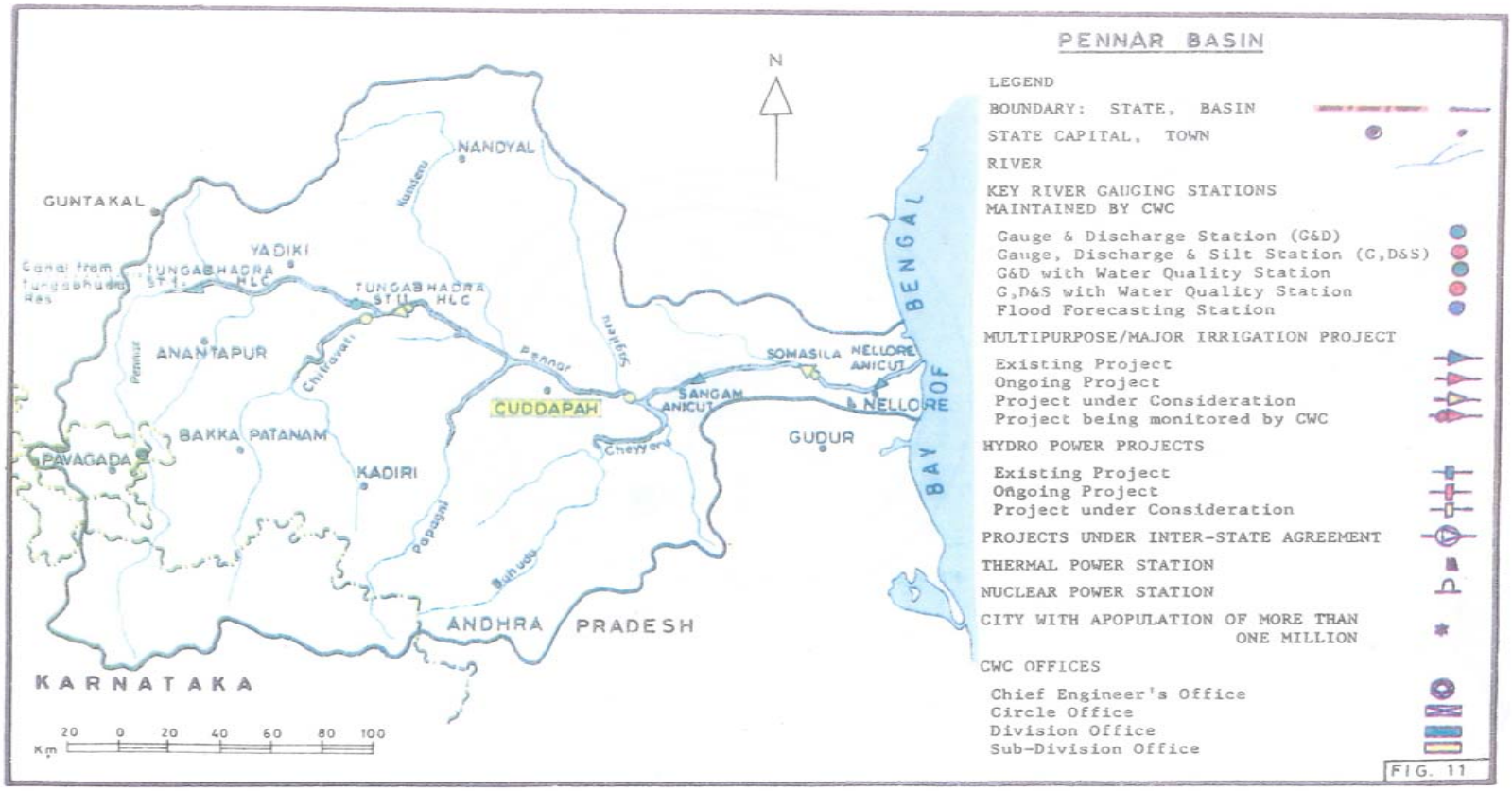


PLATE NO. 1
REFERENCE:-
STATE BOUNDARY
CIRCLE OFFICE
DIVISION
SUB DIVISION
GAUGE DISCHARGE SITE
GAUGE DISCHARGE & WATER QUALITY SITE
GAUGE DISCHARGE SEDIMENT & WATER QUALITY SITE
RIVER
RESERVOIR
ANDHRA PRADESH
KARNATAKA
TAMIL NADU
BAY OF BENGAL
ANANTAPUR
CUDDAPAH
NELLORE
CHITTOOR
KOLAR
BANGALORE
MADRAS
VELLORE
KRISHNAGIRI RESERVOIR
DHARMAPURI
SATHANUR RESERVOIR
PONDICHERRY
CUDDALORE
PENNAR
PAPAGNI
CHITRAVATHI
SAGILERU
KUNDERU
PALLERU
MANNERU
BOGGERU
SWARNAMUKHI
KALINGI
PALAR
CHETTAR
PONNAIYAR
MANIMUKTA
VELLAR
KALLAR
Kilometres 20 10 0 20 40 60 80 100
GOVERNMENT OF INDIA
CENTRAL WATER COMMISSION
CAUVEY & SOUTHERN RIVERS CIRCLE
BANGALORE
HYDROLOGICAL OBSERVATION STATIONS OF EAST FLOWING RIVERS (NORTH OF CAUVERY)
EXECUTIVE ENGINEER
78°
80°

40


41
Plate No. : 2
REFERENCE
STATE BOUNDARY
GAUGE DISCHARGE WATER QUALITY SITE
GAUGE DISCHARGE, SEDIMENT WATER QUALITY SITE
RESERVOIR
RIVER
VELLAR
PALAR
MARIHAUTHAR
PAMBER
VAIGAI RESERVOIR
MADURAI
SUKHNIYAR
VAIGAI
GUNDAR
ARJUNA
VAIPPAR
RAMANATHAPURAM
CHITTAR
TAMBRAPARNI
NAMBIAR
NAGERCOIL
KANYAKUMARI
KERALA
TAMIL NADU
BAY OF BENGAL
INDIAN OCEAN
GOVERNMENT OF INDIA
CENTRAL WATER COMMISSION
CAUVERY & SOUTHERN RIVERS CIRCLE
BANGALORE
HYDROLOGICAL OBSERVATION STATIONS OF EAST FLOWING RIVERS (SOUTH OF CAUVERY)
EXECUTIVE ENGINEER
OCT. 1990


EAST FLOWING RIVERS BASIN
PENNAR TO KANYAKUMARI
KARNATAKA
ANDHRA PRADESH
TAMIL NADU
KERALA
BAY OF BENGAL
INDIAN OCEAN
BANGALORE
CHENNAI
SALEM
COIMBATORE
TRICHY
KARAIKAL
PONDICHERRY
MADURAI
RAMESWARAM
KANYAKUMARI
CENTRAL WATER COMMISSION



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

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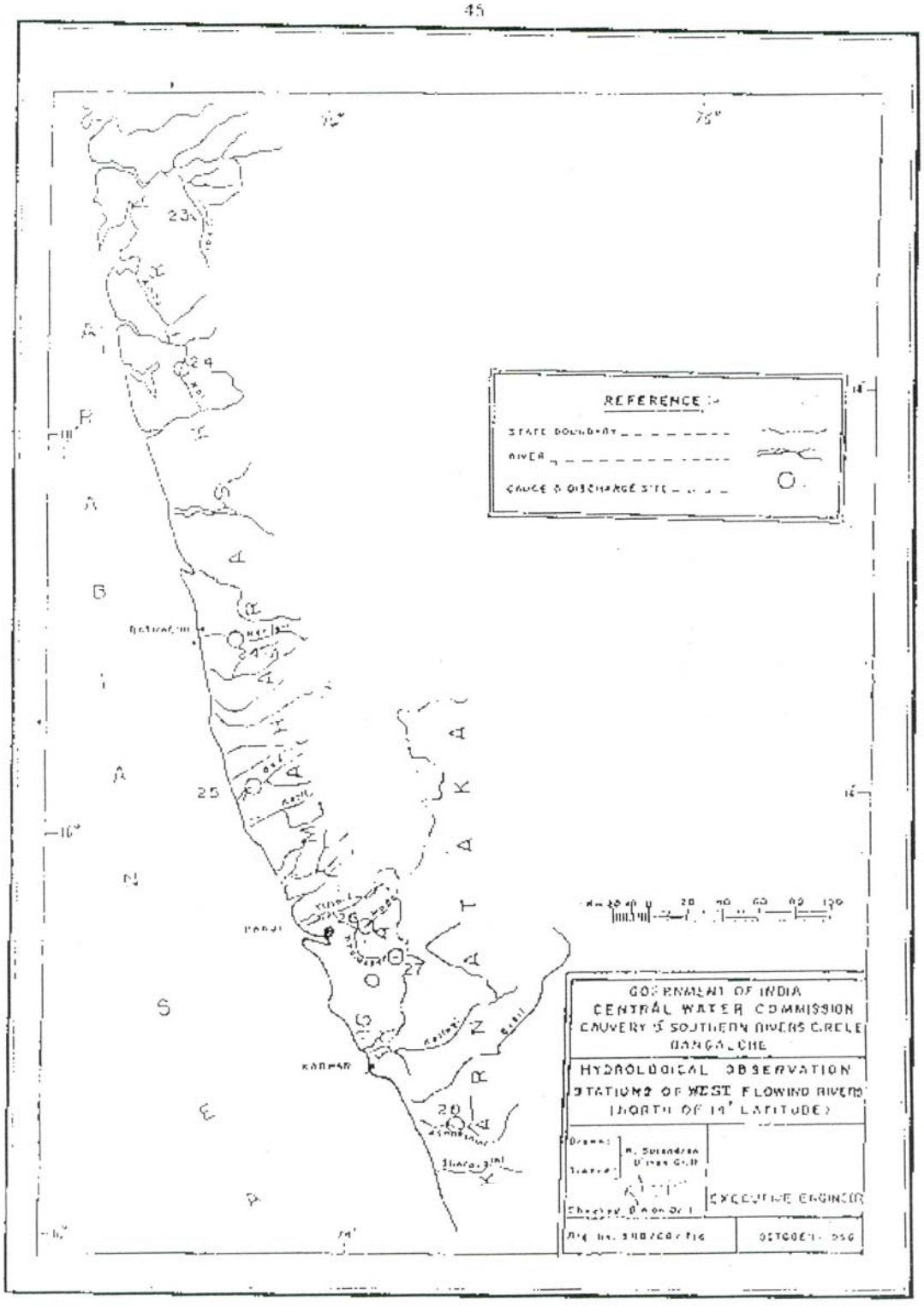
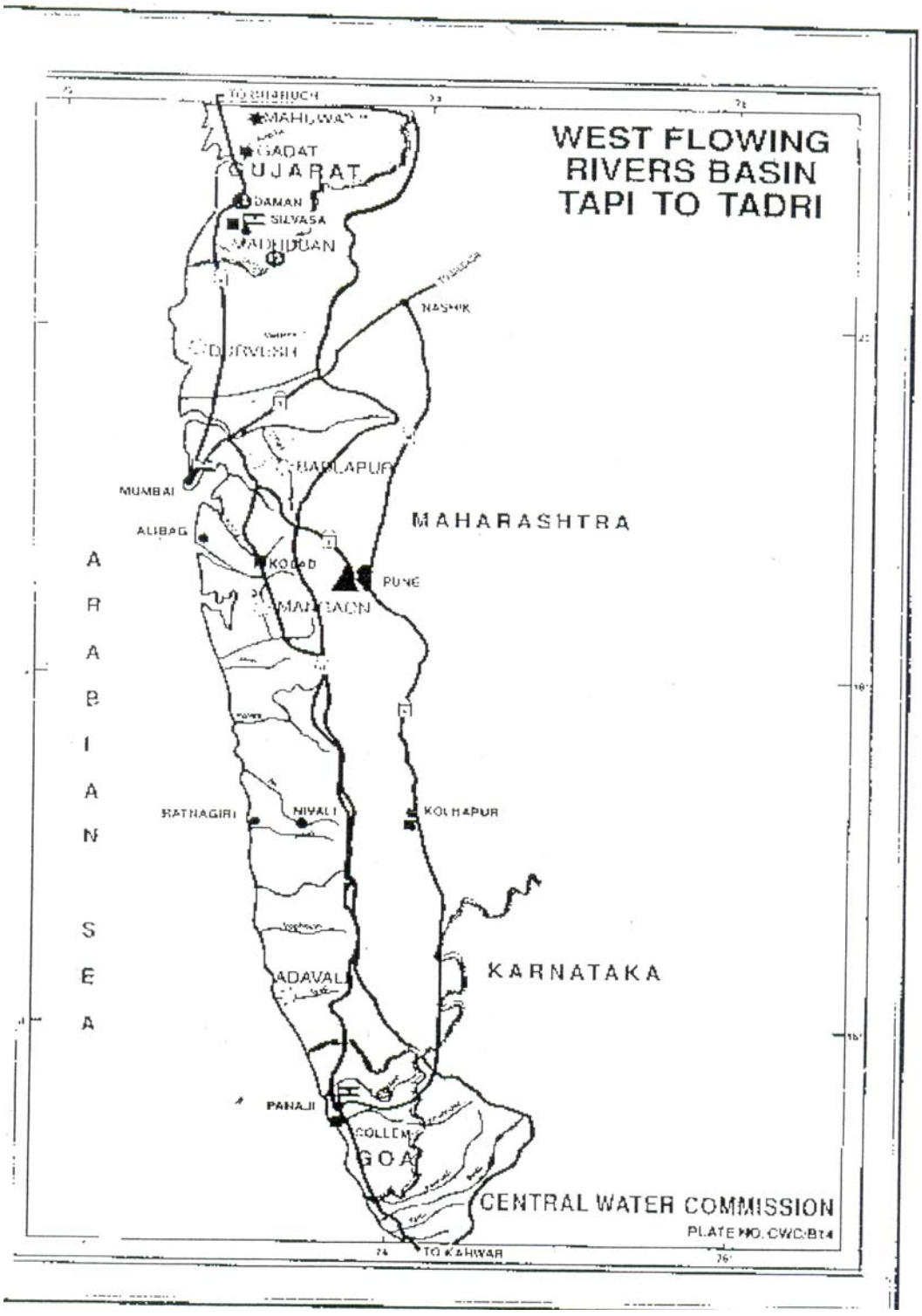
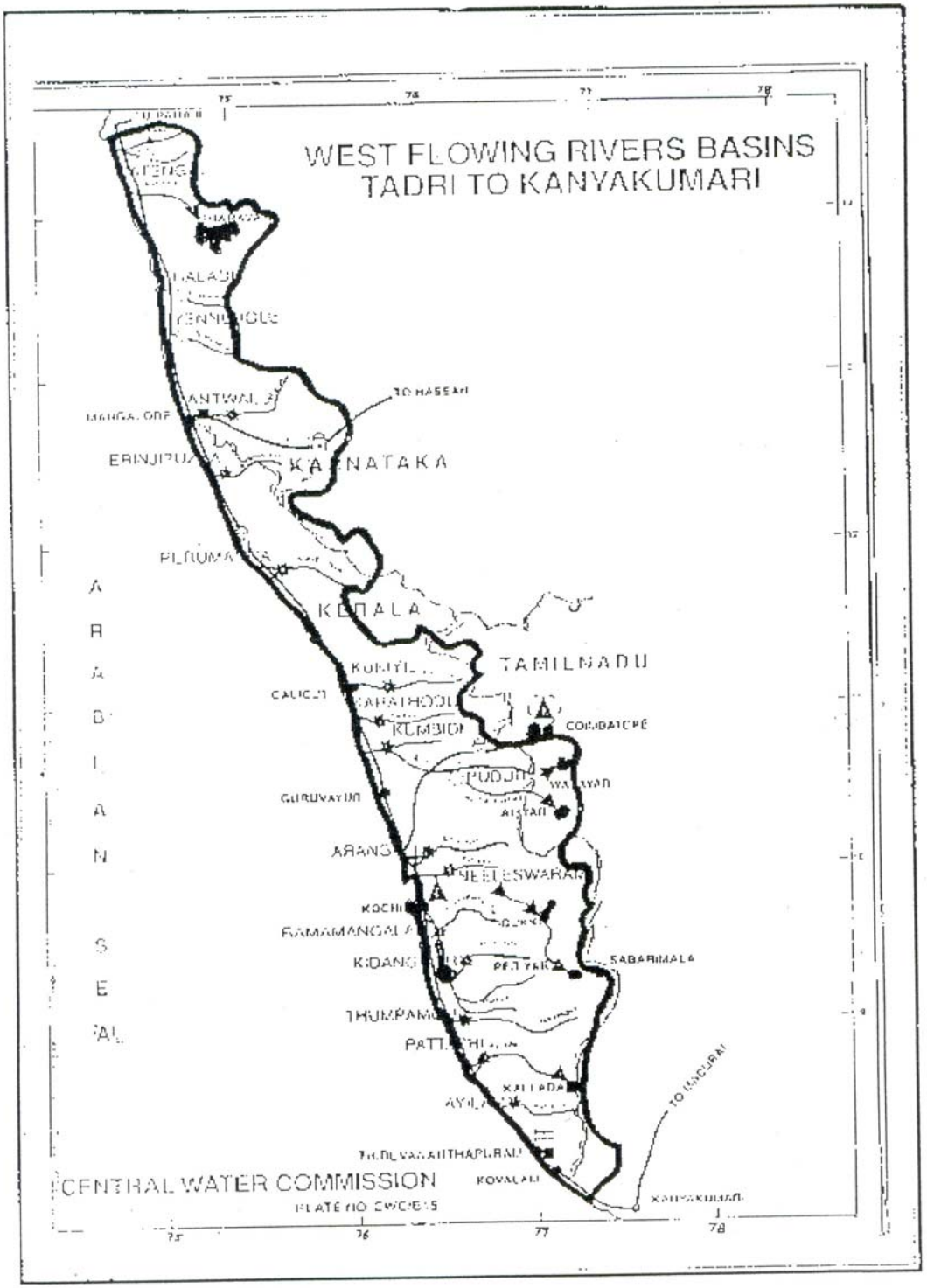
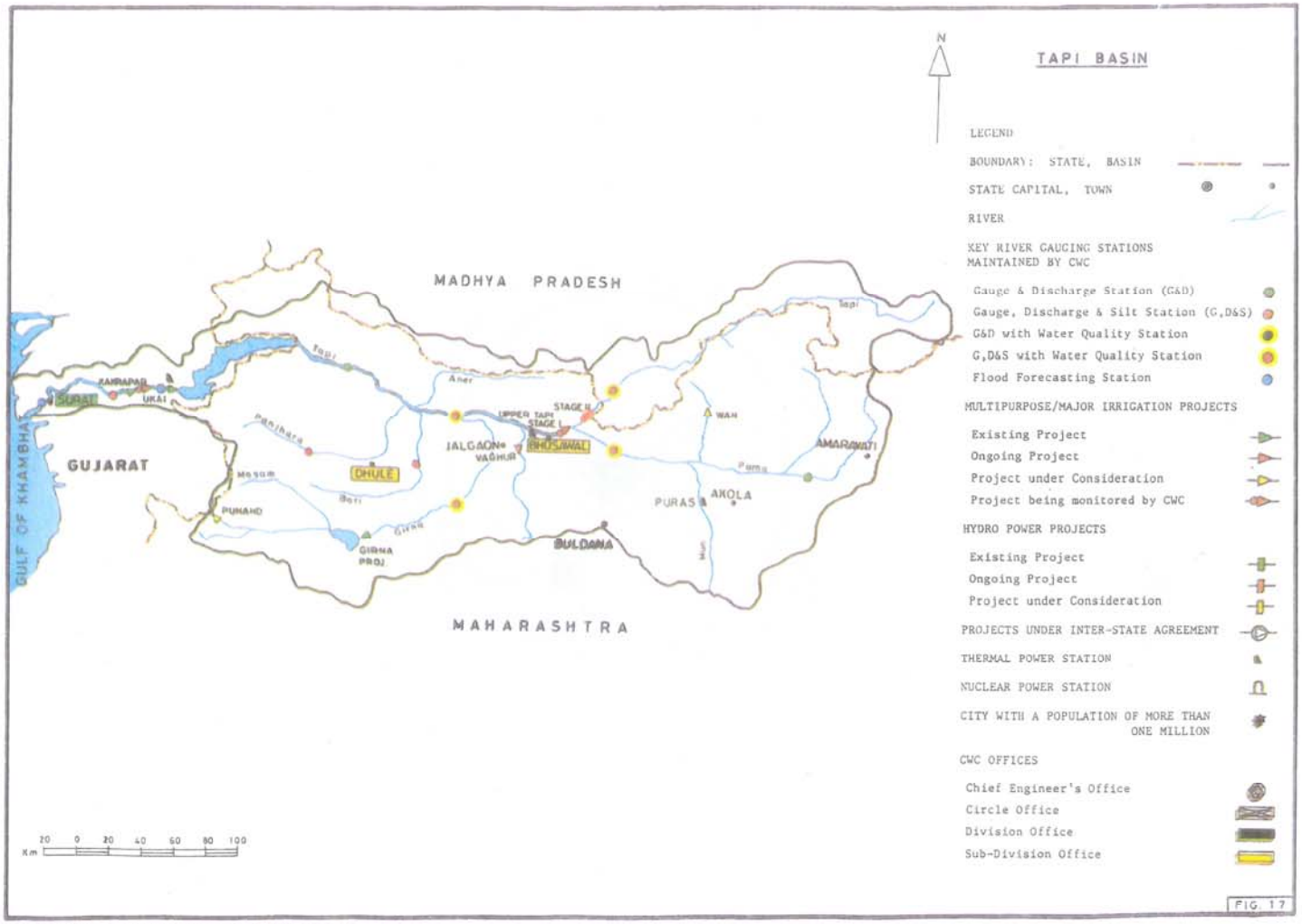

45
REFERENCE :-
STATE BOUNDARY
RIVER
GAUGE & DISCHARGE SITE
GOVERNMENT OF INDIA
CENTRAL WATER COMMISSION
CAUVERY & SOUTHERN RIVERS CIRCLE
BANGALORE
HYDROLOGICAL OBSERVATION
STATIONS OF WEST FLOWING RIVERS
(NORTH OF 14° LATITUDE)
EXECUTIVE ENGINEER
KARWAR
PANJI

50


WEST FLOWING
RIVERS BASIN
TAPI TO TADRI
GUJARAT
DAMAN
SILVASA
NASHIK
MUMBAI
MAHARASHTRA
ALIBAG
PUNE
RATNAGIRI
NIVALI
KOLHAPUR
KARNATAKA
PANAJI
GOA
ARABIAN SEA
CENTRAL WATER COMMISSION


WEST FLOWING RIVERS BASINS
TADRI TO KANYAKUMARI
TO HASSAN
KARNATAKA
KERALA
TAMILNADU
COIMBATORE
GURUVAYUR
SABARIMALA
TO MADURAI
KOVALAM
ARABIAN SEA
CENTRAL WATER COMMISSION



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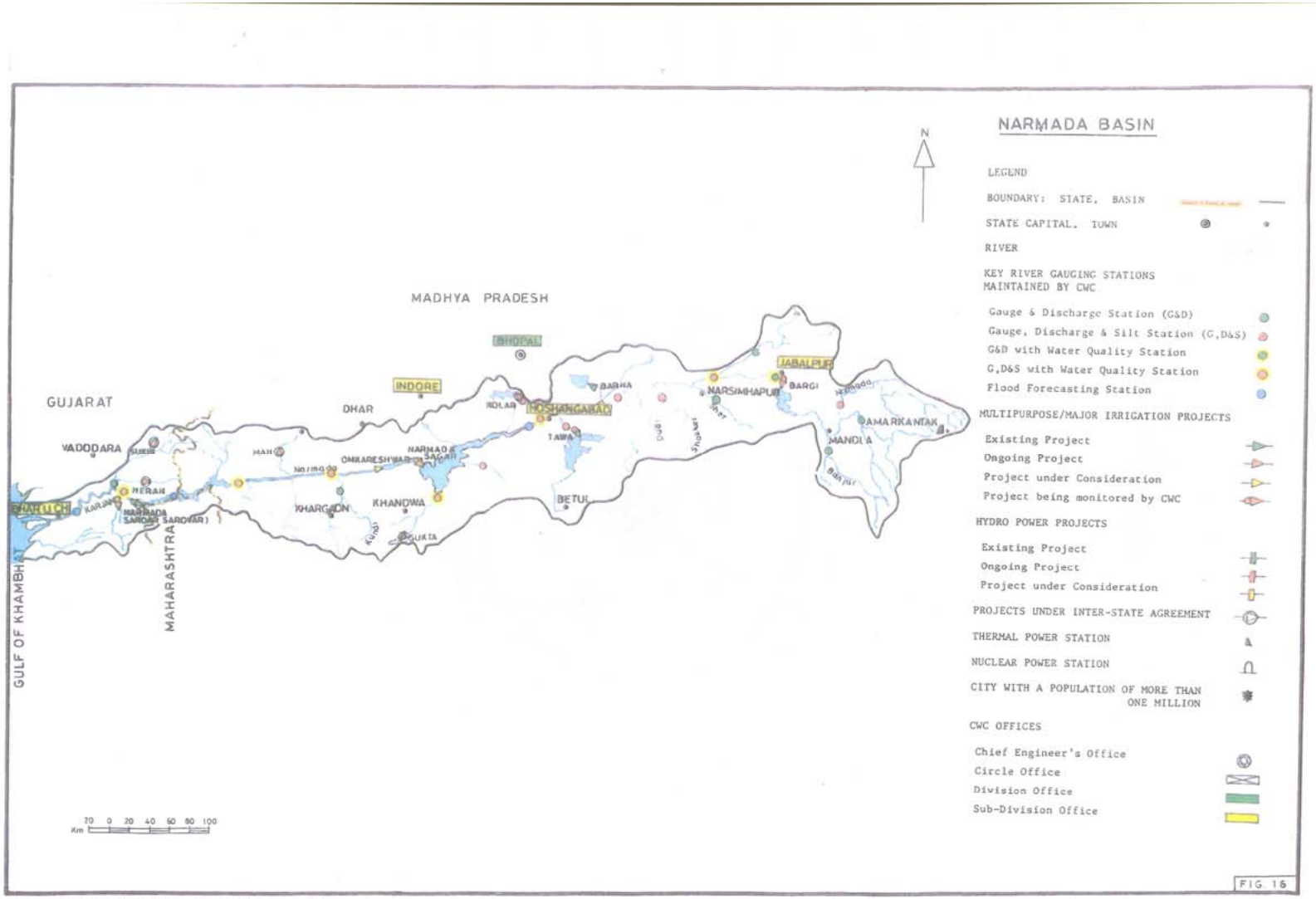

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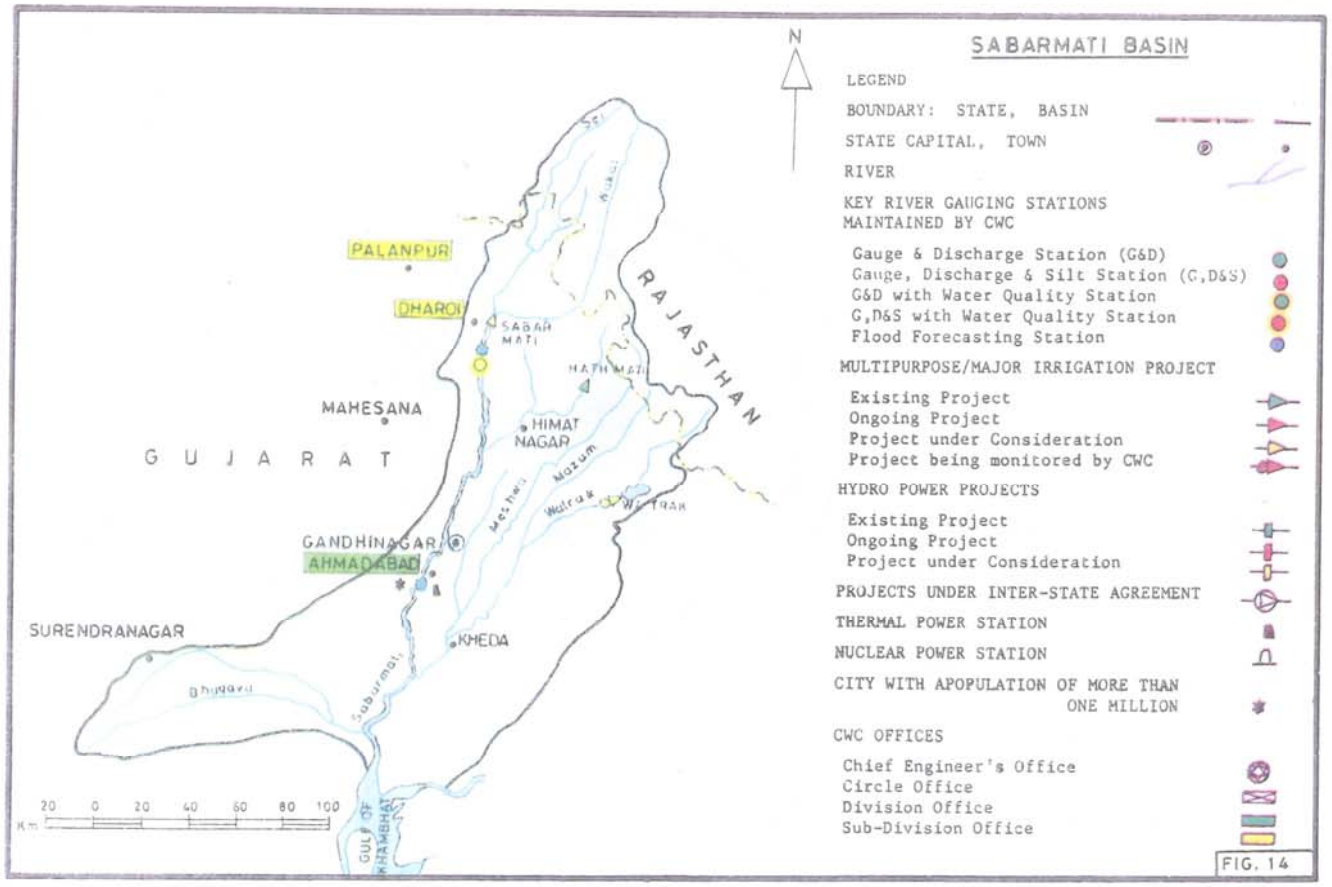
The territorial waters of India extend into the sea to a distance of twelve nautical miles measured from the appropriate base line.



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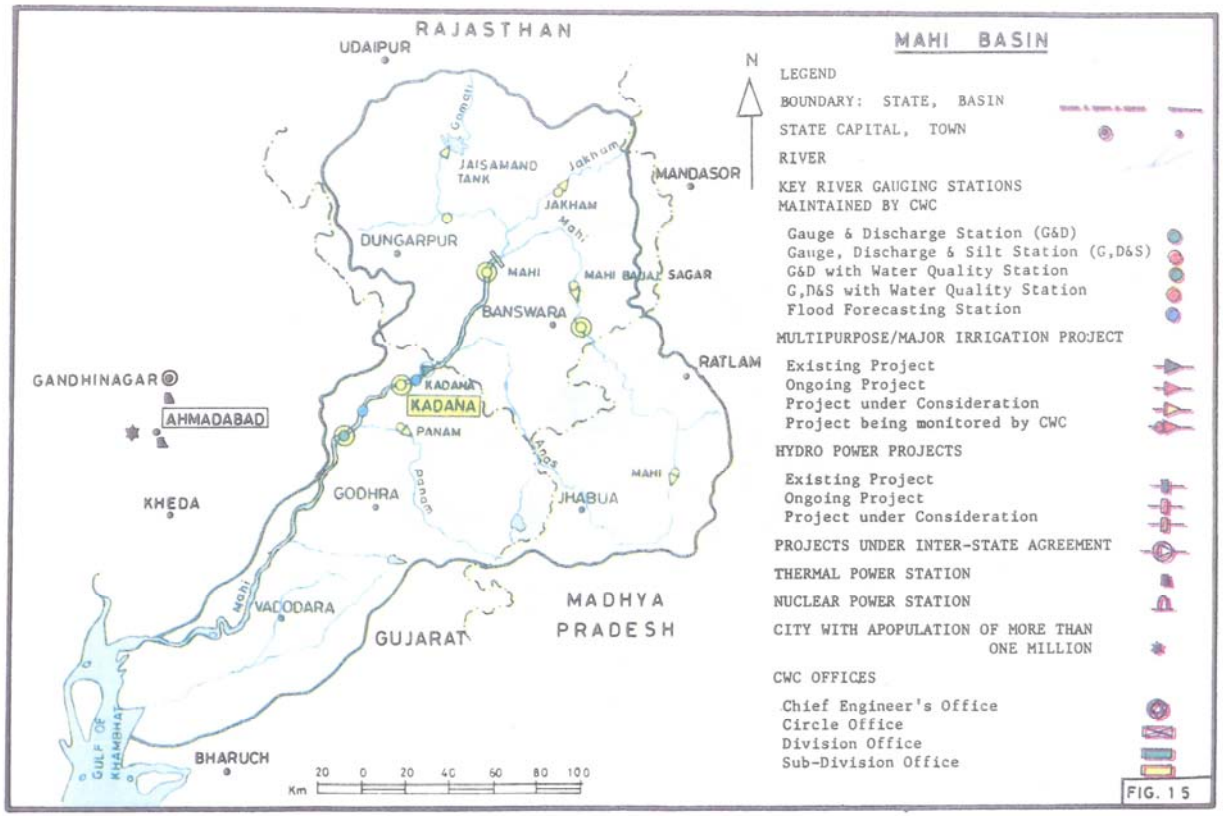

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Chapter 3

Water and Related Statistics

3.0 This chapter presents some important characteristics relating to non-classified river basins of the country. These characteristics are physical features and geo-climatic conditions of the river basins and other features like storage capacity, soil characterises, major and medium irrigation projects and flow of water, etc.

3.1 Surface Water Storage

3.1.1 In India, a total storage capacity of 225.14 BCM has so far been created. Besides, storages of 63.90 BCM are under construction and storages of 107.54 BCM are under consideration. Therefore expected storage capacity would be 396.59 cu km against total availability of 1869 cu km of water in the river basins of this country.

3.1.2 Live storage capacities in respect of different non-classified river basins along with average annual flow in cubic kilometer are given in Table 1. Accordingly, the Krishna basin leads in term of storage capacity (49.55 cu km) followed by Godavari basin (31.33 cu km) and Narmada basin (23.60 cu km). Pennar basin leads (76%) in terms of storage capacity created as percentage of average annual flow followed by Tapi basin (71%) which even otherwise has requirement for higher storage capacity as it covers the semi desert areas of Madhya Pradesh, Maharashtra & Gujarat. The West Flowing Rivers of Kutch, Shaurashtra including Luni, Krishna, Narmada and Brahmani & Baitarni basins exceed 50% capacity of their respective average annual flow. The storage percentage is, however, less than 25% in few basins and hence there is a scope for increasing storage potential in them particularly for those basins for which the annual average flow is higher. This publication presents data on average annual runoff at terminal sites of all basins with catchment area up to the site.

3.2 Drainage/catchment area and population distribution.

3.2.1 The salient features presented in Table 2 include drainage area, population and average annual flow of water in columns 4, 14 and 16. Accordingly, the 12 non-classified river basins cover an estimated population of 46 crores on 1st March 2007 accounting for 46% of total population of India. The estimated population as on 1st March 2007 of east flowing rivers have the highest population of 8.30 crores followed by Krishna (7.11 crores), Godavari with 6.18 crores and west flowing rivers (6.16 crores). The estimated population as on 1st March 2007 of Brahmani is the least population of 0.97 crores. West flowing rivers have the maximum population density of 539 persons per sq km followed by Cauvery 372

persons, Subarnarekha 366 persons and East Flowing rivers 337 persons per sq km. Mahanadi has the least population density of 136 persons per sq km followed by Narmada 184 persons Brahmani 195 persons and Godavari basin with density of 196 persons per sq km.

3.2.2 The drainage areas of these basins are accounted for 43% of the total geographical area of the country. The Godavari basin has the highest drainage area of 3,12,800 sq km followed by Krishna basin with drainage area of 2,58,948 sq km and Mahanadi basin with drainage area of 1,41,600 sq km. The river basins of Rushikulya (7,700 sq km), Vamsadhara (10,830 sq km), Sarada (2,665 sq km) and Nagavali (9,510 sq km) together have the least total drainage area of 30,705 sq km.

3.2.3 The average annual potential/average annual flow in non-classified river basins is maximum at 113.53 cu km in West Flowing Rivers from Tadri to Kanyakumari followed by 110.54 cu km at Godavari basin and 87.41 cu km in West Flowing Rivers from Tapi to Tadri. The runoff at terminal site is, however, maximum at Polavaram in Godavari (88728 MCM), followed by 68824 MCM in West Flowing Rivers from Tapi to Kanyakumari and 46477 MCM in Mahanadi Basin at Tikrapara. The site wise distribution is given in Table 2.

3.3 Hydrological Observation sites

3.3.1 Table 3 gives the distribution of hydrological observation sites by types of sites and non-classified river basin. Observations on water discharges, volume of sediments deposited on the flow areas & examinations of water qualities are made at different water releasing points of the river basins. Geographical locations of observation sites, types of experiments done on those sites and dates of commencement of experiments are also given for understanding distribution of waters on participating States. There are 46 such sites on Godavari basin out of 282 sites and 37 sites in Krishna basin. Rushikulaya & other small three rivers altogether have only 5 observation centers.

3.4 Peak Water Level

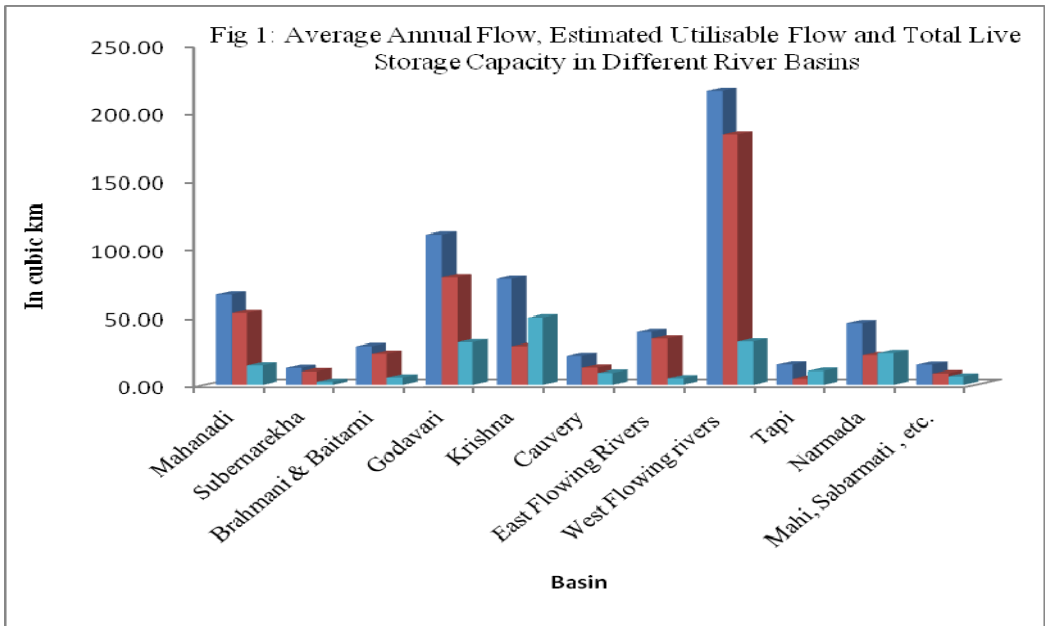
3.4.1 The historical observations over a long reference period on peak water level at different terminal sites along with latitude, longitude, stage record, drainage area are presented by site in Table 4. However, a uniform reference period could not be used as the dates of inception of the sites are different. It covers a period of 1964 to 2007. The peak water level varies widely from basin to basin and also within sites of a basin. The highest level of 892.6 m is found in the terminal site “Sakleshpur” of Cauvery basin while the lowest level of 3.2 m is also found in the same basin against the terminal site “Gopurajapuram”.

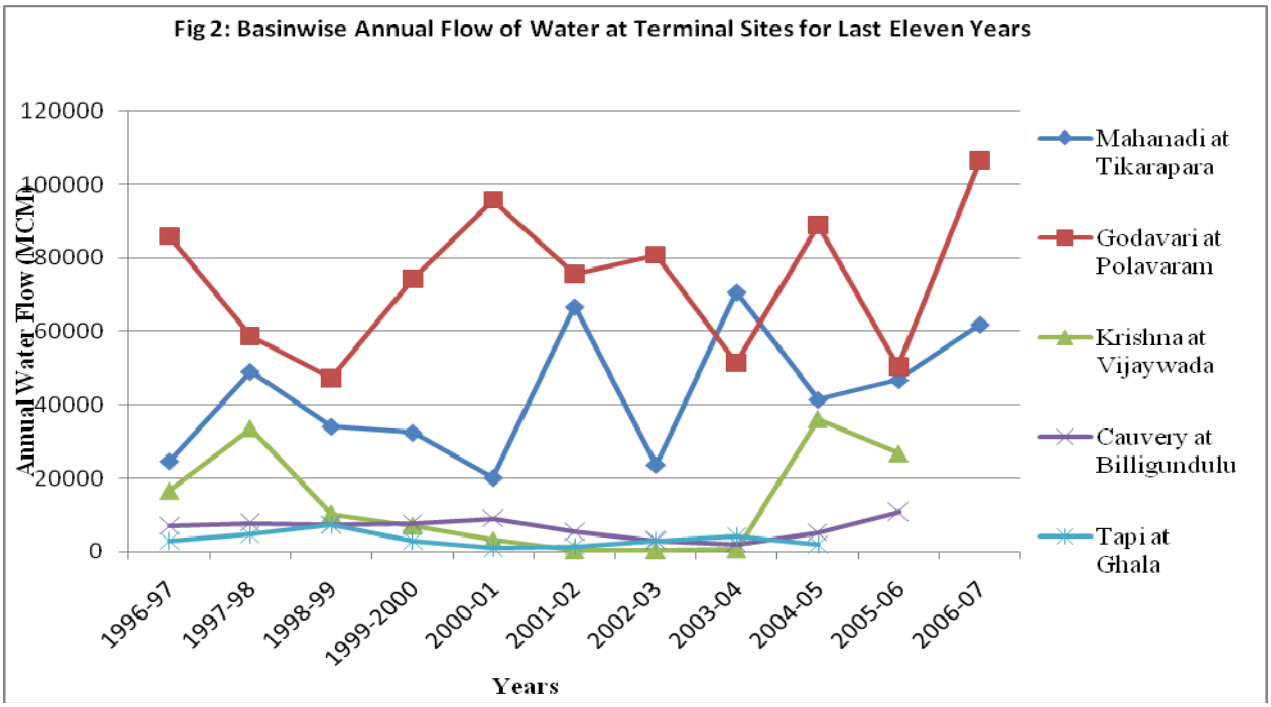
3.4.2 The data on seasonal and annual flow of water for last ten years and historical extreme - maximum and minimum - water levels and discharges over sites are provided in Table 5. The reference period of ten years is based on the latest information available. It is natural that the flow will vary from site to site. But, the data given in the table do not reveal any trend of water flow in either season or annually in the sites.

3.4.3 The maximum and minimum observed water levels and discharges are presented in Table 6 by sites over a long but varying reference period. The dates of extreme observations are spread over the years.

3.4.4 Expectation of availability of required amount of water is of paramount importance for any plan/project or irrigated cultivation purposes. With this view Table 7 has been presented here. It provides dependable flow of water at 10 equal percentile levels for each site. The percentiles have been calculated taking into consideration the whole period of releases of water from the sites from the day of its opening. It is seen that the annual dependable flow is in general maximum at 20% level.

3.4.5 Monthly average flow of water per unit drainage area is presented in Table 8 over the calendar months of a long but varying reference period. The reference period has been taken separately on the basis of age of the sites. This would help in understanding expected water availability in different months of a year.





Chapter 4

Sedimentation statistics

4.1 Water flow (natural or artificial) tries to scour its surface whenever it flows in a channel. Silt or gravel or even larger boulders are detached from its bed or banks. The moving water sweeps these detached particles downstream. Silting and scouring in channels is not very uncommon and must be avoided by proper designs. The full supply level of water gets reduced by scouring and causes loss of command. It may also cause damage to canal banks and foundations of irrigation structures. Silting interferes with the proper functioning of a channel as the channel section gets reduced by silt, thereby reducing its discharging capacity.

4.2 Development and construction of projects formulated by harnessing the available water resources during last three to four decades has ushered in an era of prosperity. Development and construction of projects has been instrumental in bringing the Green revolution that has essentially made India to achieve self-sufficiency in food grains. However, these projects are seriously threatened by sedimentation due to the silt carried by various rivers and streams up to the point of their interception. Sediment is also threatening denudation of forests.

4.3 The sediment in a canal is a burden to be borne by the flowing water and is, therefore, designated as sediment load. The sediment may move in water either as bed load or as suspended load. Bed load is that in which the sediment moves along the bed with occasional jumps into the main river. While the suspended load is one in which the material is maintained in suspension due to the turbulence of the water flow.

4.4 Sediment is one of the major obstructions on the flow line or channel of water and unmanageable quantity of it shorten longevity of channels. Moreover, it causes soil-erosion. Therefore, study of sediments and nature of its deposits on downstream are very important for preparation of any water supply projects. Sound database on sediments are essential tools for policy planning purposes.

4.5 The analysis of suspended sediment is carried out for three different grade of sediments, namely, coarse sediment, having particles with diameter above 0.2 mm, medium sediment with diameter ranging from 0.075 to 0.2 mm. and fine sediment with diameter less than 0.075 mm.

4.6 The water sample from each group is passed through 100/72 mesh sieve (B.S.S). The residue on the sieve is washed with clear water several times, transferred to a crucible and its oven dry

weight is measured. This gives the coarse sediment from which the sediment intensity in gm/litre, for the group is worked out.

4.7 After the removal of coarse sediment by filtration and washings, the residual contains the medium and fine sediment which is passed through 200 mesh sieve (B.S.S). Sediment particles retained on the sieve are medium sediment and part of the fine sediment. So, the residue in the sieve is thoroughly washed with clear water several times, transferred to a crucible and its oven dry weight is measured. Medium grade sediment intensity in gm/litres is worked out, as is done for coarse sediment.

4.8 The filtrate and washings after separation of coarse and medium grade of sediment the water contain only fine grade of sediment in suspension. The filtrate and washings obtained from all the groups are combined together in an enameled bucket and kept overnight for settlement. About 5 to 10 ml of 10% alum solution is added to hasten the coagulation of colloidal silt. After the settlement is complete, the supernatant liquid is siphoned off carefully and the reduced volume of suspension is filtered through a dried and pre weighted Whitman No. 2 grade filter paper. Extra washings with clear water are given to remove excessive alum, if used. The filter paper along with the residue is dried to its constant weight and weighed to determine weight of the fine sediment in gm/litres. The intensity of fine silt, in gm/ litres so obtained, is the amount of the sediment for the entire cross section.

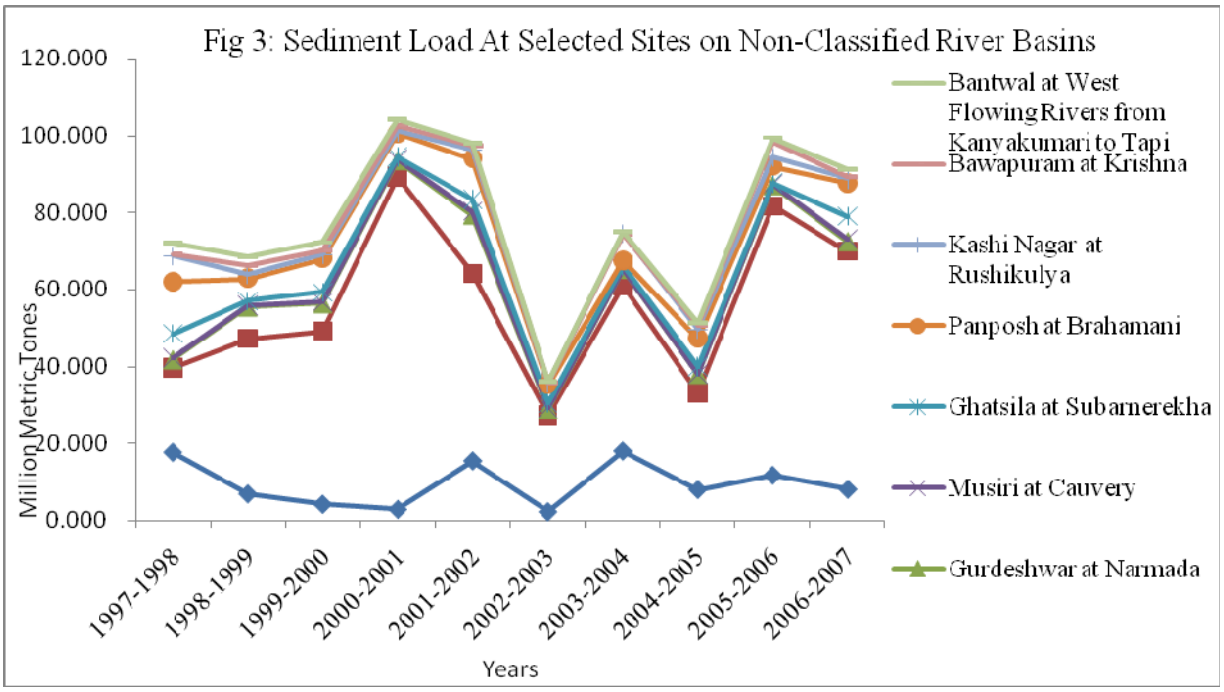
4.9 The total sediment load of the river along the cross-section is evaluated from the coarse and medium sediment concentration obtained group-wise and the sediment for the entire cross section. In this section detailed information on quantity of average sediment deposits on the streams/ rivers at terminal sites are presented separately for all sites on seasonal and annual basis for last 10 years in Table 9. The frequency of sediment observation is taken daily during monsoon season and once in a week during the lean period. Data for non-observed days is interpolated from the relationship of discharge vs. sediment load prepared on the basis of observed sediment concentration and weighted mean discharge during the same year.

4.10 Sediment concentration in gm/litre (coarse, medium and fine) is recorded in the daily flow tables. The sediment load reported in the 10 daily tables indicates average sediment load. The summary of sediment load of the Ten Daily and monthly figures are given in Table 10, indicates average sediment load per day. In Ten daily and monthly summary tables, sediment load is rounded off to full integer. In ten-daily summary tables, Ten daily average values are rounded off to nearest full integer when more than 1000, nearest first decimal figure when it is between 100-999 and nearest two decimal figures when it is less than 100. The annual/ seasonal sediment yield in millimetre is the notional depth of soil over the catchment equivalent to annual/ seasonal suspended sediment runoff calculated at the sediment observation station. It is computed using the relation.

Sediment yield (mm) = total suspended sediment load (T)/1400*catchment area (sq km)

4.11 It can be seen that among the basins, Narmada carries highest amount of sediments compared to others. However sediment load deposit is highest in West Flowing rivers basin on

unit area basis. It is 3819 metric tons per sq km in Narmada basin, 1103 metric tones in Tapi basin and 669 metric tones in Godavari basin.



Chapter 5

Water quality statistics

5.1 Water is a prime necessity for human survival and growth of agriculture as well as industrial development. Effective management of water resource, monitoring and control of its quality are becoming increasingly important for sustainable development and human welfare. Pollution of water and maintaining water quality at acceptable levels has become a universal phenomenon in present day context; Environmental Protection Act also includes, as one of its objectives, protection of water from pollution. Now-a-days greater emphasis is given to water quality because of concern of environmentalists. Degradation of water quality is not only caused by increasing inflow of domestic and industrial waste into water course but also from the abstraction of water from rivers rendering them dry or with meager flow leading to concentration of pollution.

5.2 World Health Organization (WHO) has classified inland water uses in five classes and has fixed tolerance limits of all polluting factors of water. Bureau of Indian Standards (BIS) has also fixed tolerance limits of water quality in Indian context following the tolerance limits of WHO. These limits are given in Table 11. The Bureau of India Standards has identified 42 water quality parameters and fixed tolerance limit for each parameters. The Mahanadi, Brahmani, Baitarni, Rushikulya, Subarnarekha, Vamsadhara, Krishna, Cauvery, East & West Flowing River basins have reported the tolerance limit for 11 water quality parameters only. The Godavari and the Narmada basins have reported tolerance limit for 27 and 20 water quality parameters respectively. Similarly, Mahi, Sabarmati, Tapi and Other West Flowing River basins have reported tolerance limit for 24 water quality parameters. The tolerance limit for a few water quality parameters are at variance among some river basins but BIS standards for tolerance limit must be consistent across the country. The tolerance limit for water quality parameters of Mahi, Sabarmati, Tapi and Other West Flowing River are at variance for many water quality parameters in these river basins.

5.3 Considering importance of water quality, an attempt has been made to present detailed information about the quality of water being supplied from different reservoirs in India. The values of water quality parameters are presented in Table 12 which exceeding tolerance limits. Further, maximum and minimum values of as many as 42 water quality parameters are presented in Table 13 for reviewing the kind of water being discharged/ supplied for different purposes.

5.4 The critical absolute values of water quality parameters for Tapi basin is crossing tolerance limit during summer monsoon and winter seasons. The P^H value is exceeding the limit for drinking, outdoor bathing and wild life propagation. Similarly, the critical absolute value for Aluminum contents in Tapi river basin is also exceeding the tolerance limit during

the year. The critical absolute value of water quality parameters at Garudeshwar, Rajghat, Mandleswar, Handia, Chhidgoan & Hoshangabad etc. for Narmada basin are also exceeding tolerance limit during the year for human consumption. The tolerance limit for bio-chemical oxygen demand (BOD) is also exceeding the limit during summer and monsoon season in almost all sites of the river basin. The critical absolute value of water quality parameters of Mahi, Sabarmati and Other West Flowing rivers is exceeding the limit of P^H value at Khanpur, Mahuwa, Gadat and Motinaroli during summer and monsoon season. The water is not useful for any purpose of human consumption. The Aluminum contents and Total Dissolve Solides (TDS) level is exceedingly high during summer and monsoon season in the river basin. The critical absolute value of water quality parameters crossing the tolerance limit during the reference year has not been reported by the agency collecting data on water quality parameters in other basins.

Chapter 6

Land use statistics

6.0 Land use pattern is a fairly useful indicator in understanding the environmental set up, socio-economic status, infrastructural facilities and climatic conditions of an area. The land use pattern is an outcome of the interaction and interplay of the various physical conditions of the area. It gives not only the land coverage but also an insight into the nature of environmental degradation in the catchment area of the basins. Hence it is considered very important in the environmental study of any area. Various Government Departments for their respective administrative units such as Blocks/Tehsils/Districts mostly compile the information. But information is not available for districts/areas under different basins. It may be possible to work out estimated district wise basin wise area but the available district wise information on land use pattern is available for 2005-06 as published by the Ministry of Agriculture & cooperation. In this issue land use statistics have confined to analysis of information at state-wise basin-wise. As we have latest land use statistical information available on basin area state wise for 2005-06. The basin wise land utilisation has been estimated as sum total of estimated land use pattern in the area of District in a particular state falling within a basin. The data on district wise & state-wise land use pattern as published by the Directorate of Economics and Statistics, Department of Agriculture & Co-operation, Ministry of Agriculture has been used for the purpose.

6.1 The data has been classified into (i) forest area (ii) area not available for cultivation (iii) other uncultivated lands excluding fallow land (iv) fallow land (v) net area sown (vi) total cropped area and (vii) area sown more than once.

6.2 The land utilization pattern by district of each basin is presented in Table 14 for the non-classified river basins. These basins cover 157979 thousand hectares area of the states. The west flowing river basin from Kanyakumari to Tapi has the highest total cropped area of about 68 % of its basin area followed by Godavari and Krishna basin with 63%. Similarly west flowing river basin from Kanyakumari to Tapi has highest net sown area of 55% followed by Krishna basin 52%.

6.3 Areas under forests have been reported highest in Godavari Basin. However it can be seen that around 19% of areas of all basins together are covered under uncultivated lands including fallow land. Among these basins the East flowing river basin has the highest of about 16% of its area still lying unutilized and if sufficient irrigation water is supplied and proper treatment of land is provided it can be brought under agricultural use.

6.4 The land use classification reported during 2005-06 as per Ministry of Agriculture for the State is adopted for the catchment area of twelve non-classified river basins. The district-wise area under catchment of the basin is reported and land use under forest coverage, not available for cultivation, other uncultivated land, follow land and net area shown under the river basin have been indicated under land use statistics. Gross Area Irrigated and net area irrigated within the river basins by source such as canals, tanks, wells and other sources are presented in table 15 and Table 16 respectively.

6.5 **Terms Used in the Publication:** The explanation, as per Ministry of Agriculture, Government of India, of the terms used in this publication is as under:

6.5.1 **Reporting Area for Land Utilisation Statistics:** The Reporting area stands for the area for which data on land use classification of area are available. In areas where land utilization figures are based on land records, reporting area is the area according to village papers, i.e. the papers prepared by the village accountants. In some cases, the village papers may not be maintained in respect of the entire area of the State. For example, village papers are not prepared for forest areas for which no village paper exists for which ad-hoc estimates of classification of area etc. framed to complete the coverage.

6.5.2 **Forest:** This includes all lands classified as forest under any legal enactment dealing with forests or administered as forests, whether state-owned or private, and whether wooded or maintained as potential forest land. The area of crops rose in the forest and grazing lands or areas open for grazing within the forests remains included under the forest area.

6.5.3 **Not available for cultivation:** This includes area under non-agricultural uses and barren & unculturable land which are briefly described below.

Area under Non- agricultural Uses: This includes all lands occupied by buildings, roads and railways or under water, e.g. rivers and canals and other lands put to uses for other than agricultural purposes.

Barren and Un-culturable Land: This includes all barren and unculturable land like mountains, deserts, etc. land whether such land is in isolated blocks or within cultivated holdings which cannot be brought under cultivation, except at an exorbitant cost, is classified as unculturable land.

6.5.4 **Other Cultivated land excluding fellow land:** This includes (i) permanent pastures and other grazing land (ii) land under miscellaneous trees, crops and groves not included in net area and (iii) culturable waste land which are briefly described below.

Permanent Pastures and other Grazing Lands: This includes all grazing lands whether they are permanent pastures and meadows or not. Village common grazing land is included under this head.

Land under Miscellaneous Tree Crops, etc: This includes all cultivable land which is not included in `Net area sown' but is put to some agricultural use. Lands under

Casuarinas trees, thatching grasses, bamboo bushes and other groves for fuel, etc. which are not included under `Orchards' are classified under this category.

Culturable Waste Land: This includes land available for cultivation, whether not taken up for cultivation or taken up for cultivation once but not cultivated during the last five years or more in succession including the current year for one reason or the other. Such lands may be either fallow or covered with shrubs and jungles which are not put to any use. They may be assessed or unassessed and may lie in isolated blocks or within cultivated holdings.

6.5.5 **Fallow Land:** This includes fallow land other than current fallows and current fallow land of land use classification which are explained below.

Fallow Lands other than Current Fallows: This includes all lands, which were taken up for cultivation but are temporarily out of cultivation for a period of not less than one year and not more than five years.

Current Fallows
This represents cropped area, which are kept fallow during the current year. For example, if any seeding area is not cropped against the same year it may be treated as current fallow.

6.5.6 **Net Area Sown:** This represents the total area sown with crops and orchards but area sown more than once in the same year is counted only once.

6.5.7 **Total Cropped Area:** This represents the total area covered with crops, i.e. the sum total of areas covered by all the individual crops; areas sown with crops more than once during the year being counted as separate areas for each crop. It is also known as Gross Cropped Area.

6.5.8 **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'.

Fig 4 : Land Utilisation Pattern in different River Basins

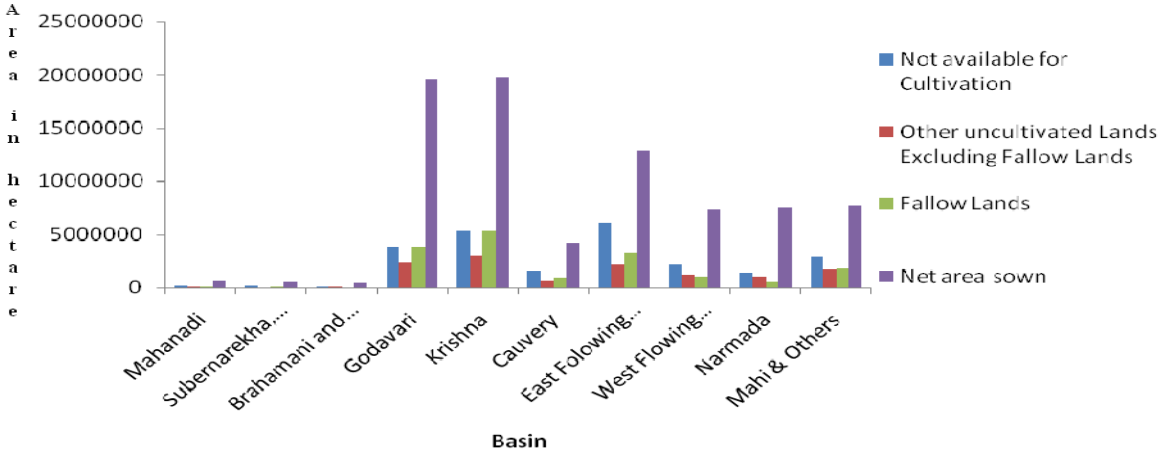


Fig 5 : Basin wise Gross Area Irrigated by different sources during 2005-06

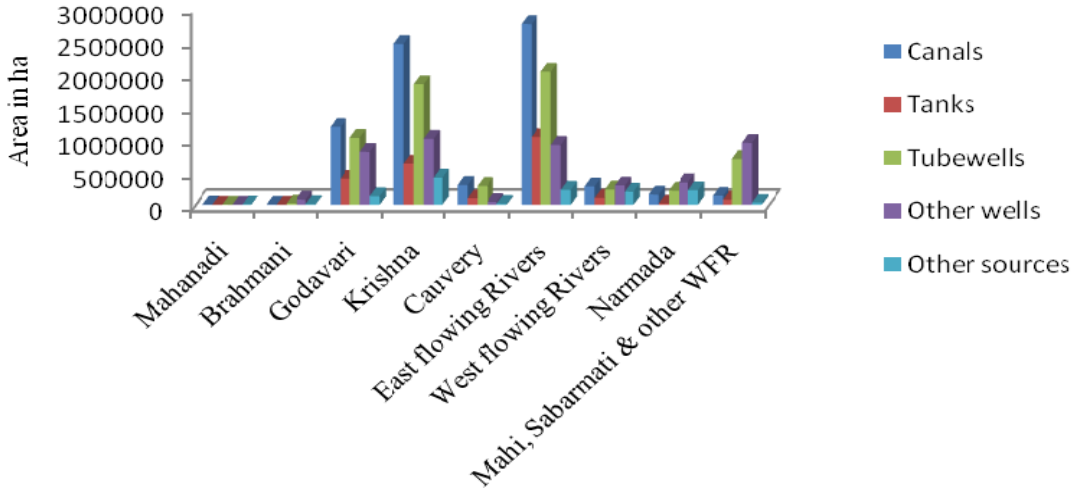


Fig 6: Gross Area Irrigated (in Hactares) by Sources in different River Basins (As per Land Use Classification for 2005-06)

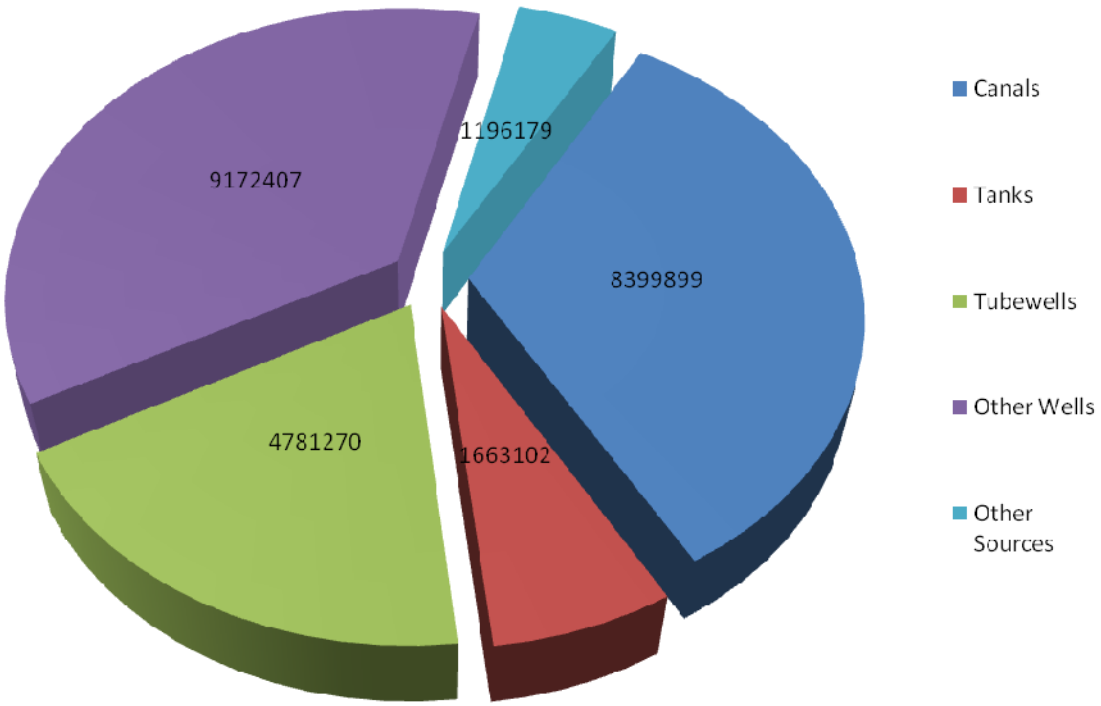


Fig 7 : Net Area Irrigated by sources in different river basins

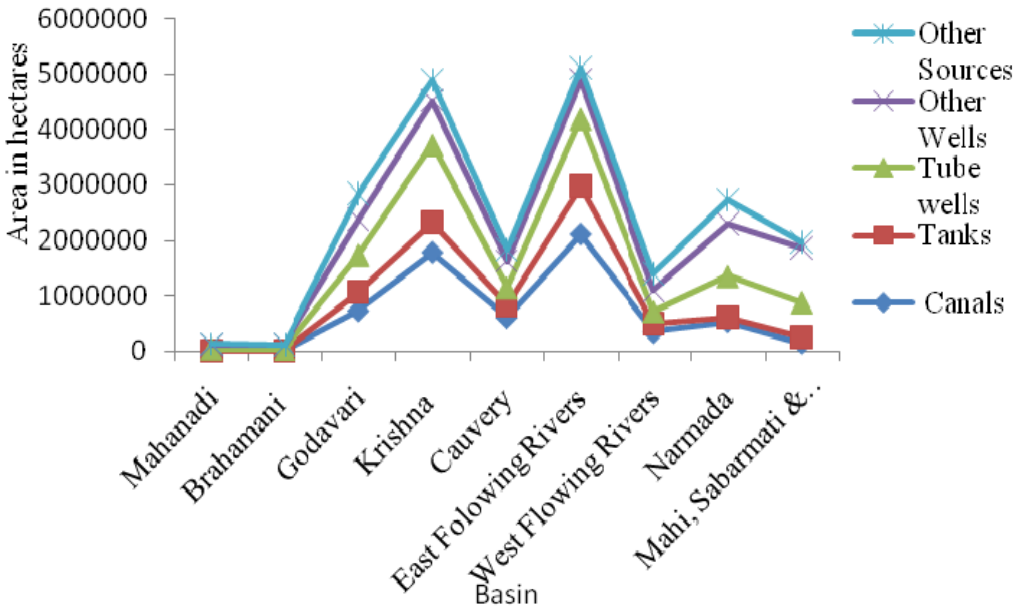


Table on Hydrology and Land Use Statistics in River Basins

Table 1 : Storage capacity by river basin

(Projects Having Live Storage Capacity of 10 MCM & above)

Unit: MCM

Sl. No.	Basin	Average Annual Flow	Live Storage Capacities upto July, 2007				Percentage of Likely Average Annual Flow ((Col.6+Col.7)/ Col.3)*100
			Completed Project	Project Under Construction	Total	Project Under Consideration	
1	2	3	4	5	6	7	8
1	**INDUS**	73305.00	16285.90	282.53	16568.43	2576.39	26.12
2	**a) GANGA**	525023.00	42060.20	18600.18	60660.38	30083.92	17.28
	b) BRAHMAPUTRA & BARAK	585597.00	2326.92	9353.64	11680.56	41262.88	9.04
3	**GODAVARI**	110540.00	25124.60	6205.79	31330.39	5841.16	33.63
4	**KRISHNA**	78124.00	41803.98	7743.54	49547.52	1127.84	64.87
5	**CAUVERY**	21358.00	8597.20	269.82	8867.02	261.99	42.74
6	**PENNAR**	6316.00	2649.40	2170.71	4820.11		76.32
7	**EFR FROM MAHANADI TO GODAVARI AND KRISHNA TO PENNAR**	22520.00	1601.44	1424.97	3026.41	945.29	17.64
8	**EFR B/W PENNAR AND KANYAKUMARI**	16458.00	1838.41	68.49	1906.90	-	-
9	**MAHANADI**	66879.00	12334.80	1873.00	14207.80	10094.20	36.34
10	**BRAHMANI & BAITARNI**	28477.00	4648.09	875.60	5523.69	8721.19	50.02
11	**SUBERNAREKHA**	12368.00	672.02	1650.19	2322.21	1380.50	29.94
12	**SABARMATI**	3809.00	1306.77	60.77	1367.54	99.33	38.51
13	**MAHI**	11020.00	4722.60	261.43	4984.03	11.81	45.33
14	**WFR OF KUTCH, SAURASHTRA INCLUDING LUNI**	15098.00	4726.92	797.23	5524.15	2849.06	55.46
15	**NARMADA**	45639.00	16979.50	6625.10	23604.60	465.73	52.74
16	**TAPI**	14879.00	9408.37	847.42	10255.79	286.92	70.86
17	**WFR FROM TAPI TO TADRI**	87411.00	11268.03	3464.38	14732.41	81.69	16.95
18	**WFR FROM TADRI TO KANYAKUMARI**	113532.00	10236.16	1317.54	11553.70	1453.31	11.46
19	**AREA OF INLAND DRAINAGE OF RAJASTHAN**	-	-	-	0.00	-	-
20	**MINOR RIVER BASINS DRAINING INTO MYANMAR AND BENGLADESH**	31000.00	312.00		312.00	1.47	1.01
21	**MEDIUM PROJECTS EACH HAVING A CAPACITY OF LESS THAN 10 MCM FOR WHICH BASIN WISE BREAKUP IS NOT AVAILABLE.**	-	6241.00	-	-	-	-
	GRAND TOTAL IN MCM	**1869353.00**	**225144.31**	**63892.33**	**289036.64**	**107544.68**	**21.21**
	GRAND TOTAL IN BCM	**1869.35**	**225.14**	**63.89**	**289.04**	**107.54**	**21.21**

Source : WM Directorate, Central Water Commission.

NOTE Under column No. 4 only completed projects in the River Basins (sl. No. 1 to 12a) having Live Storage more than 10 MCM are included.

BCM: BILLION CUBIC METRE

MCM: MILLION CUBIC METRE

EFR: East Flowing Rivers

WFR: West Flowing Rivers

Table 2 : Salient Features of Different River Basins

Sl. No.	Name of the Basin (Origin, Altitude & Length of the River)	State	Drainage Area (Sq.Km)	Principal Tributries & their Catchment Area		Basin Location		Number of Hydrological Observation Site	Climate Details		
				Tributary	Area (Sq.Km)	Latitude (a^{o}-$b^{'}$)	Longitute (x^{o}-$y^{'}$)		Temprature Variation (Centigrade) (^{o}C)	Average Annual Rainfall (mm)	Evapo-ration (mm) (mm)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1	**Mahanadi** Mahanadi Rises from Pharsiya village near Nagri Town in Raipur Distt. of Chhattisgarh at an elevation of 442 m. Length 851 Km.	Madhya Pradesh	130	Mahanadi	48230	19-20 to 23-35	80-30 to 86-50	GD =5	7 to 45.5	1184	Monthly range 40 in Winter to 360 in Summer
				Pairi	3503			GDQ =2			
		Chhttishgarh	74970	Seonath	30761			GDSQ=13			
		Orissa	65600	Jonk	3673						
		Jharkhand	650	Hasdeo	9803						
		Maharashtra	250	Mand	5237						
				Ib	12447						
				Ong	5128						
				Tel	22818						
		Total	141600	Total	141600						

(Contd.)

Table 2 : Salient Features of Different River Basins

Sl. No.	Basin Name	Principal Minerals	Estimated Population (Lakh) (as on March 2007)	Major Industries	Average Annual Runoff (MCM) (at terminal Site with	Soil Characteris-tics	Major Projects			
							Name	Gross Storage (MCM)	Live Storage (MCM)	Water withdrawal (MCM)
(1)	(2)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
1	**Mahanadi**	Iron Ores Coal Lime stone Quartzite Copper Ores Silver Lead Mica Bauxite Galena & Graphite	190.72	Iron Steel Copper Cement Paper and Aluminium	61945 2006-2007 Tikarapara (124450)	Black Red Yellow Brownish red to Yellowish red Dark Gray Coastal alluvial	Hirakund	8141.00	5892.00	14195.00
							Tandula	312.07	302.09	310.00
							Hasdeo Bango Dam	7901.21	-	2532.71
							Mand Diversion	-	-	111.62
							Ib Diversion Scheme	-	-	199.00
							Sunder Dam	4700.00	4440.00	65.69
							Barupa Barrage	-	-	2300.84
							Mahanadi Main Canal			
							Kharang Tank			
							Manairi Tank, Tairi			
							Kodar			
							Mahandi Delta			
							Ong Diversion			
							Salaki			

(Contd.)

Table 2 : Salient Features of Different River Basins

Sl. No.	Name of the Basin (Origin, Altitude & Length of the River)	State	Drainage Area (Sq.Km)	Principal Tributries & their Catchment Area		Basin Location		Number of Hydrological Observation Site	Climate Details		
				Tributary	Area (Sq.Km)	Latitude (a^{o}-$b^{'}$)	Longitute (x^{o}-$y^{'}$)		Temprature Variation (Centigrade) (^{o}C)	Average Annual Rainfall (mm)	Evapo-ration (mm) (mm)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
2	**Subernarekha, Burhabalang and Baitarni**										
2.1	**Subernarekha** Rises from Nagri village in Ranchi Distt. of Bihar at an elevation of 600 m. Length 395 Km.	Jharkhand	13590	Subernarekha	7383	21-33 to	85-09 to	GDQ =2	18 to 31	1800	-
		Orissa	3201	Kanchi	1096	23-32	87-27	GDSQ =6			
		West Bangal	2160	Karkari	1341						
				Kharkai	6611						
				Raru	680						
				Garru	640						
				Dulang	1200						
		Total	18951	Total	18951						
2.2	**Burhabalang** Rises from Mayur Bhanj Distt. of Orissa at an elevation of 800 m. Length 125 Km.	Orissa	4800			21-22 to 22-20	86-20 to 87-05	GDSQ =1	08 to 49	1800	-
		Total	4800								

(Contd.)

Table 2 : Salient Features of Different River Basins

Sl. No.	Basin Name	Principal Minerals	Estimated Population (Lakh) (as on March 2007)	Major Industries	Average Annual Runoff (MCM) (at terminal Site with	Soil Characteristics	Major Projects			
							Name	Gross Storage (MCM)	Live Storage (MCM)	Water withdrawal (MCM)
(1)	(2)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
2	**Subernarekha, Burhablang and Baitarni**		110.81							
2.1	Subernarekha (water withdrawals during 1997-99)	Coal Iron Ore Bauxite Copper Chromium Gold Vanadium Lime Stone Dolomite Asbestos Chinaclay Talc and Building Stone		Tobacco Products, Cement, Asbestos Sheets, Ceramics, Glass, Coaches & Locomotive , Automobiles, Agricultural Equipment, Wires & Cables, Iron & Steel Machinary, Metal Tubes & conduits, Copper & Brass, Chemical Acids & Caustics, Fertilizer, Soaps	10278 (2006 to 2007) Gatshila (14176)	Gravelly Sandy Loams Alluvium & Black Clays Laterite Red etc.	Kanchi Irrigati Scheme	-	-	-
2.2	**Burhabalang** (water withdrawals during 1997-99)	Iron ore, China Clay, Quartz, Soap stone & Lime stone found in limited areas.		NIL	3656 (2006 to 2007) Govindpur (4495)	Red & Yellow Soil Laterite Soil Alluvial Soil	-	-	-	-

(Contd.)

Table 2 : Salient Features of Different River Basins

Sl. No.	Name of the Basin (Origin, Altitude & Length of the River)	State	Drainage Area (Sq.Km)	Principal Tributries & their Catchment Area		Basin Location		Number of Hydrological Observation Site	Climate Details		
				Tributary	Area (Sq.Km)	Latitude (a^{o}-$b^{'}$)	Longitute (x^{o}-$y^{'}$)		Temprature Variation (Centigrade) (^{o}C)	Average Annual Rainfall (mm)	Evapo-ration (mm) (mm)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
2.3	**Baitarni**	Jharkhand	736			20-35 to	85-10 to	GDSQ =2	12 to 38	1450	-
	Rises in the hill ranges of Keonjhar Distt. of Orissa near Manka-rancho village at an elevation of 900 m.	Orissa	10246	Salindi	1793	22-15	87-03				
				Kusai	870						
				Orarai	821						
				Others	7498						
	Length 355 Km.	Total	10982	Total	10982						
3	**Brahmani**	Jharkhand	15769	Brahmani	26831	20-28 to	83-52 to	GDSQ =5	10 to 43	1460	Average
	Rises from Nagri village in Ranchi Distt. of Bihar at an elevation of 600 m.	Orissa	22364	Karo	2741	23-35	87-03	GD =1			Monthly
		M.P.	900	Sankh	6933						Evaporation
				Tikra	2528						varies from
	Length 799 Km.										18 to 135
		Total	39033	Total	39033						

(Contd.)

Table 2 : Salient Features of Different River Basins

Sl. No.	Basin Name	Principal Minerals	Estimated Population (Lakh) (as on March 2007)	Major Industries	Average Annual Runoff (MCM) (at terminal Site with	Soil Characteristics	Major Projects			
							Name	Gross Storage (MCM)	Live Storage (MCM)	Water withdrawal (MCM)
(1)	(2)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
2.3	**Baitarni** (water withdrawals during 1997-99)	Iron Ore, Copper, Chromite, Asbestos, Manganese, Atomic Minerals, China Clay & Soap Stone		Ferro - Manganese Plant Sponge Iron Plant	5474 (2006-2007) Anandpur (8570)	Red & Yellow Laterite Alluvial	Akhuapada Kanpur Irrigation Project Salandi Baitarni System Anandpur Barrage	- 242.65	- 184.15	451.46 581.09
3	**Brahmani** (water withdrawals during 1997-99)	Iron Copper Chromite Coal Manganese Lime stone Dolomite Lead Fire-Clay Bauxite & China-Clay	97.01	Steel Plants Cement Aluminimum Explosive Chemical Machine Tools Fertilizer Plant	14810 (2006-2007) Jenapur (33955)	Red & Yellow Mixed Red & Black Red Sandy Red Loamy & Coastel Alluvium		-	-	-

(Contd.)

Table 2 : Salient Features of Different River Basins

Sl. No.	Name of the Basin (Origin, Altitude & Length of the River)	State	Drainage Area (Sq.Km)	Principal Tributries & their Catchment Area		Basin Location		Number of Hydrological Observation Site	Climate Details		
				Tributary	Area (Sq.Km)	Latitude (a^{o}-$b^{'}$)	Longitute (x^{o}-$y^{'}$)		Temprature Variation (Centigrade) (^{o}C)	Average Annual Rainfall (mm)	Evapo-ration (mm) (mm)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
4	**Rushikulya, Vamsadhara, Sarada & Nagavali**										
4.1	**Rushikulya** Rises from Matabarhi village of Phulbani Distt. of Orissa at an elevation of 1000 m. Length 162 Km.	Orissa	7700	Rushikulya	2798	19-07 to	84-01 to	GDSQ =1	12 to 44	1360	-
				Baghua	736	20-19	85-06				
				Barhanadi	2353						
				Pathama	663						
				Ghodapada	1150						
		Total	7700	Total	7700						
4.2	**Vamsadhara** Rises from Near Laljigah village in Kalahandi Distt. of Orissa Length 254 Km.	Orissa	8015	Vamsadhara	5458	18-15 to	83-20 to	GDSQ =1	12 to 43	1300 to 1500	-
		Andhra Pd.	2815	Harbhangi	1689	19-55	84-20	GD =1			
				Sanna Nadhi	1276						
				Mahendratha-Naya	1115						
				Others	1292						
		Total	10830	Total	10830						
4.3	**Sarda** Elevation of Origin is 1000 m. Length 122 Kms.	Andhra Pradesh	2665			17-25 to 18-17	82-32 to 83-06	GD =1	18 to 42.5	1000	-
		Total	2665								
4.4	**Nagavali** Rises from Near Lakhbahal village in Kalahandi Distt. of Orissa at an elevation 1300 m. Length 256 Km.	Orissa	4462			18-10 to	82-53 to	GDSQ =1	16 to 40	1000	-
		Andhra Pd.	5048			19-44	84-05				
		Total	9510								

(Contd.)

Table 2 : Salient Features of Different River Basins

Sl. No.	Basin Name	Principal Minerals	Estimated Population (Lakh) (as on March 2007)	Major Industries	Average Annual Runoff (MCM) (at terminal Site with	Soil Characteristics	Major Projects			
							Name	Gross Storage (MCM)	Live Storage (MCM)	Water withdrawal (MCM)
(1)	(2)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
4	**Rushikulya, Vamsadhara, Sarda & Nagavali**		158.39							
4.1	**Rushikulya** (water withdrawals during 1997-99)	Clay Lime Stone Manganese Sand Talc Black Sand & Grinding Material		Chemical Sugar Spining Mills	2912 (2006-2007) Purshottampur (7112)	Red & Yellow Laterite Alluvial Saline	Rushikulya System	-	-	-
4.2	**Vamsadhara** (water withdrawals during 1997-99)	Manganese Grayphite Lime Stone Bauxite Mica & Quartz		No large scale Industries.	6422 (2006-2007) Kashi Nagar (7820)	Red & Black Red Sandy Balck Laterite Yellow		-	-	-
4.3	**Sarada** (water withdrawals during 1997-99)	Manganese Grayphite Aluminium Bauxite & Mica		Steel Plant	650 (2006-2007) Anakapalli (2090)	Red & Coastal Sands Laterite Alluvial Forest		-	-	-
4.4	**Nagavali** (water withdrawals during 1997-99)	Manganese Grayphite Lime Stone Bauxite & Mica		There is no large scale Industries.	4666 (2006-2007) Srikakulam (9500)	Coastel Sand Red Mixed Laterite Forest	Thotapally Narayan Puram Jaiyavathi	- - -	- - -	189.73 79.97 113.27

(Contd.)

Table 2 : Salient Features of Different River Basins

Sl. No.	Name of the Basin (Origin, Altitude & Length of the River)	State	Drainage Area (Sq.Km)	Principal Tributries & their Catchment Area		Basin Location		Number of Hydrological Observation Site	Climate Details		
				Tributary	Area (Sq.Km)	Latitude (a^{o}-$b^{'}$)	Longitute (x^{o}-$y^{'}$)		Temprature Variation (Centigrade) (^{o}C)	Average Annual Rainfall (mm)	Evapo-ration (mm) (mm)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
5.	**Godavari** Godavari Rises from Nasik distt. of Maharashtra at an elevation of 1067 m. Length 1465 Km.	Andhra Pradesh	73200	Godavari	75576	16-16 to 22-36	73-26 to 83-07	GD =28 GDQ = 1 GDSQ =17	15 to 40	1000 to 3000	Mean daily evaporation varies from about 5 mm near coastal region to 16.6 mm in uper region.
		Karnataka	4380	Pravara	6537						
		Madhya Pd.	31280	Purna	15579						
		Maharashtra	152027	Manjira	30844						
		Orissa	17830	Maner	13106						
		Chhatisgarh	34095	Pranhita	61093						
				Indravathi	41665						
				Sabari	20427						
				Pen Gaya	23898						
				Wargha	24087						
		Total	312812		312812						

(Contd.)

Table 2 : Salient Features of Different River Basins

Sl. No.	Basin Name	Principal Minerals	Estimated Population (Lakh) (as on March 2007)	Major Industries	Average Annual Runoff (MCM) (at terminal Site with	Soil Characteristics	Major Projects			
							Name	Gross Storage (MCM)	Live Storage (MCM)	Water withdrawal (MCM)
(1)	(2)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
5.	**Godavari**	Bauxite Manganege Iron Ore Coal Lead Zinc Corundum	617.59	Paper Other Timber Product Rice Milling Cotton Ginning processing Spinning & Weaving Manufacture of various textile Extraction of Oil from Ground Nut & other Oil Seeds Small Engineering Industries	131022 (2006-2007) Polavaram (307800)	Black Red Laterite Alluvium Mixed Saline & Alkaline	Waghed	76.48	70.00	24.72
							Ozarkhed	67.96	62.50	20.56
							Karanjawan	175.56	166.22	54.82
							Palkhed	21.24	21.24	44.43
							Gangapur	215.8	203.8	538.98
							N.Madmeswar	-	-	-
							Jayakwadi Stage-	2909.00	2170.00	225.20
							Puma	934.46	809.3	127.95
							Mula	735.8	636.8	245.13
							Bhandaradarn	312.6	307.53	219.20
							Maner	67.68	49.27	87.28
							Adhole	30.00	27.6	17.57
							S.R.S. Project St	3172.00	2322.00	392.80
							Kaddam	186.80	137.1	-
							Nizam Sagar	841.30	724.92	6654.70
							Lower Maner	-	-	-
							Maner Project	85.52	69.66	-
							Manjira	-	-	21.02
							Dhuti Weir	15.43	7.79	-
							Bagh	269.00	241.00	254.54
							Idiadoh	-	-	209.84
							Cotton Barrage	-	-	161.86
							Lakhnavaram	60.46	47.39	-
							Wain Ganga Canal			
							Surthi System			
							Kodwa			
							Godavari (Darna)			
							Parvara			
							Purna			
							Pus			
							Pench			
							Kalisara			

(Contd.)

Table 2 : Salient Features of Different River Basins

Sl. No.	Name of the Basin (Origin, Altitude & Length of the River)	State	Drainage Area (Sq.Km)	Principal Tributries & their Catchment Area		Basin Location		Number of Hydrological Observation Site	Climate Details		
				Tributary	Area (Sq.Km)	Latitude (a^{o}-$b^{'}$)	Longitute (x^{o}-$y^{'}$)		Temprature Variation (Centigrade) (^{o}C)	Average Annual Rainfall (mm)	Evapo-ration (mm) (mm)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
6.	**Krishna** Rises from near Mahabaleshwar about 64 Km. from Arabian Sea at an elevation of 1337 m. Length 1401 Km.	Andhra Prd	76252	Ghatprabha	8829	13-7 to	73-21 to	GD =15	15 to 39	784	-
		Maharashtra	69425	Malaprabha	11549	19-25	81-9	GDQ =12			
		Karanataka	113271	Bhima	70614			GDSQ =10			
				Tungabhadra	71417						
				Musi	11212						
				Palleru	3263						
				Muneru	10409						
				Others	71655						
		Total	258948	Total	258948						

(Contd.)

Table 2 : Salient Features of Different River Basins

Sl. No.	Basin Name	Principal Minerals	Estimated Population (Lakh) (as on March 2007)	Major Industries	Average Annual Runoff (MCM) (at terminal Site with	Soil Characteristics	Major Projects			
							Name	Gross Storage (MCM)	Live Storage (MCM)	Water withdrawal (MCM)
(1)	(2)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
6	**Krishna**	Bauxite Manganege Iron Ore Copper Gold Coal Lime Stone Lead Zinc Corundum Ilmenite Refractory minerals & Kaolin	710.89	Textile Chemical Cement Automobiles Engineering Goods Extratactionof Gold Alluminum Electrical Dynamic	26741 Vijaywada 251360	Forest Deep Black Medium Black, Coarse Shallow Black, Mixed Red & Black, Red, Red Loamy, Red Sandy, Redish Brown, Laterite, Deltaic Alluvium	Radha Nagri Ghod Khadakwasla Stage-I Vir Dam Pony Dam Tungabhadra Bhadra Ghatprabha Stag Stage-II Upper Krishna Rajoulibunda Di Musi Project Naga-Arjun-Sag Sri Sailam PD Jurala Prakashan Barrra Kurnool Cuddap Krishna Barrage Tulsi Neera Right Ban Neera Left Bank Vijay Nagar Cha Vani Vilas Sagar Tungbhadra High Stage-I Tungbhadra Right BankLow Level Canal	- - - - - - 3767.00 2023.00 - - 1066.00 - - 11559.00 8716.00 - - - - - - - - - - - -	- - - - - - - 1780.00 - - 863.00 - - 6767.00 - - - - - - - - - - -	Major & Medium projects - 20363 through Poni Hudro-electric power project. Tungbhadra Dam, Nagarjun Sagar project and Prakashan Barrage - 12666 for export to other basins :

(Contd.)

Source : Water Year Book of Krishna Basin for year 2006-2007.

Table 2 : Salient Features of Different River Basins

Sl. No.	Name of the Basin (Origin, Altitude & Length of the River)	State	Drainage Area (Sq.Km)	Principal Tributries & their Catchment Area		Basin Location		Number of Hydrological Observation Site	Climate Details		
				Tributary	Area (Sq.Km)	Latitude (a^{o}-$b^{'}$)	Longitute (x^{o}-$y^{'}$)		Temprature Variation (Centigrade) (^{o}C)	Average Annual Rainfall (mm)	Evapo-ration (mm) (mm)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
7.	**Cauvery** Originate at Talakavasi in Georg Distt. of Karnataka at an elevation of 1341 m. Length 800 Kms.	Karnataka	34273	Harangi	717	10-05 to	75-30 to	GD= 3	20 TO 30	500 to 3800	Annual 1500
		Tamil Nadu	43856	Hemavathi	5410	13-30	79-45	GDQ= 16			to 2500
		Kerala	2866	Lakshmana-	1690			GDSQ=14			
		Pondicherry	160	Tirtha							
				Kabini	7040						
				Shimsha	8469						
				Arkavathi	4150						
				Bhawani	6154						
				Amravathi	8380						
				Others	39145						
		Total	81155	Total	81155						

(Contd.)

Table 2 : Salient Features of Different River Basins

Sl. No.	Basin Name	Principal Minerals	Estimated Population (Lakh) (as on March 2007)	Major Industries	Average Annual Runoff (MCM) (at terminal Site with	Soil Characteristics	Major Projects			
							Name	Gross Storage (MCM)	Live Storage (MCM)	Water withdrawal (MCM)
(1)	(2)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
7.	**Cauvery** (water withdrawals during 1996-99)	Stone Mining	318.15	Paper Mills Sugar Mills Chemical Factory Cotton Mills	12558 2005-2006 Musiri (66243)	Black Cotton Red Laterite Alluvial Forest Mixed	Krishnaraja Saga Hemavathi Mattur Bhawani Sagar Reservoir Kabini Kattalai Cauvery Anicut Channel Cauvery Delta System Kalingrajan Anicut System Kodiveri Anicut System Lower Coleroon Anicut System	1400.35 1050.62 2708.79 928.80 552.74	1275.69 1012.60 2646.77 907.80 453.06	- - - - -

(Contd.)

Table 2 : Salient Features of Different River Basins

Sl. No.	Name of the Basin (Origin, Altitude & Length of the River)	State	Drainage Area (Sq.Km)	Principal Tributries & their Catchment Area		Basin Location		Number of Hydrological Observation Site	Climate Details		
				Tributary	Area (Sq.Km)	Latitude (a^{o}-$b^{'}$)	Longitute (x^{o}-$y^{'}$)		Temprature Variation (Centigrade) (^{o}C)	Average Annual Rainfall (mm)	Evapo-ration (mm) (mm)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
8.	**East Flowing Rivers from Mahandi to Kanyakumari**										
8.1	**Gundlakama** Rises near Iskagudem Village in Kurnool Distt. of Andhra Pd. at an elevation of 600 m. Length 220 Km.	Andhra Pd.	8494			15-38	78-47	GDSQ = 1	-	-	-
		Total	8494								
8.2	**Paleru** Rises from near Gogulapalle Village in Nellore Distt. of Andhra Pradesh at an elevation of 325 m. Length 104 Km.	Andhra Pd.	2483			15-17	79-13	GD = 1	-	-	-
		Total	2483								
8.3	**Pennar** Rises from Thena-nahesava Hills of Nandidurg range in Karnataka Length 597 Km.	Karnataka	6937	Jayamangali	1282	13-16 to	77-04 to	GDQ = 3	15.02 to	508 to 988	-
		Andhra Pd.	48276	Chitravathi	5908	15-52	80-10	GDSQ= 1	40.9		
				Kunderu	8057						
				Papagini	7423						
				Sagileru	3077						
				Cheyyeru	7325						
				Others	22141						
		Total	55213	Total	55213						

(Contd.)

Table 2 : Salient Features of Different River Basins

Sl. No.	Basin Name	Principal Minerals	Estimated Population (Lakh) (as on March 2007)	Major Industries	Average Annual Runoff (MCM) (at terminal Site with	Soil Characteristics	Major Projects			
							Name	Gross Storage (MCM)	Live Storage (MCM)	Water withdrawal (MCM)
(1)	(2)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
8.	**East Flowing Rivers from Mahandi to Kanyakumari (water withdrawals during 1996-97)**		830.23							
8.1	**Gundlakama**				1583 2005-2006 Thammavaram (7889)			-	-	-
8.2	**Paleru**				5 2005-2006 K.Bitragunta (2420			-	-	-
8.3	**Pennar**				2174 2005-2006 Nellore 50800		Somashila	2093.00	-	-

(Contd.)

Table 2 : Salient Features of Different River Basins

Sl. No.	Name of the Basin (Origin, Altitude & Length of the River)	State	Drainage Area (Sq.Km)	Principal Tributries & their Catchment Area		Basin Location		Number of Hydrological Observation Site	Climate Details		
				Tributary	Area (Sq.Km)	Latitude (a^{o}-$b^{'}$)	Longitute (x^{o}-$y^{'}$)		Temprature Variation (Centigrade) (^{o}C)	Average Annual Rainfall (mm)	Evapo-ration (mm) (mm)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
8.4	**Swarnamukhi** Rises from Pakada village in Chittur Distt. of Andhra Pd. at an elevation of 300 m. Length 130 Km.	Andhra Pd.	3225			13-28	79-09	GDQ = 1	22.5 to 32	762 to 1270	-
		Total	3225								
8.5	**Kalingi** Rises near Kalahasti in Andhra Pradesh Length 76 Km.	Andhra Pd.	5927		-	-	-	GDQ = 1	-	-	-
		Total	5927								
8.6	**Palar** Rises beyond Talag-rore village in Kolar Distt. of Karnataka at an elevation of 900 m Length 348 Km.	Karnataka	3044	Poini	2400	12-39 to	78-32 to	GDQ = 3	22.5 to 32.5	762 to 1270	-
		Andhra Pd.	4681	Cheyyar	1953	12-54	79-56				
		Tamil Nadu	10146	Others	13518						
		Total	17871		17871						
8.7	**Ponniar** Rises near Hongash-enhalli Village in Kolar Distt. of Karnataka at an elevation of 900m. Length 396 Km.	Karnataka	3530			11-45 to	77-33 to	GDQ = 1	22.5 to 32.5	762 to 1270	-
		Andhra Pradesh	210			13-30	79-47	GDSQ = 2			
		Tamil Nadu	12279								
		Total	16019								

(Contd.)

Table 2 : Salient Features of Different River Basins

Sl. No.	Basin Name	Principal Minerals	Estimated Population (Lakh) (as on March 2007)	Major Industries	Average Annual Runoff (MCM) (at terminal Site with	Soil Characteristics	Major Projects			
							Name	Gross Storage (MCM)	Live Storage (MCM)	Water withdrawal (MCM)
(1)	(2)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
8.4	**Swarnamukhi**				920 2005-2006 Naidupeta (2650)			-	-	-
8.5	**Kalingi**				1019 2005-2006 Sullurpet (5927)			-	-	-
8.6	**Palar**				464 2005-2006 Chengalpattu (16230)			-	-	-
8.7	**Ponniar**				1855 2005-2006 Villupuram (12900)		Krishnagiri Sathanur Rese	66.10 228.91	-	-

(Contd.)

Table 2 : Salient Features of Different River Basins

Sl. No.	Name of the Basin (Origin, Altitude & Length of the River)	State	Drainage Area (Sq.Km)	Principal Tributries & their Catchment Area		Basin Location		Number of Hydrological Observation Site	Climate Details		
				Tributary	Area (Sq.Km)	Latitude (a^{o}-$b^{'}$)	Longitute (x^{o}-$y^{'}$)		Temprature Variation (Centigrade) (^{o}C)	Average Annual Rainfall (mm)	Evapo-ration (mm) (mm)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
8.8	**Vellar** Rises near village Tumba in Chottori Hills of Eastern Ghats in Salem Distt. of Tamil Nadu at an elevation of 900 m. Length 210 Kms	Tamil Nadu	8922				-	GDQ = 1	-	-	-
		Total	8922								
8.9	**Vaigai** Rises in Western shopes of Varusha-nadu Hills near Kottaimalai in Madurai Distt. of Tamil Nadu at an elevation of 1200 m. Length 258 Km.	Tamil Nadu	7741	Mangalar	375	9-17 to	77-23	GDQ = 1	25 to 35	635 to 1270	-
				Suruliyar	1210	09-32		GDSQ = 1			
				Varahanadi	380						
				Others	5776						
		Total	7741	Total	7741						

(Contd.)

Table 2 : Salient Features of Different River Basins

Sl. No.	Basin Name	Principal Minerals	Estimated Population (Lakh) (as on March 2007)	Major Industries	Average Annual Runoff (MCM) (at terminal Site with	Soil Characteristics	Major Projects			
							Name	Gross Storage (MCM)	Live Storage (MCM)	Water withdrawal (MCM)
(1)	(2)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
8.8	**Vellar**				N.A. 2005-2006 Kudalaiyathur (7890)			-	-	-
8.9	**Vaigai**				241 2005-2006 Parmakudi (6796)		Vaigai Reserv	194.78	-	-

(Contd.)

Table 2 : Salient Features of Different River Basins

Sl. No.	Name of the Basin (Origin, Altitude & Length of the River)	State	Drainage Area (Sq.Km)	Principal Tributries & their Catchment Area		Basin Location		Number of Hydrological Observation Site	Climate Details		
				Tributary	Area (Sq.Km)	Latitude (a^{o}-$b^{'}$)	Longitute (x^{o}-$y^{'}$)		Temprature Variation (Centigrade) (^{o}C)	Average Annual Rainfall (mm)	Evapo-ration (mm) (mm)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
8.10	**Vaippar** Rises on the Eastern shopes of the Varushandu Hill ranges of Western ghat near Suragiri in Nellai Kattabomman Distt. in Tamil Nadu at an elevation of 900 m. Length 125 Km.	Tamil Nadu	5069			-	-	GDQ = 1	-	-	-
		Total	5069								
8.11	**Tambraparani** Rises on Western slopes of Westernghat near Alwarkuru village in Nellai Kattabomman Distt. of Tamil Nadu at an elevation of 1400 m. Length 130 Km.	Tamil Nadu	5482					GDSQ = 1	- -	- -	- -
		Total	5482								

(Contd.)

Table 2 : Salient Features of Different River Basins

Sl. No.	Basin Name	Principal Minerals	Estimated Population (Lakh) (as on March 2007)	Major Industries	Average Annual Runoff (MCM) (at terminal Site with	Soil Characteristics	Major Projects			
							Name	Gross Storage (MCM)	Live Storage (MCM)	Water withdrawal (MCM)
(1)	(2)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
8.10	**Vaipar**				18 2005-2006 Irrukkankudi (3721)			-	-	-
8.11	**Tambraparani**				656 2005-2006 Murappandu (4380)			-	-	-

(Contd.)

Table 2 : Salient Features of Different River Basins

Sl. No.	Name of the Basin (Origin, Altitude & Length of the River)	State	Drainage Area (Sq.Km)	Principal Tributries & their Catchment Area		Basin Location		Number of Hydrological Observation Site	Climate Details		
				Tributary	Area (Sq.Km)	Latitude (a^{o}-$b^{'}$)	Longitute (x^{o}-$y^{'}$)		Temprature Variation (Centigrade) (^{o}C)	Average Annual Rainfall (mm)	Evapo-ration (mm) (mm)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
9.	**West Flowing Rivers from Kanyakumari to Tapi**										
9.1	**Ulhas** Rises from Sahyadri Hills in Rajgod Distt. of Maharashtra at an elevation of 600 m. Length 122 Km.	Maharashtra	4637			18-44 to 19-22	72-45 to 73-48	GD = 1	12.4 to 38.9	2943	-
		Total	4637								
9.2	**Kal** Rises from Sahyadri Hills in Rajgod Distt. of Maharashtra at an elevation of 652 m. Length 40 Km.	Maharashtra	670			18-05 to 18-25	73.10 to 73.13	GDQ = 1	-	2795	-
		Total	670								
9.3	**Kajavi** Rises in the Vishal Ghat region of Sahayadri Hills. Length - N.A.	Maharashtra	315				-	GD = 1	-	-	-
		Total	315								
9.4	**Gad** Rises from Sahayadri Hills, regions in Sindhudurg Distt.of Maharashtra at an elevation of 600 m. Length 66 Km.	Maharashtra	890			16-0 to 16-20	73-30 to 74-00	GDQ = 1	-	2600	-
		Total	890								

(Contd.)

Table 2 : Salient Features of Different River Basins (Contd.)

Sl. No.	Basin Name	Principal Minerals	Estimated Population (Lakh) (as on March 2007)	Major Industries	Average Annual Runoff (MCM) (at terminal Site with	Soil Characteristics	Major Projects			
							Name	Gross Storage (MCM)	Live Storage (MCM)	Water withdrawal (MCM)
(1)	(2)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
9.	**West Flowing Rivers from Kanyakumari to Tapi**		616.13							
9.1	**Ulahas**				4246 2005-2006 Badlapur (785)			-	-	-
9.2	**Kal**				1360 2005-2006 Mangaon (259)		Kal	-	-	-
9.3	**Kajavi**				1337 2005-2006 Anjanari (315)	Sandy mixed with Gravel.		-	-	-
9.4	**Gad**				2034 2005-2006 Belen Bridge (605)			-	-	-

(Contd.)

Table 2 : Salient Features of Different River Basins

Sl. No.	Name of the Basin (Origin, Altitude & Length of the River)	State	Drainage Area (Sq.Km)	Principal Tributries & their Catchment Area		Basin Location		Number of Hydrological Observation Site	Climate Details		
				Tributary	Area (Sq.Km)	Latitude (a^{o}-$b^{'}$)	Longitute (x^{o}-$y^{'}$)		Temprature Variation (Centigrade) (^{o}C)	Average Annual Rainfall (mm)	Evapo-ration (mm) (mm)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
9.5	**Mandovi** Rises in the Jamboti Ghat in Karnataka at an elevation of 600 m Length 62 Km. Length 62 Km.	Goa	1550			15-15 to 15-40	73-15 to 73-45	GD = 1	42.6	3484	-
		Total	1550								
9.6	**Agnashini** Rises from Western Ghat of Karnataka at an elevation 676 m. Length 117 Km.	Karnataka	1350			-	-	GDQ = 1	20 to 32.7	2028 to 5465	-
		Total	1350								
9.7	**Haladi** Rises near Someswara in the reserved forest of Karnataka at an elevation of 870 m. Length 70 Km.	Karnataka	781			-	-	GDQ = 1	21.7 to 32.4	5516	-
		Total	781								
9.8	**Swarna** Rises fromWestern Ghat Karnataka Distt. Length 61 Km.	Karnataka	165			-	-	GDQ = 1	21.7 to 32.4	4436	-
		Total	165								

(Contd.)

Table 2 : Salient Features of Different River Basins

Sl. No.	Basin Name	Principal Minerals	Estimated Population (Lakh) (as on March 2007)	Major Industries	Average Annual Runoff (MCM) (at terminal Site with	Soil Characteristics	Major Projects			
							Name	Gross Storage (MCM)	Live Storage (MCM)	Water withdrawal (MCM)
(1)	(2)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
9.5	**Mandovi**				3790 2005-2006 Ganjim (880)		Anjunem	-	-	-
9.6	**Agnashini**				3972 2005-2006 Santeguli (1090)			-	-	-
9.7	**Haladi**				1853 2005-2006 Haladi (583)			-	-	-
9.8	**Swarna**				1332 2005-2006 Yennehole (327)		Proposed Dam S	370.95	108.65	-

(Contd.)

Table 2 : Salient Features of Different River Basins

Sl. No.	Name of the Basin (Origin, Altitude & Length of the River)	State	Drainage Area (Sq.Km)	Principal Tributries & their Catchment Area		Basin Location		Number of Hydrological Observation Site	Climate Details		
				Tributary	Area (Sq.Km)	Latitude (a^{o}-$b^{'}$)	Longitute (x^{o}-$y^{'}$)		Temprature Variation (Centigrade) (^{o}C)	Average Annual Rainfall (mm)	Evapo-ration (mm) (mm)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
9.9	**Netravati** Rises between Kudermukh of Ballalaryan Durga in Dakshina Kannada Distt. of Karnataka at an elevation of 1000 m. Length 103 Km.	Karnataka	3657			-	-	GDSQ = 1	16 to 42	2002 to 5277	-
		Total	3657								
9.10	**Payaswani** Originate from Pattighat reserved forest in Coorg Distt. of Karnataka at an elevation of 1350 m. Length 105 Km.	Karnataka	581			-	-	GDSQ = 1	-	-	-
		Kerala	957								
		Total	1538								
9.11	**Valapatanam** Rises from South of Ammatti Village in the Distt. of Coorg of Karnatak at an elevation of 900 m. Length 101 Km.	Karnataka	546			-	-	GDSQ = 1	22 to 32.9	2369 to 4268	-
		Kerala	1321								
		Total	1867								

(Contd.)

Table 2 : Salient Features of Different River Basins

Sl. No.	Basin Name	Principal Minerals	Estimated Population (Lakh) (as on March 2007)	Major Industries	Average Annual Runoff (MCM) (at terminal Site with	Soil Characteristics	Major Projects			
							Name	Gross Storage (MCM)	Live Storage (MCM)	Water withdrawal (MCM)
(1)	(2)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
9.9	**Netravathi**				12314 2005-2006 Bantwal (3184)			-	-	-
9.10	**Payaswani**				305 2005-2006 Erinjipuzha (957)			-	-	-
9.11	**Valapatanam**				4850 2005-2006 Perumannu (1070)		Kattampally Pazhassi	-	-	-

(Contd.)

Table 2 : Salient Features of Different River Basins

Sl. No.	Name of the Basin (Origin, Altitude & Length of the River)	State	Drainage Area (Sq.Km)	Principal Tributries & their Catchment Area		Basin Location		Number of Hydrological Observation Site	Climate Details		
				Tributary	Area (Sq.Km)	Latitude (a^{o}-$b^{'}$)	Longitute (x^{o}-$y^{'}$)		Temprature Variation (Centigrade) (^{o}C)	Average Annual Rainfall (mm)	Evapo-ration (mm) (mm)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
9.12	**Chaliyar (Beypore)** Rises from Elambabari Hills in Kerala State at an elevation of 2067 m. Length 169 Km.	Kerala	2545			-	-	GDSQ = 1	25.8 to 29.4	1289 to 5042	-
		Tamil Nadu	388								
		Total	2933								
9.13	**Kadalundi** Rises from East of Karuvarukkundu Village in Calicut Distt. in Kerala at an elevation of 900 m. Length 130 Km.	Kerala	1112			-	-	GDSQ = 1	25.8 to 29.4	1289 to 5042	-
		Total	1112								
9.14	**Bharathapuzha** Rises in the Eastern slops of Anamalai Hills of Western Ghat in Tamil Nadu at an elevation of 2250 m. Length 209 Km.	Tamil Nadu	1786			10-26 to	75-53 to	GDQ = 3	22.2 to 37.4	2000 to 3000	-
		Kerala	4400			11-13	77-13	GDSQ = 2			
		Total	6186								
9.15	**Chalakudi** Rises from Anamalai Hills of Western Ghat Length 130 Km.	Kerala	1404			-	-	GDSQ = 1	25.9 to 28.7	1494 to 4588	-
		Tamil Nadu	300								
		Total	1704								

(Contd.)

Table 2 : Salient Features of Different River Basins(Contd.)

Sl. No.	Basin Name	Principal Minerals	Estimated Population (Lakh) (as on March 2007)	Major Industries	Average Annual Runoff (MCM) (at terminal Site with	Soil Characteristics	Major Projects			
							Name	Gross Storage (MCM)	Live Storage (MCM)	Water withdrawal (MCM)
(1)	(2)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
9.12	**Chaliyar (Beypore)**				6161 2005-2006 Kuniyil (1876)			-	-	-
9.13	**Kadalundi**				1404 2005-2006 Karathodu (750)			-	-	-
9.14	**Bharathapuzha**				863 2005-2006 Mankara (2775)		Malampuzha Re Chiturpuzha Kanvirapuzha	228.40	226.00	-
9.15	**Chalakudi**				2099 2005-2006 Arangaly (1342)		Chalakudi River Diversion Schen Sholayar H.E.S. Peringilkuthu Le Scheme	443.50	299.50	-

(Contd.)

Table 2 : Salient Features of Different River Basins(Contd.)

Sl. No.	Name of the Basin (Origin, Altitude & Length of the River)	State	Drainage Area (Sq.Km)	Principal Tributries & their Catchment Area		Basin Location		Number of Hydrological Observation Site	Climate Details		
				Tributary	Area (Sq.Km)	Latitude (a^{o}-$b^{'}$)	Longitute (x^{o}-$y^{'}$)		Temprature Variation (Centigrade) (^{o}C)	Average Annual Rainfall (mm)	Evapo-ration (mm) (mm)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
9.16	**Periyar** Rises at the forest Sivagiri Peak 80 Km. South of Devikulan at an elevation of 2438 m. Length 244 Km.	Kerala	5398			-	-	GDSQ = 1 GDQ = 2	25.9 to 28.7	Good Rainfall Max.8656	-
		Total	5398								
9.17	**Muvattupuzha** Rises from the East of Erattupetta village in Distt. Of Kottayam in Kerala State at an evelation of 1200 m Length 121 Km.	Kerala	1554			9.43	76-53	GDSQ = 1	25.9 to 28.7	2779 to 4526	-
		Total	1554								
9.18	**Meenachil** Village in the Distt. Kottayam of Originate at East of Errattupata Kerala State at an evalation 900 m. Length 78 Km.	Kerala	1272			9-40	76-52	GDSQ = 1	26.2 to 29.4	2420 to 4526	-
		Total	1272								
9.19	**Pamba** Rises in the Peermedu Plateau at an elevation 1670 m. Length 176 Km.	Kerala	2235			-	-	GDSQ = 1	22.6 to 32.7	2276 to 4275	-
		Total	2235								

(Contd.)

Table 2 : Salient Features of Different River Basins(Contd.)

Sl. No.	Basin Name	Principal Minerals	Estimated Population (Lakh) (as on March 2007)	Major Industries	Average Annual Runoff (MCM) (at terminal Site with	Soil Characteristics	Major Projects			
							Name	Gross Storage (MCM)	Live Storage (MCM)	Water withdrawal (MCM)
(1)	(2)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
9.16	**Periyar**				9321 2005-2006 Neeleshwaram (4234)		Periyarvalley Pro Edamalayar Idukky Hydel Pr	453.50 1089.80 1996.30	299.35 1017.80 1489.50	- 1824.00 2027.90
9.17	**Morathupuzha**				6120 2005-2006 Ramamangalam (1208)			-	-	-
9.18	**Meenachil**				2153 2005-2006 Kidangoor (615)			-	-	-
9.19	**Pamba**				5104 2005-2006 Malakkara (1713)		Pamba Hydel Project	487.30	471.68	1046.80

(Contd.)

Table No.1.2 : Salient Features of Different River Basins(Contd.)

Sl. No.	Name of the Basin (Origin, Altitude & Length of the River)	State	Drainage Area (Sq.Km)	Principal Tributries & their Catchment Area		Basin Location		Number of Hydrological Observation Site	Climate Details		
				Tributary	Area (Sq.Km)	Latitude (a^{o}-$b^{'}$)	Longitute (x^{o}-$y^{'}$)		Temprature Variation (Centigrade) (^{o}C)	Average Annual Rainfall (mm)	Evapo-ration (mm) (mm)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
9.20	**Achankovil** Rises from South of the Devermalai in the Quillon Distt. of Kerala State at an elevation of 1500 m. Length 128 Km.	Kerala	1484			09-10	72-15	GDSQ = 1	26.1 to 29.1	2520	-
		Total	1484								
9.21	**Kallada** Rises in Papanasam range South of Kulathupuzha in Quillon Distt. of Kerala State at an elevation of 900 m. Length 121 Km.	Kerala	1699			-	-	GDSQ = 1	26.1 to 29.1	2225 to 4038	-
		Total	1699								
9.22	**Vamanapuram** Originates in the Chemunji Motai at an elevation of 1860 m. Length 88 Km.	Kerala	687			-	-	GDSQ = 1	26.2 to 28.8	1836 to 4651	-
		Total	687								

(Contd.)

Table 2 : Salient Features of Different River Basins(Contd.)

Sl. No.	Basin Name	Principal Minerals	Estimated Population (Lakh) (as on March 2007)	Major Industries	Average Annual Runoff (MCM) (at terminal Site with	Soil Characteristics	Major Projects			
							Name	Gross Storage (MCM)	Live Storage (MCM)	Water withdrawal (MCM)
(1)	(2)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
9.20	**Achankovil**				1246 2005-2006 Thumpamon (810)			-	-	-
9.21	**Kalada**				1138 2005-2006 Pattazhy (1210)		Kalada Irrigation Project	-	-	-
9.22	**Vamanapuram**				808 2005-2006 Ayilam (540)			-	-	-

Source : Water Year Book for year 2005-2006

Table 2 : Salient Features of Different River Basins

Sl. No.	Name of the Basin (Origin, Altitude & Length of the River)	State	Drainage Area (Sq.Km)	Principal Tributries & their Catchment Area		Basin Location		Number of Hydrological Observation Site	Climate Details		
				Tributary	Area (Sq.Km)	Latitude (a^{o}-$b^{'}$)	Longitute (x^{o}-$y^{'}$)		Temprature Variation (Centigrade) (^{o}C)	Average Annual Rainfall (mm)	Evapo-ration (mm) (mm)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
10	**Tapi** Rises from Near Multai in Betul Distt. of Madhya Pradesh at an elevation of 752 m. Length 724 Km.	M.P.	9804	Tapi(Main)	22522	20.00 to	72.45 to	GD = 4	05 to 48	830	
		Maharashtra	51504	Gomai	1148	22.00	78.15	GDSQ = 3			
		Gujarat	3837	Arunavati	935						
				Buray	1419						
				Panjhra	3257						
				Bori	2580						
				Aner	1702						
				Girna	10061						
				Waghur	2592						
				Purna	18929						
		Total	65145	Total	65145						
11	**Narmada** Originates from Amarkantak of Shehdol Distt. of Madhya Pradesh at an elevation of 1057 m. Length 1312 Km.	Madhya Pradesh	85859	Burhner	4228	21-20 to	72-32 to	GD = 6	7.5 to 41.9	674 to 1623	Lower Zone
		Maharashtra	1538	Hiran	4795	23-45	81-45	GDQ = 5			12.0 to 28.0
		Gujarat	11399	Tawa	6338			GDSQ = 14			Middle Zone
				Chhota Tawa	5055						1.0 to 3.0
				Kundi	3973						
				Orsang	3946						
				Others	70461						
		Total	98796	Total	98796						

(Contd.)

Table 2 : Salient Features of Different River Basins

Sl. No.	Basin Name	Principal Minerals	Estimated Population (Lakh) (as on March 2007)	Major Industries	Average Annual Runoff (MCM) (at terminal Site with	Soil Characteristics	Major Projects			
							Name	Gross Storage (MCM)	Live Storage (MCM)	Water withdrawal (MCM)
(1)	(2)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
10	**Tapi** (water withdrawals during 1995-98)	Coal	208.34	Paper Mills Sugar Mills Cotton Spinning Mills Dal Miils Oil Mills Wood Cutting Mills	N.A.	Shallow Black Medium Black Black Cotton Light Brown to Redish Brown Dark Yellow & Redish	Ukai Dam Kate Purna Nalganga Kakrapar weir Girna	8510.00 97.67 76.20 51.51	7092.00 86.35 69.32 36.51	Information not available
11	**Narmada** (water withdrawals during 1995-99)	Bauxite Clay Coal Dolomite Graphite Iron Ore Manganese Talc & Lime Stone	184.24	Therefew Large Scale & Medium Scale Industries. Industries are low as compared with other Basins.	33768 hm^3 2004-2005 Gurudeshwar (87892)	Shallow BlackMedium BlackMedium Deep BlackMixed Red & Black Sandy Loam	Karjan Sardar Sarover Jobat Man Upper Beda Maheshwar Narmada Sagar Sukta Kolar Tawa Barna Bargi Matiyari Sukhi Tanwar	630.00 - - - - - 89.50 270.00 2310.00 539.00 3920.00 56.80 - -	- - - - - - 78.05 265.00 2050.50 455.00 3180.00 51.12 - -	5516.06 - - - - - 78.96 124.17 1478.04 315.24 22.28 49.37

Source : Water Year Book of Tapi Basin for year 2005-2006, Water Year Book of Narmada Basin for year 2004-2005.

Table 2 : Salient Features of Different River Basins

Sl. No.	Name of the Basin (Origin, Altitude & Length of the River)	State	Drainage Area (Sq.Km)	Principal Tributries & their Catchment Area		Basin Location		Number of Hydrological Observation Site	Climate Details		
				Tributary	Area (Sq.Km)	Latitude (a^{o}-$b^{'}$)	Longitute (x^{o}-$y^{'}$)		Temprature Variation (Centigrade) (^{o}C)	Average Annual Rainfall (mm)	Evapo-ration (mm) (mm)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
12	**Mahi and Sabarmati**										
12.1	**Mahi** Rises from Near village Sardarpur in Dhar Distt. of Madhya Pradesh at an elevation of 500 m. Length 583 Km.	Madhya Pradesh	6695	Som	8707	22-35	74-58	GD = 2	5 to 50	785	-
		Rajasthan	16453	Anas	5604			GDSQ = 3			
		Gujarat	11694	Panam	2470			GDQ = 1			
				Others	18061						
		Total	34842	Total	34842						
12.2	**Sabarmati** Originates in Aravali Hills in Rajasthan at an elevation of 762 m. Length 371 Km.	Rajasthan	4124	Sei	946	24-40	73-20	GD = 4	9 to 48	787.5	-
		Gujarat	17550	Wakal	1625			GDSQ = 1			
				Harnav	972			GDQ = 1			
				Hathmati	1526						
				Watrak	8638						
				Others	7967						
		Total	21674	Total	21674						
12.3	**Luni** Western Slope of Aravali Hills near Ajmer in Rajasthan at an elevation of 772 m. Length 511 Km.	Rajasthan	32879	Guhiya & Sukri	4126	24-11 to	70-37 to	GD = 2	2 to 46	300-500	-
				Bandi	3016	26-43	74-39				
				Sukari	3280						
				Jawai	2701						
				Others	19756						
		Total	32879	Total	32879						

(Contd.)

Table 2 : Salient Features of Different River Basins

Sl. No.	Basin Name	Principal Minerals	Estimated Population (Lakh) (as on March 2007)	Major Industries	Average Annual Runoff (MCM) (at terminal Site with	Soil Characteristics	Major Projects			
							Name	Gross Storage (MCM)	Live Storage (MCM)	Water withdrawal (MCM)
(1)	(2)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
12	**Mahi and Sabarmati**		507.74							
12.1	**Mahi**	Phyllites, gneisses Quartzite & Granite		Engg., Handicraft, Stonework, Cement, Chemical, Liquier, Sugar, Tex and Wools etc.	3891 2003-2004 Khanpur (32,510)		Mahi Bajaj Saga Kadana Res. Wanakbari Weir Sonkamblamba Jakham Panam Bhadar	2180.00 1542.00 41.88	1712.00 1203.00 36.24	- -
12.2	**Sabarmati**	- do -		- do -	1095 2003-2004 Nabhoi (20149)		Dharoi Dam Watrak Maheswar Res. Sabarmati Noti Fatewadi Hatmati	907.88 176.90	731.99 154.30	- -
12.3	**Luni**	-		-	300 2003-2004 Gandhav (32010)					

(Contd.)

Table 2 : Salient Features of Different River Basins

Sl. No.	Name of the Basin (Origin, Altitude & Length of the River)	State	Drainage Area (Sq.Km)	Principal Tributries & their Catchment Area		Basin Location		Number of Hydrological Observation Site	Climate Details		
				Tributary	Area (Sq.Km)	Latitude (a^{o}-$b^{'}$)	Longitute (x^{o}-$y^{'}$)		Temprature Variation (Centigrade) (^{o}C)	Average Annual Rainfall (mm)	Evapo-ration (mm) (mm)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
12.4	**Banas** Rises from village Pindara of Sirohi Distt. in Rajasthan at an elevation of 372.51 m. Length 266 Km.	Rajasthan	3269	Sipu	1420	23-30 to	71-15 to	GD = 1	5 to 46.5	921.4	-
		Gujarat	5405	Sukli	438	24-55	73-15	GDQ = 2			
				Khari	1391			GDSQ = 1			
				Others	5425						
		Total	8674	Total	8674						
12.5	**Shetrunji** Originates at Chchai Hills in Gir Forest of Junagarh Distt.of Gujarat at an elevation of 380 m. Length 182 Km.	Gujarat	5514	Satali	651	21-00 to	70-50 to	GDSQ = 1	6 to 47	604.52	-
				Theli	484	21-47	72-10				
				Gagaria	754						
				Kharai	665						
				Others	2960						
		Total	5514	Total	5514						
12.6	**Bhadar** Rises from Near Vaddi village of Rajkot Distt. of Gujarat at an elevation of 261 m. Length 198 Km.	Gujarat	7094	Vasavadi	583	21-45 to	69-45 to	GDSQ = 1	4 to 45	625	-
				Gondali	513	22-10	71-20				
				Venu	953						
				Others	5045						
		Total	7094	Total	7094						
12.7	**Machhu** Rises from near village Khokhara in Surendra Nagar Distt. of Gujarat at an elevation of 220 m. Length 142 Km.	Gujarat	2515	Beti	236	22-10 to	70-40 to	GD = 1	6 to44	533	-
				Maha	508	23-10	71-45				
				Others	1771						
		Total	2515	Total	2515						

(Contd.)

Table 2 : Salient Features of Different River Basins

Sl. No.	Basin Name	Principal Minerals	Estimated Population (Lakh) (as on March 2007)	Major Industries	Average Annual Runoff (MCM) (at terminal Site with	Soil Characteristics	Major Projects			
							Name	Gross Storage (MCM)	Live Storage (MCM)	Water withdrawal (MCM)
(1)	(2)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
12.4	**Banas**				372.0 2003-2004 Kamalpur (6960)		Sipu Dam Dantiwada Da	177.80 464.00	156.00 444.00	-
12.5	**Shetrunji**				176.1 2003-2004 Lowara (3953)		Shetrunji Irrig Scheme	350.00	309.00	-
12.6	**Bhadar**				400.6 2003-2004 Ganod (6266)		Bhadar Irrigati Scheme	238.00	221	-
12.7	**Machhu**				145.7 2003-2004 Gungoan (2137)			-	-	-

(Contd.)

Table 2 : Salient Features of Different River Basins

Sl. No.	Name of the Basin (Origin, Altitude & Length of the River)	State	Drainage Area (Sq.Km)	Principal Tributries & their Catchment Area		Basin Location		Number of Hydrological Observation Site	Climate Details		
				Tributary	Area (Sq.Km)	Latitude (a^{o}-$b^{'}$)	Longitute (x^{o}-$y^{'}$)		Temprature Variation (Centigrade) (^{o}C)	Average Annual Rainfall (mm)	Evapo-ration (mm) (mm)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
12.8	**Rupen** Originates from Taranga Hill ranges near Kheralu taluka of Mehsana Distt. of Gujarat at an elevation of 180 m. Length 156 Km.	Gujarat	2500	Khari	180	23-25 to	71-30 to	GD = 1	10to 50	469	-
				Pushvati	446	24-00	72-46				
				Others	1874						
		Total	2500	Total	2500						
12.9	**Purna** Rises from Satpura Hills Length 180 Km.	Gujarat	2373			20-41 to	72-45 to	GDSQ = 1	10 to 44	-	-
		Maharashtra	58			21-15	74-00				
		Total	2431								
12.10	**Ambica** rises from Satpura Hill range Length 136 Km. Length 136 Km.	Gujarat	2613			20-31 to	72-48	GDSQ = 1	8 to 40	-	-
		Maharashtra	102			20-57	73-52				
		Total	2715								
12.11	**Vaitarna** Originates from Hill terrains of Maharashtra at Trimbak Distt. Nasik Length 120 Km.	Maharashtra	2019			19-30 to	72-45 to	GDSQ = 1	-	-	-
						20-20	73-35				
		Total	2019								

(Contd.)

Table 2 : Salient Features of Different River Basins

Sl. No.	Basin Name	Principal Minerals	Estimated Population (Lakh) (as on March 2007)	Major Industries	Average Annual Runoff (MCM) (at terminal Site with	Soil Characteristics	Major Projects			
							Name	Gross Storage (MCM)	Live Storage (MCM)	Water withdrawal (MCM)
(1)	(2)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
12.8	**Rupen**			-	52.73 2003-2004 Sapawada (2125)			-	-	-
12.9	**Purna**			Spring & Textile, ginning & Pressing	1283 2003-2004 Mahuwa (1995)			-	-	-
12.10	**Ambica**			- do -	74 2003-2004 Gadat (1510)			-	-	-
12.11	**Vaitarna**			-	2982 2003-2004 Durvesh (2019)			-	-	-

(Contd.)

Table 2 : Salient Features of Different River Basins

Sl. No.	Name of the Basin (Origin, Altitude & Length of the River)	State	Drainage Area (Sq.Km)	Principal Tributries & their Catchment Area		Basin Location		Number of Hydrological Observation Site	Climate Details		
				Tributary	Area (Sq.Km)	Latitude (a^{o}-$b^{'}$)	Longitute (x^{o}-$y^{'}$)		Temprature Variation (Centigrade) (^{o}C)	Average Annual Rainfall (mm)	Evapo-ration (mm) (mm)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
12.12	**Dhadar** Originates from Chota Udaipur Hill range Length 142 Km.	Gujarat	3423			21-45 to 22-45	72-30 to 73-45	GDQ = 1	-	-	-
		Total	3423								
12.13	**Damanganga** Originates from Sahyadri hill in Nasik Distt. of Maharashtra at an elevation of 930 m. Length 131 Km.	Maharashtra	1408			19-51 to 20-28	72-50 to 73-38	GD = 2	-	2200	-
		Gujarat	495								
		Dadar-Nagar, Haveli & Daman	415								
		Total	2318								
12.14	**Kim** Rises from Satpura Hill ranges in Bharuch Distt. of Gujarat. Length 107 Km.	Gujarat	1286			21-19 to 21-38	72-40 to 73-27	GDQ = 1	10 to 44	-	-
		Total	1286								

(Contd.)

Table 2 : Salient Features of Different River Basins

Sl. No.	Basin Name	Principal Minerals	Estimated Population (Lakh) (as on March 2007)	Major Industries	Average Annual Runoff (MCM) (at terminal Site with	Soil Characteristics	Major Projects			
							Name	Gross Storage (MCM)	Live Storage (MCM)	Water withdrawal (MCM)
(1)	(2)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
12.12	**Dhadar**		11.23	Chemical & Petrolium Production Springing Textile, rubber and Plastic, Electric, Mechanic etc.	396.4 2003-2004 Pingalwada (2400)			-	-	-
12.13	**Damanganga**				767.1 2003-2004 Nanipalsan (764)		Madhuban Dam Damanganga	567.00	-	-
12.14	**Kim**				406.6 2003-2004 Motinaroli (804)			-	-	-

Source : Water Year Book for year 2003-2004.

Table 3 : Number of operational hydrological observation Sites by non- classified river basins

S.No.	Basin Name	Type & Nos. of Sites				Frequency of Water Quality Monitoring
		Guage & Discharge (GD)	Guage, Discharge & Water Quality (GDQ)	Guage, Discharge, Sediment & Water Quality (GDSQ)	Total no. of Sites	
1	2	3	4	5	6	7
1	**Mahanadi**	5	2	13	20	Once a month
2	**Suberanrekha, Burhabalang & Baitarni**	Nil	2	9	11	-do-
3	**Brahmani**	1	Nil	5	6	-do-
4	**Rushikulya,Vamsdhara, Sarada & Nagavali**	2	Nil	3	5	-do-
5	**Godavari**	28	1	17	46	Thrice a month
6	**Krishna**	15	12	10	37	-do-
7	**Cauvery**	3	16	14	33	Once a month
8	**East Flowing Rivers from Mahanadi to Kanyakumari**	3	15	9	27	-do-
9	**West Flowing Rivers from Kanya Kumari to Tapi**	7	13	18	38	-do-
10	**Tapi**	2	-	3	5	-do-
11	**Narmada**	6	5	14	25	Twice a month
12	**Mahi and Sabarmati**	13	6	10	29	-do-
	Total	**85**	**72**	**125**	**282**	

Source : Water Year Books of differernt Basins.
Note : Guage-Discharge & Sediment observations are taken daily.

Table 4 : Important Historical Observations by sites and River Basin

I Basin : Mahanadi

Sl. No.	Site Name	Drainage Area (Km^2)	Latitude	Longitude	Zero of Gauge (m)	Stage Record		Reference Period		Date of Establishment		
						Peak Water Level (m)	Date of Occurrece	From	To	Discharge (MCM)	Sediment	Water Quality
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)		(10)	(11)	(12)
1	**Basantpur**	57780.0	21°43'36"	82°47'17"	206.000	219.820	20-09-1980	01-02-1971	31-05-2007	07/04/1972	07-04-1973	01/09/1972
2	**Seorinarayan**	48050.0	21°43'00"	82°35'48"	209.500	224.635	30-08-2003	01-06-1985	31-05-2007			
3	**Rajim**	8760.0	20°58'25"	81°52'48"	275.000	283.710	18-09-1980	01-02-1971	31-05-2007	04/12/1971	04-12-1972	01/09/1972
4	**Kantamal**	19600.0	20°39'00"	83°43'55"	118.000	132.065	05-07-2006	08-08-1971	31-05-2007	22/07/1975	22-07-1976	01/10/1972
5	**Kesinga**	11960.0	20°11'51"	83°13'30"	166.000	178.835	13-09-1977	10-11-1977	31-05-2007	22/09/2005	22-09-2006	01/06/2001
6	**Salebhata**	4650.0	20°59'00"	83°32'22"	130.000	139.930	30-08-1982	23-07-1971	31-05-2007	01/05/1972	01-05-1973	15/09/1972
7	**Sundergarh**	5870.0	22°06'55"	84°00'40"	214.000	222.900	11-09-1998	07-08-1977	31-05-2007	21/07/1979	21-07-1980	02/06/1980
8	**Kurubhata**	4625.0	21°59'15"	83°12'15"	215.000	220.350	10-08-2004	23-10-1977	31-05-2007	22/07/1979	22-07-1980	01/07/1980
9	**Bamnidhi**	9730.0	21°53'55"	82°43'02"	223.000	229.225	22-08-1975	29-01-1971	31-05-2007	01/05/1972	01-05-1973	01/09/1972
10	**Manendragarh**	1100.0	23°12'10"	82°13' 05"	411.000	420.860	12-07-1990	21-06-1987	31-05-2007	09/07/1992	09-07-1993	01/10/1992
11	**Rampur**	2920.0	21°39'06"	82°31'10"	219.000	229.665	29-08-2003	29-01-1971	31-05-2007	05/07/1975	05-07-1976	15/01/1972
12	**Jondhra**	29645.0	21°43'30"	82°20'50"	219.000	230.600	14-07-1994	24-01-1979	31-05-2007	11/10/1979	11-10-1980	02/06/1980
13	**Simga**	30761.0	21°37'54"	81°41'16"	244.000	257.680	13-07-1994	29-07-1971	31-05-2007	30/12/1971	30-12-1972	01/09/1972
14	**Kotni**	6990.0	21°14'10"	81°14'50"	268.000	280.080	30-08-1978	20-09-1977	31-05-2007			
15	**Ghatora**	3035.0	22°03'24"	82°13'15"	246.000	254.650	21-07-1994	15-10-1977	31-05-2007	01/11/1999	01-11-2000	01/11/1991
16	**Andhiarkhore**	2210.0	21°50'02"	81°36'21"	252.000	260.150	09-10-1994	27-09-1977	31-05-2007	12/07/1979		01/06/1980
17	**Pathardih**	2511.0	21°20'28"	81°35'38"	271.000	279.210	12-07-1994	12-06-1987	31-05-2007			01/06/1995
18	**Baronda**	3225.0	20°54'45"	81°53'10"	283.000	289.600	09-07-2001	12-07-1977	31-05-2007	29/06/1979	29-06-1980	02/06/1980
19	**Tikarapara**	124450.0	22°38'00"	84°37'08"	50.000	74.980	30-08-1982	19-02-1971	31-05-2007	18-02-1971	01-06-1973	01-12-1972

Source : The Superintending Engineer, Wainganga Division, Central Water Commission

Table 4 : Important Historical Observations by sites and River Basin

II Basin : Subarnarekha, Burhabalang & Baitarni

Sl. No.	Site Name	Drainage Area (Km2)	Latitude	Longitude	Zero of Gauge (m)	Stage Record		Reference Period	Date of Establishment		
						Peak Water Level (m)	Date of Occurrece		Discharge (MCM)	Sediment	Water Quality
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1	**Muri**	1330	23°48'56"	85°12'47"	231.000	237.80	09.07.1994	20.08.1988 to 31.05.2007	09.07.1994	-	01.05.1991
2	**Adityapur**	6309	22°47'29"	86°10'06"	123.000	139.850	13.09.1973	23.08.1971 to 31.05.2007	03.09.1973	02.06.1975	01.01.1976
3	**Jamshedpur**	12649	22°47'00"	86°12'00"	111.000	129.820	12.10.1973	24.06.1972 to 31.05.2007	12.10.1973	27.01.1972	01.09.1972
4	**Ghatsila**	14176	22°34'49"	86°20'08"	72.000	86.835	13.10.1973	16.03.1971 to 31.05.2007	13.10.1973	30.12.1972	01.09.1973
5	**Govindapur**	4495	21°32'52"	86°55'14"	0.000	8.940	31.10.1999	22.06.1978 to 31.05.2007	31.10.1999	21.03.2003	01.05.2003
6	**Champua**	1710	22°03'57"	85°40'56"	367.000	376.540	29.06.2005	01.02.1980 to 31.05.2007	29.06.2005	09.08.2001	08.09.2001
7	**Anandpur**	8570	21°12'34"	86°07'23"	28.000	41.150	19.08.1975	07.03.1972 to 31.05.2007	19.08.1975	01.06.1972	01.09.1972

Source : The Superintending Engineer, Wainganga Division, Central Water Commission

Table 4 : Important Historical Observations by sites and River Basin

III Basin : Brahmani

Sl. No.	Site Name	Drainage Area (Km2)	Latitude	Longitude	Zero of Gauge (m)	Stage Record		Reference Period	Date of Establishment		
						Peak Water Level (m)	Date of Occurrece		Discharge (MCM)	Sediment	Water Quality
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1	**Tilga**	3160	22°20'00"	84°30'00"	372.000	379.320	28.09.1987	27.04.1978 to 31.05.2007	28.08.1987	21.07.80	01.06.80
2	**Jaraikela**	9160	22°19'08"	85°06'19"	185.000	194.055	06.08.1977	23.07.1971 to 31.05.2007	06.08.1977	01.06.75	01.09.75
3	**Panposh**	19448	22°16'19"	84°51'07"	170.500	180.380	06.08.1977	01.07.1972 to 31.05.2007	06.08.1997	01.08.96	01.11.90
4	**Gomlai**	21950	21°50'16"	84°56'33"	135.000	147.000	26.07.1996	29.08.1977 to 31.05.2007	26.07.1996	17.07.80	01.06.80
5	**Jenapur**	33955	20°55'23"	86°00'51"	13.000	23.475	18.08.1984	09.07.1977 to 31.05.2007	18.04.1984	09.07.80	01.03.80

Source : The Superintending Engineer, Wainganga Division, Central Water Commission

Table 4 : Important Historical Observations by sites and River Basin

IV Basin : Rushikulya, Vamsadhara, Sarada & Nagavali

Sl. No.	Site Name	Drainage Area (Km2)	Latitude	Longitude	Zero of Gauge (m)	Stage Record		Reference Period	Date of Establishment		
						Peak Water Level (m)	Date of Occurrece		Discharge (MCM)	Sediment	Water Quality
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1	**Purushottampur**	7112	19°31'00"	84°53'00"	12.000	18.970	04.11.1999	14.07.1978 to 31.05.2007	-	15.01.2001	08.10.2001
2	**Kashi Nagar**	7820	18°50'49"	83°57'04"	51.000	58.935	18.09.1980	23.09.1971 to 31.05.2007	-	13.10.1972	01.09.1972
3	**Gunupur**	6740	19°05'00"	83°49'00"	80.250	87.670	17.09.1980	19.04.1978 to 31.05.2007	-	-	-
4	**Srikakulam**	9500	18°18'48"	83°53'18"	6.650	14.530	12.05.1990	16.02.1988 to 31.05.2007	-	27.06.2001	27.06.2001
5	**Ankapali**	2090	17°41'00"	83°01'08"	20.400	28.450	10.05.1990	01.12.1987 to 31.05.2007	-	-	-

Source : The Superintending Engineer, Wainganga Division, Central Water Commission

Table 4 : Important Historical Observations by sites and River Basin

V Basin : Godavari

Sl. No.	Site Name	Drainage Area (Km^2)	Latitude	Longitude	Zero of Gauge (m)	Stage Record		Reference Period	Date of Establishment		
						Peak Water Level (m)	Date of Occurrece		Discharge	Sediment	Water Quality
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1	**Polavaram**	307800	17°14'45"	81°39'35"	10.897	25.897	21.09.2005	1/66 to 5/06	01.01.1966	25.10.1966	25.10.1966
2	**Koida**	305460	17°27'21"	81°30'20"	13.000	39.280	11.09.2005	2/76 to 5/06	13.11.1976	-	-
3	**Konta**	19550	17°48'00"	81°23'00"	30.100	44.180	20.09.2005	2/64 to 5/06	28.10.1965	01.01.1968	05.05.1968
4	**Injaram**	12925	17°50'00"	81°23'00"	35.957	46.750	27.07.2003	1/64 to 5/06	19.01.1966	-	-
5	**Potteru**	1120	18°10'13"	81°47'40"	120.500	130.030	06.08.2003	3/89 to 5/06	20.05.1997	-	-
6	**Saradaput**	3047	18°36'00"	82°08'00"	88.000	237.520	08.10.2003	1/68 to 5/06	05.09.1970	-	-
7	**Sangam**	1565	17°35'50"	80°49'40"	53.000	58.250	21.09.2005	6/96 to 5/06	24.08.1996	-	-
8	**Perur**	268200	18°33'00"	80°22'00"	83.000	81.130	18.09.2005	3/64 to 5/06	17.09.1965	24.02.1968	24.10.1968
9	**Pathagudem**	40000	18°49'00"	80°21'00"	85.750	97.550	14.09.2005	7/64to 5/06	20.07.1964	21.07.1965	01.01.1972
10	**Medapalli**	2031	19°24'42"	80°37'49"	202.770	213.310	19.09.2005	6/65 to 5/06	19.12.1966	-	-
11	**Mirdapalli**	24210	19°17'56"	80°41'34"	228.500	238.390	24.07.2003	10/72 to 5/06	27.10.1972	-	-
12	**Tumnar**	1700	19°00'30"	81°14'20"	315.007	324.407	23.08.2003	3/89 to 5/06	09.12.1991	-	-
13	**Chindnar**	17270	19°05'00"	81°18'00"	325.002	337.375	14.09.2005	6/71 to 5/06	07.12.1971	-	-
14	**Cherribeda**	890	19°38'23"	81°29'07"	564.400	572.400	25.07.2003	3/96 to 5/06	13.11.1996	-	-
15	**Amabal**	1968	19°17'00"	81°47'20"	84.000	539.460	25.07.2003	12/88 to 5/06	30.10.1993	-	-
16	**Sonarpal**	1523	19°16'00"	81°52'00"	534.356	540.150	25.07.2003	7/89 to 5/06	05.12.1991	-	-
17	**Jagdalpur**	7380	19°06'30"	82°01'30"	544.595	541.471	29.08.2003	8/64 to 5/06	21.09.1965	21.09.1965	01.12.1979
18	**Kosagumda**	1635	19°16'37"	82°14'00"	547.000	554.770	28.08.2003	3/96 to 5/06	13.11.1996	-	-
19	**Murthahandi**	N.A.	19°03'00"	82°17'00"	533.600	541.180	28.08.2003	2/79 to 5/06	01.12.1988	-	-
20	**Nowrangpur**	3545	19°12'00"	82°31'00"	550.716	557.645	07.09.2003	6/71 to 5/06	21.12.1965	01.06.1969	01.01.1972
21	**Tekra**	108780	18°57'06"	79°57'45"	95.090	109.240	18.09.2005	6/64 to 5/06	15.07.1964	01.07.1965	15.06.1966
22	**Bhatpalli**	3100	19°18'47"	79°27'57"	156.000	164.500	20.07.2003	8/86 to 5/06	01.10.1986	07.10.1987	04.01.1987
23	**Sirpur**	47500	19°32'54"	79°32'51"	157.380	153.420	07.08.2005	6/64 to 5/06	16.10.1965	13.12.1965	03.06.1966
24	**Bamni**	46020	19°48'48"	79°22'58"	198.630	173.120	29.07.2005	1/64 to 5/06	21.07.1965	19.10.1965	31.05.1966

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Table 4 : Important Historical Observations by sites and River Basin

V Basin : Godavari

Sl. No.	Site Name	Drainage Area (Km^2)	Latitude	Longitude	Zero of Gauge (m)	Stage Record		Reference Period	Date of Establishment		
						Peak Water Level (m)	Date of Occurrece		Discharge	Sediment	Water Quality
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
25	**P.G.Bridge**	18441	19°49'08"	78°34'11"	188.000	213.355	28.07.2005	12/64 to 5/06	09.11.1992	-	-
26	**Mangrul**	2500	20°11'15"	77°59'15"	385.938	288.095	28.07.2005	11/92 to 5/06	01.09.1964	-	-
27	**Marlegaon**	7410	19°32'28"	77°40'19"	465.000	394.738	28.07.2005	8/63 to 5/06	20.07.1992	-	-
28	**Kanhargaon**	3515	19°57'37"	77°09'03"	165.041	468.115	08.08.2003	2/91 to 5/06	29.12.1965	-	-
29	**Ghugus**	21429	19°56'05"	79°06'29"	198.000	177.911	06.08.2005	6/64 to 5/06	21.07.1986	-	-
30	**Nandgaon**	4580	20°31'01"	78°48'21"	230.000	207.650	15.09.2005	10/85 to 5/06	11.08.1987	13.07.1988	01.01.1988
31	**Hivra**	10240	20°32'54"	78°19'29"	286.000	240.350	28.07.2005	11/86 to 5/06	25.06.1988	20.06.1990	16.12.1987
32	**Bhisnur**	5000	21°06'26"	78°07'59"	137.276	292.320	29.09.2003	11/86 to 5/06	14.07.1965	26.06.1990	07.11.1987
33	**Asthi**	50990	19°41'05"	79°47'19"	229.000	154.020	17.09.2005	8/63 to 5/06	-	14.03.1966	01.06.1966
34	**Rajoli**	1900	20°11'30"	79°40'03"	208.705	189.200	06.08.2005	1/85 to 5/06	25.06.1986	25.06.1986	-
35	**Wairgarh**	2600	20°25'26"	80°05'09"	224.300	214.325	03.08.2003	7/92 to 5/06	07.08.1992	-	-
36	**Salebandi**	1800	20°54'40"	79°55'42"	218.500	233.520	15.09.2005	7/85 to 5/06	21.06.1986	-	-
37	**Pauni**	35520	20°47'46"	79°38'32"	263.300	233.965	28.07.2003	9/84 to 5/06	21.09.1965	12.01.1966	12.01.1966
38	**Satrapur**	11100	21°13'04"	79°14'05"	335.950	272.890	27.07.2003	1/64 to 5/06	30.05.1986	01.08.1988	09.12.1987
39	**RamaKona**	2500	21°43'16"	78°49'11"	272.000	345.900	27.07.2003	2/86 to 5/06	21.11.1986	-	-
40	**Rajegaon**	5380	21°37'32"	80°15'09"	289.000	284.410	27.07.2003	12/85 to 5/06	26.07.1986	22.06.1990	15.01.1988
41	**Kumhari**	8070	21°52'58"	80°10'41"	425.000	299.600	16.09.2005	12/86 to 5/06	01.12.1986	10.09.1988	01.01.1988
42	**Keolari**	2970	22°22'52"	79°54'06"	117.975	435.640	14.09.2003	11/86 to 5/06	29.06.1987	-	-
43	**Somanpally**	12691	18°38'30"	79°49'35"	124.316	125.150	22.09.2005	7/64 to 5/06	17.03.1967	-	-
44	**Mancherial**	102900	18°50'00"	79°27'00"	312.000	131.511	23.09.2005	3/64 to 5/06	01.06.1966	01.06.1966	01.12.1979
45	**Gandlapet**	1360	18°49'16"	78°26'17"	347.500	313.940	24.08.2003	7/86 to 5/06	10.09.1986	-	31.07.1988
46	**Betmogra**	2105	18°42'12"	77°32'30"	352.000	356.200	16.10.2005	8/84 to 5/06	03.07.1997	-	15.07.1997
47	**Degloor**	1900	18°32'12"	77°34'56"	542.723	364.600	21.08.2003	8/64 to 5/06	17.07.1987	01.01.1994	15.09.1988
48	**Saigaon**	9960	18°03'00"	77°03'00"	92.920	551.683	24.09.2005	6/89 to 5/06	10.11.1966	19.07.1973	16.08.1973

(Contd.)

Table 4 : Important Historical Observations by sites and River Basin

V Basin : Godavari

Sl. No.	Site Name	Drainage Area (Km^2)	Latitude	Longitude	Zero of Gauge (m)	Stage Record		Reference Period	Date of Establishment		
						Peak Water	Date of		Discharge	Sediment	Water Quality
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
49	**Bhatpalli**	4650	18°25'38"	76°40'22"	92.920	580.150	22.09.2005	6/76 to 5/06	10.11.1967	19.07.1973	16.08.1973
50	**Yelli**	53630	19°02'00"	77°28'00"	334.300	350.920	28.07.2005	6/68 to 5/06	22.04.1978	01.06.1978	01.07.1978
51	**Purna**	15000	19°11'00"	77°02'00"	358.000	371.800	27.07.2005	7/86 to 5/06	02.09.1969	10.10.1972	01.11.1972
52	**Zari**	5550	19°23'41"	76°46'24"	373.000	379.280	10.08.2003	7/86 to 5/06	18.06.1987	-	01.08.1988
53	**G.R.Bridge**	33934	18°57'00"	76°45'00"	364.000	375.100	22.09.2005	6/76 to 5/06	19.06.1976	01.07.1976	01.07.1976
54	**Dhalegaon**	30840	19°12'00"	76°22'00"	386.575	397.125	22.09.2005	1/64 to 5/06	16.08.1965	11.07.1971	01.07.1972
55	**Pachegaon**	5800	19°32'00"	74°52'00"	475.000	479.040	29.07.2003	12/78 to 5/06	23.07.1983	-	-
56	**Ghargaon**	626	19°19'13"	74°10'43"	80.000	607.910	28.07.2003	6/89 to 5/06	29.07.1991	-	-

(Contd.)

Source : Water Year Book for 2005-2006. (Godavari Basin)

Table 4 : Important Historical Observations by sites and River Basin

VI Basin : Krishna

Sl. No.	Site Name	Drainage Area (Km2)	Latitude	Longitue	Zero of Gauge (m)	Stage Record		Referece Period	Date of Establishment		
						Peak Water Level (m)	Record Date of		Discharge	Sediment	Water Quality
1	2	3	4	5	6	7	8	9	10	11	12
1	**Arjunwad (Seasonal)**	12660	16 47 00	74 34 00	523.225	543.685	05-08-2005	1/1969 to 11/2006	12/01/1969		
2	**Bastawade**	640	16 27 00	74 21 00	535.180	546.860	28-06-1983	6/1979 to 5/2007	27/08/1979		
3	**Bawapuram**	67180	15 52 58	77 56 52	270.245	280.495	19-11-1992	6/1965 to 5/2007	01/04/1964	01/06/1965	01/01/1972
4	**Boriomerga**	2640	17 29 00	76 14 00	427.000	434.950	15-09-1983	7/1979 to 5/2006	25/07/1979		
5	**Chincholi**	830	17 45 00	76 41 00	526.300	532.800	17-07-1989	8/1979 to 4/2006	02/08/1979		
6	**Cholachguda (Seasonal)**	9373	15 52 00	75 43 00	522.500	535.600	18-11-1992	6/1982 to 11/2006	01/06/1982	01/06/1982	01/06/1982
7	**Daddi**	1150	16 04 00	74 28 00	674.153	681.003	28-06-1983	12/1978 to 5/2007	01/12/1978		
8	**Dameracherla**	11501	16 44 07	79 40 08	55.000	62.040	24-07-1989	6/1968 to 5/2007	27/07/1968		01/01/1980
9	**Dhond**	11660	18 28 00	74 34 00	496.000	508.395	02-08-1976	12/1967 to 5/2007	24/11/1967		
10	**Gokak Falls (Seasonal)**	2770	16 10 00	74 49 00	536.000	546.880	23-09-2005	7/1971 to 11/2006	14/07/1971		
11	**Gotur**	1100	16 13 00	74 31 00	615.830	626.470	28-06-1983	6/1980 to 5/2007	17/06/1980		
12	**Halia**	3100	16 46 00	79 21 00	127.900	134.405	23-09-1991	6/1984 to 5/2007	11/07/1984		01/06/1992
13	**Huvinhedigi**	55150	16 29 07	76 55 07	342.240	356.350	08-08-2005	2/1976 to 5/2007	01/02/1976	01/06/1976	01/02/1976
14	**Jewangi**	1920	17 15 00	77 28 00	421.100	426.960	15-08-1990	11/1978 to 5/2006	24/11/1978		
15	**K Agraharam**	132920	16 15 30	77 50 30	270.000	282.300	09-08-2005	6/1981 to 5/2007	30/08/1981	01/06/1982	01/06/1982
16	**Karad**	5462	17 18 00	74 18 00	549.915	567.162	07-06-1976	6/1965 to 5/2007	21/06/1965	22/06/1965	01/09/1972
17	**Keesara**	9854	16 43 00	80 19 00	27.500	35.810	24-07-1989	6/1965 to 5/2007	01/06/1965	02/07/1965	01/01/1972
18	**Kokangaon**	1640	17 18 00	75 49 00	452.000	458.350	27-09-1979	7/1979 to 10/2006	25/07/1979		
19	**Koyna**	920	17 23 00	73 44 00	568.000	582.750	29-07-2006	10/1972 to 5/2007	15/10/1972		
20	**Kurundwad**	15190	16 41 00	75 36 00	519.455	539.760	05-08-2005	5/1972 to 5/2007	01/06/1972	06/08/2003	01/07/2003
21	**Lakshmipuram**	2400	15 45 30	78 04 30	286.300	290.360	02-10-1996	9/1984 to 5/2006	13/09/1984		
22	**Madhira**	1850	16 55 20	80 21 25	44.500	52.010	20-09-2005	6/1984 to 5/2007	07/06/1984		01/06/1992
23	**Malkhed**	7650	17 12 35	77 09 25	390.000	400.910	16-08-1990	8/1990 to 5/2007	15/08/1990	08/09/1992	01/06/1992
24	**Mantralayam**	60630	15 56 56	77 25 58	306.000	315.800	19-11-1992	6/1972 to 5/2007	01/06/1972	26/07/1977	01/08/1977
25	**Mudhol**	6734	16 19 00	75 12 00	520.000	532.350	06-08-2005	7/2000 to 5/2007	25/07/2000	08/09/2003	01/11/2000

(Contd.)

Table 4 : Important Historical Observations by sites and River Basin

VI Basin : Krishna

Sl. No.	Site Name	Drainage Area (Km^2)	Latitude	Longitude	Zero of Gauge (m)	Stage Record		Reference Period		Date of Establishment		
						Peak Water Level (m)	Date of Occurrece			Discharge	Sediment	Water Quality
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)		(10)	(11)	(12)
26	**Narasingpur**	22856	17 58 00	75 08 00	448.243	462.393	10-08-2006	12/1966 to 5/2007	22/02/1966			
27	**Navalgund**	2952	15 33 00	75 22 00	558.000	565.310	18-09-2000	6/1991 to 5/2006	16/06/1991			
28	**Paleru Bridge**	2928	16 56 54	80 02 55	70.357	78.877	23-07-1989	6/1965 to 5/2007	01/07/1964		01/06/1992	
29	**Pandegaon**	690	16 56 00	74 56 00	576.785	582.245	26-09-1979	10/1979 to 5/2007	06/10/1979			
30	**Phulgaon (Seasonal)**	2205	18 32 00	74 22 00	81.000	93.950	23-08-1997	6/1992 to 11/2006	21/07/1992		02/08/1993	
31	**Pondugala**	221220	16 41 02	79 39 40	42.334	60.934	15-10-1998	11/1975 to 5/2007	13/11/1975	01/12/1975	01/12/1975	
32	**Purushothamagudem**	2720	17 25 00	79 57 00	144.000	154.250	23-07-1989	9/1987 to 5/2006	01/09/1987			
33	**Sadalga (Seasonal)**	2322	16 34 00	74 32 00	525.160	538.950	29-06-1983	6/1969 to 11/2006	24/06/1969			
34	**Samdoli (Seasonal)**	1948	16 51 00	74 30 00	528.594	546.324	05-08-2005	12/1966 to 11/2006	01/12/1966			
35	**Sarati**	7200	17 54 00	75 02 00	466.128	476.788	02-08-1976	6/1965 to 5/2007	16/08/1965	01/06/1966	01/09/1972	
36	**Shirdhon**	630	17 24 00	75 32 00	437.000	442.200	26-09-1979	7/1979 to 5/2007	26/07/1979			
37	**T Ramapuram (Seasonal)**	23500	15 39 33	76 57 58	349.368	354.328	14-10-1971	12/1965 to 11/2006	23/08/1964		01/01/1980	
38	**Takli**	33916	17 24 00	75 51 00	409.278	423.718	12-08-2006	6/1965 to 5/2007	10/08/1965	01/12/1966	01/09/1972	
39	**Talikot (Seasonal)**	2486	16 28 22	76 17 23	48.000	56.010	18-10-2001	9/1995 to 11/2006	21/09/1995			
40	**Terwad (Seasonal)**	2425	16 44 00	74 35 00	520.000	540.390	05-08-2005	8/1979 to 11/2006	22/08/1979			
41	**Vandur**	550	16 34 00	74 17 00	531.000	542.020	24-07-1989	6/1979 to 5/2007	18/07/1979			
42	**Vijayawada**	251360	16 30 00	80 37 00	8.152	19.052	16-10-1998	6/1965 to 5/2007	01/06/1965	01/02/1965	01/01/1972	
43	**Wadakbal**	12092	17 32 00	75 53 00	416.883	428.563	29-09-1989	6/1965 to 5/2007	06/08/1964	01/06/1965	01/09/1972	
44	**Wadenapally**	235544	16 47 50	80 04 10	22.054	41.144	16-10-1998	12/1965 to 5/2007	10/12/1964	01/12/1966	01/01/1972	
45	**Warunji**	1890	17 16 00	74 10 00	549.437	568.047	06-06-1976	1/1966 to 5/2007	01/01/1966	01/06/1974	01/06/1974	
46	**Yadgir**	69863	16 44 03	77 07 18	350.503	361.913	07-09-1969	6/1965 to 5/2007	11/11/1964	01/06/1965	01/01/1972	

Source : Water Year Book of Krishna Basin for 2006-07

Table 4 : Important Historical Observations by sites and River Basin

VII Basin : Cauvery

Sl. No.	Site Name	Drainage Area (Km^2)	Latitude	Longitude	Zero of Gauge (m)	Stage Record		Reference Period	Date of Establishment		
						Peak Water Level (m)	Date of Occurrece		Discharge	Sediment	Water Quality
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1	**Gopurajapuram**	-	10°51'00"N	79°48'00"E	13.000	3.2400	8.11.2005	2005-2006	01.02.1999	-	02.09.2000
2	**Annavasal**	-	10°58'20"N	79°45'20"E	4.250	5.170	28.10.2005	do	01.02.1999	-	02.09.2000
3	**Menaangudi**	-	10°56'50"N	79°42'20"E	4.280	7.100	28.09.2005	do	21.08.1996	-	01.09.2000
4	**Porankudi**	-	10°54'10"N	79°42'30"E	3.000	5.590	25.11.2005	do	01.02.1999	-	01.09.2000
5	**Peralam**	-	10°58'00"N	79°39'50"E	6.000	8.680	06.01.2006	do	01.02.1999	-	01.09.2000
6	**Thengudi**	-	10°55'00"N	79°38'30"E	5.000	8.735	09.11.2005	do	02.07.1997	-	02.09.2000
7	**Musiri**	66243	10°56'30"N	78°26'06"E	82.000	85.310	04.11.2005	do	01.06.1972	-	01.06.1978
8	**Nallamaranpatty**	9080	10°52'51"N	77°59'05"E	129.000	131.500	12.12.2005	do	23.01.1978	10.12.1978	16.08.1978
9	**Elubthimangalam**	3386	11°01'54"N	77°53'32"E	129.000	131.920	24.11.2005	do	07.08.1998	-	01.06.2000
10	**Kodumudi**	53233	11°04'52"N	77°53'27"E	121.570	125.490	06.11.2005	do	21.06.1971	11.07.1972	01.06.2000
11	**Savandapur**	5776	11°31'18"N	77°30'36"E	179.000	182.770	27.11.2005	do	17.07.1978	24.04.1979	02.04.1979
12	**Thengumarahada**	1370	11°34'20"N	76°55'15"E	336.650	339.700	23.10.2005	do	02.04.1979	01.06.2002	01.06.1979
13	**Nellithurai**	1475	11°17'16"N	76°53'35"E	300.000	306.670	27.07.2005	do	01.06.1979	01.07.2002	01.16.1979
14	**Urachikottai**	44100	11°28'40"N	77°42'05"E	155.000	162.400	29.10.2005	do	05.08.1979	04.01.2001	01.06.1979
15	**Thevur**	1248	11°31'38"N	77°45'10"E	95.000	171.110	27.10.2005	do	24.09.1999	-	01.06.2000
16	**Sevanur**	258	11°33'18"N	77°42'54"E	170.000	171.230	24.11.2005	do	20.09.1999	-	01.06.2001
17	**Thoppur**	362	11°56'14"N	78°03'18"E	320.000	325.810	24.11.2005	do	21.10.1999	-	01.06.2001
18	**Kudlur**	709	11°56'14"N	77°27'50"E	433.000	437.140	02.11.2005	do	06.03.1999	-	01.06.2001

(Contd.)

Table 4 : Important Historical Observations by sites and River Basin

VII Basin : Cauvery

Sl. No.	Site Name	Drainage Area (Km^2)	Latitude	Longitude	Zero of Gauge (m)	Stage Record		Reference Period	Date of Establishment		
						Peak Water Level (m)	Date of Occurrece		Discharge	Sediment	Water Quality
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
19	**Hogenakkai**	1636	12°07'15"N	77°47'07"E	252.000	256.350	24.10.2005	do	05.10.1996	-	05.10.1996
20	**Billigundulu**	36682	12°10'48"N	77°43'48"E	255.000	264.210	-	do	30.08.1971	06.09.1972	01.06.1978
21	**T.Bekuppe**	3500	12°31'00"N	77°26'00"E	604.000	-	-	do	24.11.2003	-	24.11.2003
22	**Bendgahalli**	1900	12°00'03"N	77°05'15"E	631.000	-	-	do	18.08.2005	-	-
23	**T.K.Halli**	7890	12°25'00"N	77°11'36"E	580.000	584.070	-	do	12.06.1978	01.06.1985	02.06.1979
24	**Kollegal**	21082	12°11'21"N	77°06'00"E	622.000	626.590	-	do	06.02.1971	15.03.1972	01.06.1978
25	**T.Narasipur**	7000	12°13'48"N	76°53'46"E	635.000	641.295	-	do	12.03.1971	20.03.1972	01.06.1978
26	**Muthankera**	1260	11°50'00"N	76°07'00"E	705.000	711.330	-	do	01.06.1973	15.02.1974	01.06.1978
27	**Kattemalavadi**	1330	12°20'45"N	76°17'18"E	766.500	769.07	-	do	06.06.1979	-	07.01.1969
28	**Akkihebbal**	5236	12°36'10"N	76°24'10"E	745.000	747.30	-	do	23.01.2002	-	01.09.2002
29	**M.H.Halli**	3050	12°49'06"N	76°08'00"E	838.000	840.15	-	do	16.10.1978	01.06.1994	01.12.1980
30	**Thimmanahalli**	1010	12°59'00"N	76°02'21"E	8.000	12.930	-	do	29.06.2000	-	02.09.2002
31	**Sakleshpur**	617	12°57'12"N	75°47'09"E	882.000	892.620	-	do	05.04.2002	-	02.09.2002
32	**Kudige**	1934	12°30'09"N	75°57'43"E	809.000	816.310	-	do	01.11.1973	-	01.06.1978

Source : Water Year Book for 2005-2006. (Cauvery Basin)

Table 4 : Important Historical Observations by sites and River Basin

VIII Basin : East Flowing Rivers from Mahanadi to Kanyakumari

Sl. No.	Site Name	Drainage Area (Km^2)	Latitude	Longitude	Zero of Gauge (m)	Stage Record		Reference Period	Date of Establishment		
						Peak Water Level (m)	Date of Occurrece		Discharge	Sediment	Water Quality
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1	**Thammavaram**	-	-	-	-	-	-	-	-	-	-
2	**K.Bitragunda**	-	-	-	-	-	-	-	-	-	-
3	**Nellore**	50800	14°28'10"N	79°59'20"E	7.230	51.92	17.10.2001	1989 to 2006	28.08.1987	-	01.09.1988
4	**Nandipalli**	2486	14°42'50"N	79°01'20"E	95.000	104.300	19.10.1996	1991 to 2006	18.06.1990	-	01.06.1994
5	**Chennur**	37981	14°34'20"N	78°48'00"E	115.805	123.545	16.07.1989	1990 to 2006	30.07.1989	08.08.1989	01.09.1989
6	**Kamalapuram**	7187	14°34'50"N	78°40'40"E	135.650	139.250	20.10.1996	1991 to 2006	16.06.1990	-	01.06.1994
7	**Alladupalli**	8758	14°42'40"N	78°42'40"E	132.955	139.845	29.10.2005	1988 to 2006	21.08.1985	11.07.1996	01.07.1987
8	**Tadapatri**	12482	14°55'20"N	78°01'10"E	223.650	230.340	04.11.1975	1972 to 2006	12.12.1971	-	01.09.1979
9	**Nagalamadike**	5050	14°11'20"N	77°22'20"E	544.550	550.500	12.09.1988	1979 to 2006	11.07.1978	-	01.06.1980
10	**Singavaram**	6262	14°35'50"N	78°01'00"E	256.465	261.085	07.07.1989	1980 to 2006	06.11.1979	-	15.09.1981
11	**Naidupeta**	2650	13°56'50"N	79°53'50"E	20.130	25.95*	14.11.1984	1978 to 2006	19.10.1977	-	01.12.1980
12	**Sullurpet**	5927	13°42'40"N	80°00'30"E	(-)2.00	(+)6.470	04.12.2005	1989 to 2006	05.10.1988	-	01.12.1988

(Contd.)

Table 4 : Important Historical Observations by sites and River Basin

VIII Basin : East Flowing Rivers from Mahanadi to Kanyakumari

Sl. No.	Site Name	Drainage Area (Km^2)	Latitude	Longitude	Zero of Gauge (m)	Stage Record		Reference Period	Date of Establishment		
						Peak Water Level (m)	Date of Occurrece		Discharge	Sediment	Water Quality
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
13	**Chengalpattu**	16230	12°39'00"N	79°56'50"E	26.000	29.500	14.11.1985	1979 to 2006	01.10.1978	-	01.06.1979
14	**Magaral**	1803	12°42'30"N	79°45'00"E	58.000	62.400	15.12.1996	1972 to 2006	25.11.1971	-	01.11.1983
15	**Arcot**	10174	12°54'50"N	79°20'00"E	159.000	161.180	18.11.1991	1980 to 2006	20.09.1979	-	01.06.1988
16	**Annavasal**	-	10°58'20"N	79°45'20"E	4.000	6.070	24.11.1999	1999 to 2006	01.02.1999	-	02.09.2000
17	**Kumarapalayam**	2208	11°59'00"N	79°40'50"E	8.500	12.500	14.12.2005	2005 to 2006	02.11.2004	-	-
18	**Villupuram**	12900	11°52'14"N	79°27'34"E	42.000	46.550	09.12.1972	1973 to 2006	09.10.1972	-	01.01.1987
19	**Vazhavachanur**	10780	12°03'55"N	78°58'42"E	133.000	139.650	15.11.1991	1979 to 2006	21.07.1978	19.10.2001	01.08.1978
20	**Gummanur**	-	-	-	-	-	-	-	-	-	-
21	**Kudalaiyathur**	7890	11°25'20"N	79°28'20"E	11.000	49.100	11.12.1998	1990 to 2005	15.11.1989	-	01.06.1993
22	**Peralam**	-	10°58'00"N	79°39'50"E	6.000	9.295	22.11.1999	1999 to 2006	01.02.1999	-	01.09.2000
23	**Menangudi**	-	10°56'50"N	79°42'20"E	4.000	7.380	09.12.1998	1997 to 2006	21.08.1996	-	01.09.2000
24	**Porakudi**	-	10°54'10"N	79°42'30"E	2.000	6.000	31.10.2004	1999 to 2006	01.02.1999	-	01.09.2000
25	**Thengudi**	-	10°55'00"N	79°38'30"E	5.000	9.200	08.11.1997	1998 to 2006	02.07.1997	07.11.2003	02.09.2000
26	**Gopurajapuram**	-	10°51'00"N	79°48'00"E	(-)2.000	3.340	08.11.2005	1999 to 2006	01.02.1999	-	02.09.2000
27	**Nallathur**	-	10°59'30"N	79°44'35"E	0.000	N.A.	N.A.	N.A.	01.06.2006	-	-

Source : SE (Coord.), Cauvery & Southern Rivrs Organisation, CWC

Note : 1. Nallathur site"Q" commenced w.e.f. 01.06.2006 only, hence not considered.

2. N.A. : Not Applicable

3. Karaikal sites are located on the disributaries of river Cauvery and hence there is no separate drainage area for these sites.

4. Data considered upto Water Year 2005-06 only.

5. Site-Kudalaiyathur washed away in high floods in 11/2005. 2005-06 data not published.

6. Thammavaram, K.Bitragunda & Gummanur site 2005-06 is not published.

Table 4 : Important Historical Observations by sites and River Basin

IX Basin : West Flowing Rivers from Kanyakumari to Tapi

Sl. No.	Site Name	Drainage Area (Km^2)	Latitude	Longitude	Zero of Gauge (m)	Stage Record		Reference Period	Date of Establishment		
						Peak Water	Date of		Discharge	Sediment	Water Quality
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1	**Addoor**	688	12o55'49"	74o57'11"	-1.000	15.670	04.08.2004	2004 to 2006	17.07.2003	-	02.09.2002
2	**Avershe**	253	13o31'18"	74o52'48"	88.000	95.400	04.08.2004	2003 to 2006	24.06.2002	-	02.09.2002
3	**Bantwal**	3184	12o53'04"	75o02'35"	1.000	13.550	26.07.1974	1971 to 2006	01.11.1970	22.06.1972	15.06.1978
4	**Haladi**	583	13o42'52"	74o51'09"	-2.000	9.050	18.07.1999	1986 to 2006	30.12.1985	-	01.09.1993
5	**Santeguli**	1090	14o26'00"	74o35'10"	8.000	18.880	12.04.1992	1988 to 2006	09.06.1988	-	01.09.1993
6	**Yennehole**	327	13o17'35"	74o58'50"	15.000	24.140	30.07.1994	1990 to 2006	24.07.1989	-	01.09.1993

Source : SE (Coord.), Cauvery & Southern Rivrs Organisation, CWC, Bangalore,

Note : 1. Avershe : Changed to 8.780 M from 01.06.2006.

2. Addoor : Changed to 1.000 M from 01.06.2006.

Table 4 : Important Historical Observations by sites and River Basin

X Basin : Tapi

Sl. No.	Site Name	Drainage Area (Km^2)	Latitude	Longitude	Zero of Gauge	Stage Record		Reference Period	Date of Establishment		
						Peak Water	Date of		Discharge	Sediment	Water Quality
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1	**Dedtalai**	6660	21°30'47"N	76°45'26"E	270.000	293.000	15.09.1998	2004-2005	1296.00	24.01.1984	01.08.1979
2	**Burhanpur**	8487	21°17'54"N	76°14'10"E	213.000	239.500	29.08.1978	- do -	2305.40	23.12.1972	01.06.1977
3	**Lakhpuri**	3560	20°50'44"N	77°21'38"E	259.000	271.015	10.08.1979	- do -	271.30	-	03.11.1986
4	**Gopalkheda**	9500	20°52'27"N	76°59'29"E	236.000	252.100	10.08.1979	- do -	161.70	30.07.1979	01.08.1979
5	**Yerli**	16517	20°56'09"N	76°28'33"E	213.000	230.670	11.08.1979	- do -	913.20	09.04.1973	01.06.1977
6	**Savkheda**	48136	21°08'53"N	75°14'27"E	141.000	159.650	07.09.1994	- do -	1576.80	11.11.1972	01.06.1977
7	**Malkheda**	1830	21°03'23"N	75°04'18"E	170.000	175.610	10.10.1992	- do -	112.75	-	01.09.1990
8	**Morane**	1933	20°54'33"N	74°42'04"E	264.000	268.500	22.09.1988	- do -	108.00	29.08.1986	01.07.1986
9	**Gidhade**	54750	21°17'41"N	74°48'33"E	119.000	138.820	07.09.1994	- do -	1592.70	-	01.09.1990
10	**Sarangkheda**	58400	21°25'42"N	74°31'38"E	108.000	123.640	08.09.1994	- do -	1604.40	13.07.1984	01.01.1980
11	**Dapuri**	8901	20°55'38"N	75°29'37"E	188.000	197.815	28.08.1975	- do -	613.40	01.07.1973	01.06.1977
12	**Ghala**	63325	21°17'50"N	73°01'31"E	1.870	19.835	17.09.1998	2004-2005	881.30	-	01.08.1983

Source : SE (Coord.), Hydrological Observation Circle, Water Year Books of Tapi Basin, Central Water Commission

Remarks : Water Year Book Published upto 2004-05.

Table 4 : Important Historical Observations by sites and River Basin

XI Basin : Narmada

Sl. No.	Site Name	Drainage Area (Km^2)	Latitude	Longitude	Zeero of Gauge (in Metre)	Stage Record		Reference Period	Date of Establishment		
						Peak Water Level (m)	Date of Occurrence		Discharge	Sediment	Water Quality
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1	**Orsang at Chandwada**	3846.0	22° 01' 48"	73^O25' 30"	18.000	33.500	07.09.94	1994-95	01.11.79	01.08.88	15.03.90
2	**Narmada at Garudeshwar**	87892.0	21° 53' 11"	73° 39' 09"	10.000	39.780	07.09.94	1994-95	23.03.72	21.01.73	15.06.77
3	**Hathni at Jobat**	792.0	22° 26' 50"	74° 35' 10"	225.000	233.950	05.08.04	2002-03	09.08.01	-	-
4	**Goi at Pati**	2151.0	21° 57' 00"	74° 45' 30"	187.000	195.85	05.08.01	2001-02	23.02.99	-	-
5	**Uri at Dhulsar**	787.0	22° 12' 00"	74° 52' 00"	151.000	155.100	05.08.04	2002-03	15.03.99	-	-
6	**Narmada at Rajghat**	77674.1	22° 04' 32"	74° 51' 15"	110.000	134.510	19.08.84	1984-85	17.01.72	23.06.72	15.06.79
7	**Narmada at Mandleshwar**	72809.3	22° 01' 06"	75° 39' 36"	138.000	157.290	31.08.73	1973-74	28.08.71	14.04.72	
8	**Kundi at Kogaon**	3919.0	22° 06' 00"	75° 41' 00"	151.000	163.010	26.06.79	1979-80	01.07.78	-	15.09.86
9	**Chhota Tawa at Ginnore**	4815.7	22° 10' 06"	76° 39' 42"	218.000	237.650	06.09.94	1994-95	21.08.71	26.12.72	16.07.79
10	**Narmada at Mortakka**	67184.0	22° 13' 30"	76° 02' 20"	153.000	169.000	26.07.97	1997-98	23.08.99	-	01.09.99
11	**Narmada at Handia**	54027.0	22° 29' 18"	77° 00' 00"	258.000	273.580	19.08.84	1984-85	26.04.77	11.12.77	01.08.79
12	**Ganjal at Chhidgaon**	1729.0	22° 25' 00"	77° 20' 00"	287.000	300.300	15.09.98	1998-99	22.12.76	-	16.09.86
13	**Narmada at Hoshangabad**	44548.0	22° 46' 36"	77° 43' 00"	282.000	301.330	30.08.73	1973-74	16.09.72	29.12.72	15.07.79
14	**Tawa at Tawakati**	1090.0	22° 10' 15"	77° 54' 30"	361.000	373.050	27.07.03	2002-03	10.05.01	-	-

(Contd.)

Table 4 : Important Historical Observations by sites and River Basin

XI Basin : Narmada

Sl. No.	Site Name	Drainage Area (Km^2)	Latitude	Longitude	Zeero of Gauge (in Metre)	Stage Record		Reference Period	Date of Establishment		
						Peak Water	Date of		Discharge	Sediment	Water Quality
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
15	**Machna at Shapur**	841.0	22° 11' 03"	77° 53' 01"	376.000	385.080	22.08.04	2002-03	20.06.00	-	-
16	**Narmada at Sandia**	33953.5	22° 55' 00"	78° 21' 00"	297.000	316.890	19.09.99	1999-00	18.04.78	09.08.78	15.09.79
17	**Shakkar at Gadarwara**	2270.0	22° 54' 30"	78° 54' 30"	321.000	332.470	18.09.99	1999-00	01.02.77	15.06.78	16.08.79
18	**Narmada at Barmanghat**	26453.0	22° 01' 36"	79° 00' 54"	306.000	331.320	30.08.73	1973-74	20.11.71	27.08.72	01.06.79
19	**Sher at Belkheri**	1508.0	22° 54' 54"	79° 20' 24"	340.000	359.950	21.07.94	1994-95	16.03.77	-	01.09.86
20	**Hiran at Patan**	3950.0	23° 18' 30"	79° 39' 45"	341.500	356.080	13.09.92	1992-93	30.08.79	-	01.09.86
21	**Banjar at Bamni**	1864.0	22° 29' 00"	80° 22' 00"	440.000	448.500	18.09.99	1999-00	30.11.99	01.07.02	01.07.02
22	**Narmada at Jamtara**	17157.0	23° 05' 12"	79° 57' 06"	360.000	382.000	24.08.91	1991-92	22.02.72	15.07.72	01.06.79
23	**Banjar at Hirdaya Nagar**	3133.0	$22^0$32' 36"	$80^0$23' 00"	436.000	445.930	17.07.94	1994-95	21.11.76	26.08.92	01.09.86
24	**Burhner at Mohgaon**	4090.0	22° 45' 42"	80° 37' 30"	447.000	467.300	08.08.04	1991-92	13.01.77	27.08.92	16.09.86
25	**Narmada at Amgaon**	9344.0	22° 30' 00"	80° 30' 00"	430.000	445.520	08.08.04	2001-02	07.09.01	-	-
26	**Narmada at Manot**	4467.0	22° 44'00"	80° 31'00"	442.000	459.650	18.08.84	1984-85	16.12.76	09.11.79	01.01.80
27	**Narmada at Dindori**	2292.0	22° 57' 00"	81^0 05'00"	660.000	669.640	23.08.91	1991-92	01.08.88	-	15.03.90

Source : SE, Office of the Chief Engineer, Narmada Basin Organisation, CWC, Bhopal.

Table 4 : Important Historical Observations by sites and River Basin

XII Basin : Mahi and Sabarmati

Sl. No.	Site Name	Drainage Area (Km^2)	Latitude	Longitude	Zero of Gauge (m)	Stage Record		Reference Period	Date of Establishment		
						Peak Water Level (m)	Date of Occurrece		Discharge	Sediment	Water Quality
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1	**Pingalwada**	2400	22°06'37"N	73°04'44"E	2.000	19.250	09.09.94	2004-2005	-	-	15.03.90
2	**Motinaroli**	804.0	21°24'16"N	72°57'48"E	5.000	18.150	16.06.94	- do -	-	-	01.07.91
3	**Mahuwa**	1995	21°00'52"N	73°08'25"E	9.000	24.800	16.06.94	- do -	-	18.06.73	15.06.77
4	**Gadat**	1510	20°51'22"N	72°59'05"E	1.500	13.985	16.06.94	- do -	-	01.02.85	01.04.80
5	**Ozerkheda**	640.0	20°06'01"N	73°16'16"E	80.100	90.400	15.08.83	- do -	-	-	-
6	**Nanipalsan**	764.0	20°12'10"N	73°16'52"E	95.000	107.890	13.07.93	- do -	-	-	-
7	**Durvesh**	2019	19°42'45"N	72°55'50"E	0.000	16.130	17.09.98	2004-2005	-	26.01.71	01.06.77

Source: Water Year Book of Tapi, Narmada & Independent Basins for 2004-2005

Table 5 : Flow of Water by season site and river basin

I Basin Mahanadi Unit : M.C.M.

Sl.No.	Site Name	Season	1996-97	1997-98	1998-99	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1	**Basantpur**	Monsoon	11992	15905	15803	18670	6937	27586	7841	29465	16116	24336	22784
		Non-Monsoon	1109	3166	2190	1892	628	2334	505	2331	1538	1505	1386
		Annual	13101	19071	17993	20562	7565	29920	8346	31796	17654	25841	24170
2	**Rampur**	Monsoon	431.9	1817.0	624.7	946.1	142.4	1377.2	460.3	4345.0	864.8	987.3	2183.0
		Non-Monsoon	0.43	28.12	10.30	5.70	26.90	74.42	39.08	39.44	24.03	13.72	3.22
		Annual	432	1845	635	952	169	1452	499	4384	889	1001	2186
3	**Bamnidhi**	Monsoon	2648.0	1728.0	4360.0	3974.0	1632.0	5947.0	2540.0	5998.0	3506.0	3218.0	2309.0
		Non-Monsoon	799.4	1648.0	969.1	1055.0	801.3	2126.0	549.0	1289.0	904.0	1146.0	862.8
		Annual	3447	3376	5329	5029	2433	8073	3089	7287	4410	4364	3172
4	**Rajim**	Monsoon	1774.0	2350.0	832.7	1555.0	651.6	5072.0	721.6	6152.0	3148.0	2743.0	4733.0
		Non-Monsoon	20.78	65.42	34.12	38.37	8.90	75.10	24.88	62.45	51.30	22.46	16.92
		Annual	1795	2415	867	1593	660	5147	746	6214	3199	2765	4750
5	**Simga**	Monsoon	2766.0	4268.0	2606.0	4061.0	1744.0	4638.0	1887.0	6974.0	3127.0	9206.0	5963.0
		Non-Monsoon	74.96	362.50	92.05	95.05	10.72	36.59	30.64	124.30	189.30	66.44	46.06
		Annual	2841	4631	2698	4156	1755	4675	1918	7098	3316	9272	6009
6	**Salebhata**	Monsoon	553.6	2244.0	1161.0	1273.0	221.7	3051.0	913.9	4890.0	1594.0	1036.0	3614.0
		Non-Monsoon	9.36	39.61	35.37	17.60	10.68	4.45	10.62	56.75	33.81	25.39	21.53
		Annual	563	2284	1196	1291	232	3055	925	4947	1628	1061	3636
7	**Kantamal**	Monsoon	3707.0	9416.0	3433.0	5783.0	5155.0	20919.0	3501.0	13478.0	11265.0	7742.0	19861.0
		Non-Monsoon	151.4	560.8	187.8	1091.0	1254.0	1718.0	524.6	1844.0	1293.0	1576.0	1211.0
		Annual	3858	9977	3621	6874	6409	22637	4026	15322	12558	9318	21072

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Table 5 : Flow of Water by season site and river basin

I Basin Mahanadi

Unit : M.C.M.

Sl.No.	Site Name	Season	1996-97	1997-98	1998-99	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
8	Kotni	Monsoon	798.8	1645.0	856.7	1487.0	741.1	2587.0	450.2	2887.0	1075.0	2651.0	2190.0
		Non-Monsoon	3.5	53.8	9.4	7.2	0.0	0.7	0.0	8.0	64.5	11.5	0.9
		Annual	802	1699	866	1494	741	2588	450	2895	1140	2662	2191
9	Andhiyarkore	Monsoon	261.5	248.1	460.1	459.6	101.1	314.3	279.0	418.9	278.9	639.1	213.0
		Non-Monsoon	17.75	135.10	38.63	27.87	6.85	18.02	9.49	25.15	24.36	17.90	6.21
		Annual	279	383	499	487	108	332	288	444	303	657	219
10	Baronda	Monsoon	604.2	1324	382.1	580.3	165.8	2054	161.8	2593	1161	1249	1960
		Non-Monsoon	8.241	35.95	16.22	13.31	4.894	13.07	3.266	25.14	17.94	15.01	6.779
		Annual	612.5	1360	398.29	593.6	170.7	2067	165.1	2618	1179	1264	1966
11	Jondhra	Monsoon	5852	8356	6300	7776	2169	9239	2852	12473	6027	12552	7451
		Non-Monsoon	101.8	1086	236.2	201.1	25.93	92.65	50.51	256.6	247.0	164.1	71.95
		Annual	5954	9442	6537	7977	2195	9332	2903	12729	6274	12716	7523
12	Ghatora	Monsoon	1041	785.5	1096	1079	333.9	1137	350.2	1047	550.2	953.6	503.0
		Non-Monsoon	14.82	290.8	62.84	36.30	4.803	17.80	6.258	41.96	31.60	26.75	5.471
		Annual	1056	1076	1159	1115	338.7	1155	356.4	1089	581.8	980.4	508.5
13	Kurubhata	Monsoon	2694	1990	2893	3539	1057	3626	1804	2824	1867	1902	1577
		Non-Monsoon	77.69	615.9	80.23	104.8	22.00	96.32	67.88	142.6	191.4	44.51	37.26
		Annual	2771	2606	2974	3644	1079	3723	1872	2967	2058	1946	1615
14	Sundargarh	Monsoon	4263	2963	5433	3986	2207	4242	2131	3573	2211	2308	2147
		Non-Monsoon	52.66	792.3	137.0	109.1	38.75	79.00	46.58	144.6	39.18	56.16	50.86
		Annual	4315	3755	5570	4095	2246	4321	2177	3717	2250	2364	2197
15	Kesinga	Monsoon	2678	4515	2234	4181	3322	14082	1923	10795	7525	5443	13253
		N-Monsoon	51.23	506.4	115.1	825.1	1259	1503	431.1	1561	1099	1104	1146
		Annual	2729	5021	2349	5006	4581	15585	2354	12356	8624	6548	14399

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Table 5 : Flow of Water by season site and river basin

I Basin Mahanadi

Unit : M.C.M.

Sl.No.	Site Name	Season	1996-97	1997-98	1998-99	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
16	Patharidhi	Monsoon	787.0	762.5	518.5	810.6	370.3	1066	323.3	1201	936.8	1719	1192
		Non-Monsoon	10.57	57.57	9.056	19.30	0.000	5.974	0.000	10.83	28.59	13.72	6.637
		Annual	797.6	820.1	527.5	829.9	370.3	1071	323.3	1212	965.4	1733	1198
17	Manendragarh	Monsoon	410.4	216.9	391.5	364.3	281.6	529.0	208.7	444.4	275.2	379.7	248.5
		Non-Monsoon	52.63	16.45	16.59	52.87	6.089	15.76	7.789	19.47	19.00	42.96	10.05
		Annual	463.0	233.4	408.1	417.2	287.7	544.7	216.5	463.9	294.2	422.7	258.6
18	Seorinaryan	Monsoon	9677	14558	10995	12976	4356	21915	6168	25702	15078	22160	19768
		Non-Monsoon	239.9	1575	419.8	416.0	46.21	139.9	78.22	401.3	525.5	208.8	185.1
		Annual	9917	16133	11415	13392	4402	22055	6246	26103	15603	22369	19953
19	Tikarapara	Monsoon	19870	41553	27699	25256	16665	59622	19535	63652	36778	42136	56562
		Non-Monsoon	4804	7523	6443	7181	3485	7143	4155	7074	4674	4701	5383
		Annual	24674	49076	34142	32437	20150	66765	23690	70726	41452	46837	61945

ision, Central Water Commission

Table 5 : Flow of Water by season site and river basin

II Basin : Subarnarekha, Burhabalang & Baitarni Unit : M.C.M.

Sl.No.	Site Name	Season	1996-97	1997-98	1998-99	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1	**Muri**	Monsoon	738.8	714.4	530.5	759.1	358.4	327.1	295.1	383.2	372.5	218.7	659.7
		Non-Monsoon	107.2	278.9	201.3	180.9	40.40	74.58	164.8	130.7	131.8	15.12	214.6
		Annual	846.0	993.3	731.8	940.0	398.8	401.7	459.9	513.9	504.3	233.8	874.3
2	**Jamshedpur**	Monsoon	11346	11639	4079	10066	3213	7367	4215	3673	4413	2229	8731
		Non-Monsoon	148.0	1328	472.3	516.2	127.0	476.1	363.1	170.1	202.1	228.6	431.6
		Annual	11494	12967	4551	10582	3340	7843	4578	3843	4615	2457	9162
3	**Adityapur**	Monsoon	2897	4279	1489	4092	1500	3605	1805	1541	1999	1127	3737
		Non-Monsoon	29.45	404.1	75.12	64.23	30.91	59.11	83.12	77.00	65.45	73.84	67.61
		Annual	2927	4683	1564	4156	1531	3664	1888	1618	2065	1201	3804
4	**Ghatsila**	Monsoon	6771	9797	4397	9051	3242	7408	4390	3922	4596	2809	9941
		Non-Monsoon	158.1	1209	596.6	457.6	179.4	298.6	347.9	205.6	378.9	238.1	730.0
		Annual	6929	11006	4994	9509	3421	7706	4738	4128	4975	3047	10671
5	**Govindapur**	Monsoon	1911	2862	1823	4019	2571	3504	2047	2922	2993	2901	3518
		Non-Monsoon	130.2	278.8	205.3	380.9	178.7	192.2	170.9	251.1	140.6	174.3	138.0
		Annual	2041	3141	2028	4400	2749	3696	2218	3173	3134	3075	3656
6	**Champua**	Monsoon	634.6	1007	652.3	1854	702.6	1256	407.9	842.3	791.4	1050	1084
		Non-Monsoon	89.31	175.1	96.94	139.1	74.50	94.3	69.7	102.6	99.73	94.63	94.19
		Annual	723.9	1182	749.2	1993	777.1	1350	477.6	945	891.1	1145	1178
7	**Anandpur**	Monsoon	2282	6034	2698	9208	3079	4605	1778	4512	3216	4974	5203
		Non-Monsoon	227.3	526.7	224.6	309.5	176.1	216.1	153.4	224.9	230.1	314.7	270.8
		Annual	2509	6561	2923	9518	3255	4821	1931	4737	3446	5289	5474

Source : Office of the Superintending Engineer, Wainganga Division, Central Water Commission

Table 5 : Flow of Water by season site and river basin

III Basin : Brahmani Unit : M.C.M.

Sl.No.	Site Name	Season	1996-97	1997-98	1998-99	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1	**Tilga**	Monsoon	1983	2542	2349	2669	1149	2480	1501	2062	1603	1706	1519
		Non-Monsoon	59.86	380.3	127.9	99.50	48.80	69.44	62.25	129.9	80.9	62.33	68.90
		Annual	2043	2922	2477	2769	1198	2549	1563	2192	1684	1768	1588
2	**Gomlai**	Monsoon	7144	13088	9670	14407	6751	15777	7455	9855	7805	6464	10470
		Non-Monsoon	459.9	1703	486.2	514.4	260.1	255.2	262.7	451.2	364.1	356.8	317.9
		Annual	7604	14791	10156	14921	7011	16032	7718	10306	8169	6821	10788
3	**Panposh**	Monsoon	12002	12290	10748	12866	6497	13114	7547	8970	7178	6665	9576
		Non-Monsoon	331.9	2218	570.0	458.8	272.9	254.9	279.7	549.6	419.3	417.6	303.1
		Annual	12334	14508	11318	13325	6770	13369	7827	9519	7597	7083	9879
4	**Jaraikela**	Monsoon	3545	6947	4205	6010	3599	5257	2947	4019	3374	2401	4140
		Non-Monsoon	133.9	825.5	226.4	229.5	128.9	122.6	138.0	219.6	166.2	183.9	206.4
		Annual	3679	7773	4431	6240	3728	5380	3085	4239	3540	2585	4346
5	**Jenapur**	Monsoon	14171	16935	11984	19886	9215	25557	7936	18096	10132	14233	12828
		Non-Monsoon	2673	3950	3152	3158	1225	2925	2834	3316	2412	2312	1982
		Annual	16844	20885	15136	23044	10440	28482	10770	21412	12544	16545	14810

Source : Office of the Superintending Engineer, Wainganga Division, Central Water Commission

Table 5 : Flow of Water by season site and river basin

IV Basin : Rushikulya, Vamsadhara, Sarada & Nagavali Unit : M.C.M.

Sl.No.	Site Name	Season	1996-97	1997-98	1998-99	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1	**Purushottampur**	Monsoon	1063	1429	2540	1485	978.8	2239	825.9	3100	1072	2650	2876
		Non-Monsoon	14.78	198.5	147.0	83.80	10.71	66.43	14.28	269.1	25.58	87.70	35.83
		Annual	1078	1628	2687	1569	989.5	2305	840.2	3369	1098	2748	2912
2	**Gunupur**	Monsoon	-	-	-	-	1066	1892	627.4	2761	1759	2071	4967
		Non-Monsoon	-	-	-	-	90.09	165.6	53.39	337.9	1478	309.5	218.9
		Annual	-	-	-	-	1156	2058	680.8	3099	1907	2381	5186
3	**Kashi Nagar**	Monsoon	1178	1330	1631	1363	1069	2008	605.5	3135	2582	2337	6047
		Non-Monsoon	118.5	276.1	202.2	160.2	74.13	155.1	32.93	324.7	166.9	312.8	374.4
		Annual	1297	1606	1833	1523	1143	2163	638.4	3460	2749	2650	6422
4	**Srikakulam**	Monsoon	2363	1118	2319	1122	1240	1807	478.5	1992	1612	1761	4388
		Non-Monsoon	169.7	114.0	171.2	75.26	58.13	143.0	67.13	340.5	129.0	157.5	276.8
		Annual	2533	1232	2490	1197	1298	1950	545.6	2333	1741	1919	4665
5	**Ankapali**	Monsoon	1106	90.81	1357	177.1	254.5	232.7	30.65	200.1	282.0	884.2	591.8
		Non-Monsoon	37.31	14.05	57.73	4.233	2.425	23.82	0.1700	125.6	45.54	108.0	59.04
		Annual	1143	104.9	1415	181.3	256.9	256.5	30.82	325.7	327.6	992.2	650.9

Source : The Superintending Engineer, Wainganga Division, Central Water Commission

Table 5 : Flow of Water by season site and river basin

V Basin : Godavari Unit : M.C.M.

S.No.	Site Name	Season	1995-96	1996-97	1997-98	1998-99	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
1	**Polavaram**	Monsoon	78271	52992	39337	69386	89710	72847	77047	49256	82402	45441	98327
		Non-monsoon	7692	5843	7954	4970	6197	2845	3827	2216	6599	5144	8276
		Annual	85963	58835	47291	74355	95906	75692	80874	51472	89001	50584	106603
2	**Koida**	Monsoon	78601	57187	44017	87818	92651	84124	80170	49543	82178	41916	93834
		Non-monsoon	7629	6364	10220	6277	6726	3680	4915	3030	6555	4657	7366
		Annual	86230	63551	54237	94094	99377	87804	85086	52573	88733	46574	101200
3	**Konta**	Monsoon	13130	10394	7582	10280	13007	13000	10003	5090	13796	11720	10218
		Non-monsoon	4255	3878	3321	3028	3638	1981	3080	1683	4243	2755	3523
		Annual	17385	14273	10903	13307	16645	14981	13083	6773	18039	14475	13741
4	**Injaram**	Monsoon	10180	9020	5634	7092	12201	9806	7861	4768	12758	9435	7630
		Non-monsoon	2295	2248	1748	1447	2035	1012	1510	792	2312	1718	1752
		Annual	12475	11268	7381	8539	14236	10818	9372	5560	15069	11153	9381
5	**Potteru**	Monsoon	-	-	1253	1131	1764	1259	1361	622	1926	1674	1117
		Non-monsoon	-	-	682	729	1198	586	835	474	1155	776	925
		Annual	-	-	1935	1860	2962	1846	2196	1095	3081	2450	2042
6	**Saradaput**	Monsoon	4925	3455	2783	2514	5049	3900	4711	2948	4965	4825	3106
		Non-monsoon	1264	1072	1023	558	628	304	651	250	993	771	690
		Annual	6188	4527	3806	3072	5677	4204	5362	3198	5958	5596	3796
7	**Sangam**	Monsoon	-	415	87	344	361	331	118	147	278	404	438
		Non-monsoon	-	10	5	5	4	7	2	1	15	2	13
		Annual	-	424	92	349	365	338	120	148	293	406	451
8	**Perur**	Monsoon	62604	39988	32539	64435	70732	62775	63538	43073	63632	31796	82171
		Non-monsoon	2737	2231	6053	2386	2343	1143	1319	953	1980	1415	1926
		Annual	65342	42219	38592	66821	73075	63918	64857	44027	65612	33212	84096
9	**Pathagudem**	Monsoon	20841	16231	13642	16182	26372	18078	34355	11082	30839	18820	21365
		Non-monsoon	537	668	1479	453	402	196	299	103	654	446	354
		Annual	21378	16899	15121	16635	26774	18274	34654	11185	31493	19266	21719
10	**Tumnar**	Monsoon	1537	1238	524	1091	1668	841	1225	492	1712	1285	817
		Non-monsoon	46	35	48	35	37	25	40	15	83	41	54
		Annual	1584	1273	571	1126	1705	867	1265	506	1795	1326	871
11	**Chindnar**	Monsoon	8958	5675	4936	4015	7534	5177	11651	3318	8190	8554	7642
		Non-monsoon	253	487	1007	170	96	116	130	30	275	193	117
		Annual	9211	6162	5943	4185	7630	5294	11782	3348	8464	8747	7759

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Table 5 : Flow of Water by season site and river basin

V Basin : Godavari Unit : M.C.M.

S.No.	Site Name	Season	1995-96	1996-97	1997-98	1998-99	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
12	**Cherribeda**	Monsoon	-	285	369	242	508	181	962	230	1162	803	595
		Non-monsoon	-	6	23	7	16	3	11	4	30	23	11
		Annual	-	291	392	249	524	184	974	234	1191	826	606
13	**Ambabal**	Monsoon	1008	765	474	386	919	503	1297	315	1129	734	545
		Non-monsoon	4	4	29	7	7	3	7	85	24	14	4
		Annual	1012	769	503	393	926	505	1304	400	1153	748	549
14	**Sonarpal**	Monsoon	635	651	339	390	779	531	938	362	1188	784	632
		Non-monsoon	82	9	14	5	6	11	4	10	26	10	5
		Annual	716	660	353	395	785	543	941	372	1215	794	637
15	**Jagdalpur**	Monsoon	3476	2059	2195	1255	2580	1968	3769	1127	3169	2317	1730
		Non-monsoon	179	411	769	75	40	65	47	40	87	57	75
		Annual	3655	2470	2964	1330	2620	2033	3816	1167	3256	2374	1805
16	Kosagumda	Monsoon	-	-	-	422	724	712	1219	304	1146	1029	724
		Non-monsoon	-	-	-	25	19	10	0	1	33	31	26
		Annual	-	-	-	448	743	722	1219	306	1178	1061	750
17	**Murthahandi**	Monsoon	1744	933	1080	713	1255	1218	1756	789	1360	1076	859
		Non-monsoon	383	499	742	118	125	129	137	50	168	138	130
		Annual	2127	1432	1823	832	1380	1348	1893	839	1528	1214	989
18	**Nowrangpur**	Monsoon	2888	1233	1874	654	1372	1568	1975	440	1552	917	710
		Non-monsoon	369	792	1257	48	43	35	22	40	82	53	63
		Annual	3257	2025	3131	702	1415	1604	1997	479	1635	971	773
19	**Somanpalli**	Monsoon	1484	1798	248	1739	1257	1909	521	446	259	11	754
		Non-monsoon	122	137	29	107	27	41	50	10	17	0	29
		Annual	1607	1935	277	1846	1284	1950	571	456	276	11	783
20	**Mancherial**	Monsoon	8860	5830	1396	15410	5819	10929	3568	2452	3208	262	10904
		Non-monsoon	583	617	146	402	455	377	366	122	118	28	244
		Annual	9444	6446	1542	15812	6275	11306	3934	2575	3326	291	11148
21	**Gandlapet**	Monsoon	418	72	1	196	169	193	36	7	3	3	23
		Non-monsoon	1	0	0	0	0	0	0	0	0	0	0
		Annual	419	72	1	197	169	193	36	7	3	3	23
22	**Betmogra**	Monsoon	-	-	37	786	244	341	419	111	221	26	439
		Non-monsoon	-	-	5	2	3	1	1	0	2	2	5
		Annual	-	-	43	788	248	342	419	111	223	27	444

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Table 5 : Flow of Water by season site and river basin

V Basin : Godavari Unit : M.C.M.

S.No.	Site Name	Season	1995-96	1996-97	1997-98	1998-99	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
23	**Degloor**	Monsoon	405	476	55	678	258	714	230	100	359	110	500
		Non-monsoon	2	0	7	12	0	0	0	0	0	0	3
		Annual	407	476	61	690	258	714	230	100	359	110	503
24	**Saigaon**	Monsoon	330	1855	28	4593	622	1549	166	20	86	24	955
		Non-monsoon	0	1	0	6	173	0	0	0	0	0	1
		Annual	330	1855	28	4599	796	1549	166	20	86	24	955
25	**Bhatkheda**	Monsoon	172	394	8	1615	259	781	21	3	29	8	-
		Non-monsoon	0	0	1	0	0	0	0	0	0	0	-
		Annual	172	394	9	1615	259	781	21	3	29	8	-
26	**Yelli**	Monsoon	1623	2929	694	10858	3676	4800	2853	2727	1262	185	9726
		Non-monsoon	2	9	117	39	65	15	18	19	3	2	11
		Annual	1625	2938	811	10897	3741	4815	2871	2746	1265	187	9737
27	**Purna**	Monsoon	419	883	214	4939	1376	1717	1262	2023	482	215	2680
		Non-monsoon	0	5	66	27	5	4	0	27	18	0	10
		Annual	419	888	280	4966	1382	1721	1262	2050	500	215	2689
28	**Zari**	Monsoon	142	252	64	1503	480	424	330	470	108	47	672
		Non-monsoon	0	0	0	1	0	0	0	0	0	0	0
		Annual	142	252	64	1504	480	424	330	470	108	47	672
29	**G.R.Bridge**	Monsoon	454	1100	147	4379	1075	2640	593	528	144	106	4584
		Non-monsoon	0	0	31	3	0	83	0	0	1	5	44
		Annual	454	1100	178	4383	1075	2723	593	528	145	111	4627
30	**Dhalegaon**	Monsoon	304	886	80	3217	702	1681	222	274	59	122	3629
		Non-monsoon	22	1	53	34	17	10	0	0	0	0	5
		Annual	326	886	133	3251	719	1691	222	274	59	122	3633
31	**Pachegaon**	Monsoon	9	211	299	559	322	76	115	24	37	347	1283
		Non-monsoon	0	0	10	3	1	0	0	0	0	0	0
		Annual	9	211	310	562	323	76	115	24	37	347	1283
32	**Ghargaon**	Monsoon	429	782	853	681	660	401	673	519	623	687	1060
		Non-monsoon	0	0	13	5	0	0	0	0	0	0	0
		Annual	429	782	866	685	660	401	673	519	623	687	1060
33	**Tekra**	Monsoon	30689	14687	18037	30933	41015	31804	26350	24595	30455	11155	38597
		Non-monsoon	901	474	4737	1155	1363	483	611	644	1094	1086	1346
		Annual	31590	15161	22774	32088	42379	32287	26960	25238	31549	12241	39943

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Table 5 : Flow of Water by season site and river basin

V Basin : Godavari Unit : M.C.M.

S.No.	Site Name	Season	1995-96	1996-97	1997-98	1998-99	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
34	**Ghugus**	Monsoon	4258	1460	827	2852	5705	4162	2621	2451	2320	602	-
		Non-monsoon	153	50	539	138	173	88	75	64	99	116	-
		Annual	4411	1510	1366	2989	5878	4250	2696	2514	2419	718	-
35	**Sirpur**	Monsoon	12060	5213	3310	10365	14582	13222	14636	10252	9835	1251	12784
		Non-monsoon	491	180	854	337	254	225	31	230	233	288	367
		Annual	12552	5393	4164	10702	14835	13447	14667	10482	10068	1538	13150
36	**P.G.Bridge**	Monsoon	3932	2605	830	4270	5731	3047	4098	8031	3580	261	5122
		Non-monsoon	122	56	167	78	134	43	41	91	24	5	57
		Annual	4054	2661	997	4349	5865	3090	4139	8122	3583	266	5179
37	**Bamini**	Monsoon	12339	4947	2419	8363	12537	9684	9728	12842	8721	1075	11530
		Non-monsoon	468	190	830	2191	418	196	197	194	191	202	380
		Annual	12806	5137	3249	8654	12955	9879	99206	13036	8912	1278	11910
38	**Marlegaon**	Monsoon	640	673	249	1784	2199	423	1088	2900	374	27	-
		Non-monsoon	40	36	110	44	39	45	49	48	13	5	-
		Annual	680	709	359	1828	2238	468	1137	2948	387	33	-
39	**Pauni**	Monsoon	8356	4556	9307	9938	17157	6997	7798	7957	11463	3319	-
		Non-monsoon	398	244	3004	690	747	107	160	337	547	311	-
		Annual	8754	4800	12312	10628	17904	7104	7958	8294	12010	3630	-
40	**Ashti**	Monsoon	18549	8493	14796	17609	29266	16400	19132	14882	20678	7520	28716
		Non-monsoon	545	273	3420	867	846	149	212	352	586	444	774
		Annual	19093	8766	18216	18476	30112	16549	19344	15235	21264	7963	29490
41	**Mirdapalli**	Monsoon	45018	47702	-	-	-	-	40171	9491	33871	25986	38606
		Non-monsoon	5126	2878	-	-	-	-	5473	2474	4995	5086	6826
		Annual	50143	50579	-	-	-	-	45645	11966	38866	31072	45432
42	**Medapalli**	Monsoon	1154	408	-	-	-	-	1976	930	1778	1060	-
		Non-monsoon	19	0	-	-	-	-	35	1	21	10	-
		Annual	1173	408	-	-	-	-	2011	931	1799	1071	-
43	**Bhisnur**	Monsoon	509	69	213	1185	1427	146	64	210	158	212	-
		Non-monsoon	176	17	423	41	54	32	61	156	125	130	-
		Annual	685	86	636	1225	1481	178	125	366	263	342	-
44	**Hivra**	Monsoon	1069	518	356	1472	2894	849	1072	868	413	261	1557
		Non-monsoon	140	27	493	77	147	42	28	33	40	57	104
		Annual	1209	545	849	1549	3041	891	1100	901	453	318	1661

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Table 5 : Flow of Water by season site and river basin

V Basin : Godavari Unit : M.C.M.

S.No.	Site Name	Season	1995-96	1996-97	1997-98	1998-99	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
45	**Nandagaon**	Monsoon	846	250	190	441	953	1178	500	527	561	175	939
		Non-monsoon	43	20	176	85	104	65	51	50	77	56	128
		Annual	889	270	367	526	1057	1243	551	577	639	230	1067
46	**Ramakona**	Monsoon	400	566	1017	888	1537	207	429	471	872	210	799
		Non-monsoon	10	6	322	47	26	3	3	3	10	2	23
		Annual	410	572	1339	934	1563	210	432	473	882	212	821
47	**Satrapur**	Monsoon	1340	1130	2531	1924	4784	865	780	776	1825	607	2265
		Non-monsoon	86	54	1388	213	207	16	11	114	149	18	116
		Annual	1426	1184	3919	2136	4991	881	791	890	1974	625	2381
48	**Keolari**	Monsoon	903	672	867	976	2009	421	284	1154	1069	250	1097
		Non-monsoon	66	43	454	136	106	26	95	58	88	36	90
		Annual	968	715	1321	1112	2115	447	379	1212	1157	286	1187
49	**Kumhari**	Monsoon	2658	1626	3155	3435	5969	1772	2165	3335	3757	1093	3566
		Non-monsoon	74	67	1038	115	139	78	94	122	110	108	212
		Annual	2731	1692	4192	3550	6108	1850	2258	3456	3866	1200	3778
50	**Rajegaon**	Monsoon	3272	1099	2897	2588	3204	1624	2483	2306	3069	956	3782
		Non-monsoon	35	11	337	50	30	0	0	0	56	59	134
		Annual	3306	1110	3234	2635	3234	1625	2483	2306	3125	1014	3916
51	**Salebardi**	Monsoon	750	329	527	633	646	588	630	788	537	220	1109
		Non-monsoon	1	0	50	3	3	0	0	0	0	23	1
		Annual	751	329	577	636	649	588	630	788	538	243	1110
52	**Rajoli**	Monsoon	477	225	476	263	833	1511	596	497	587	265	1087
		Non-monsoon	1	0	16	2	1	0	0	0	1	22	2
		Annual	478	225	492	265	833	1511	596	497	588	287	1089
53	**Bhatpalli**	Monsoon	2542	1024	327	1695	716	1983	890	513	917	283	1011
		Non-monsoon	66	59	56	59	52	55	71	36	62	25	55
		Annual	2608	1083	383	1754	768	2038	962	549	979	308	1066
54	**Kanergaon**	Monsoon	295	247	131	1189	1218	361	767	1232	116	32	230
		Non-monsoon	1	0	36	5	0	0	0	0	0	0	1
		Annual	296	247	167	1194	1218	361	767	1232	116	32	231
55	**Mangrul**	Monsoon	354	120	50	233	604	423	328	1080	43	8	314
		Non-monsoon	19	12	8	8	18	7	11	21	9	0	67
		Annual	374	133	59	241	622	430	340	1101	52	8	381
56	**Wairagarh**	Monsoon	803	507	555	527	985	1082	1856	719	1152	585	1393
		Non-monsoon	2	1	15	1	3	0	1	0	4	10	3
		Annual	805	509	565	528	987	1082	1856	719	1156	595	1396

Source : SE, Godavari Circle, Central Water Commission, Hyderabad. Note : - = Not Available.

Table 5 : Flow of Water by season site and river basin

VI Basin : Krishna Unit : MCM

S.No.	Site Name	Season	1997-1998	1998-1999	1999-2000	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
1	2	3	4	5	6	7	8	9	10	11	12	13
1	**Arjunwad (Seasonal)**	Monsoon	10449	5152	8115	2868	3391	3223	2717	7926	18333	17640
		Non-Monsoon	0	0	0	0	0	0	0	0	0	
		Annual	10449	5152	8115	2868	3391	3223	2717	7926	18333	17640
2	**Bastawade**	Monsoon	1603	1151	1470	982	811	793	820	1064	1688	1762
		Non-Monsoon	0	0	0	0	0	0	0	0	0	0
		Annual	1603	1151	1470	982	811	793	820	1064	1688	1762
3	**Bawapuram**	Monsoon	4449	8111	5063	5376	3271	793	497	1525	5928	4501
		Non-Monsoon	289	178	141	154	125	55	177	170	196	86
		Annual	4738	8289	5204	5530	3396	848	673	1695	6124	4587
4	**Boriomerga**	Monsoon	17	1042	32	92	13	0	2	6	17	
		Non-Monsoon	0	27	0	0	0	0	1	0	1	
		Annual	17	1069	32	92	13	0	3	6	17	
5	**Chincholi**	Monsoon	0	0	35	44	0	0	0	0	0	
		Non-Monsoon	0	0	0	0	0	0	0	0	0	
		Annual	0	0	35	44	0	0	0	0	0	
6	**Cholachguda (Seasonal)**	Monsoon	734	904	642	836	427	318	200	559	789	785
		Non-Monsoon	252	163	259	170	63	47	105	84	233	
		Annual	986	1067	901	1006	490	364	305	644	1022	785
7	**Daddi**	Monsoon	2544	1637	2466	1552	1433	1338	1244	1848	2960	3172
		Non-Monsoon	13	6	1	2	1	0	3	1	3	15
		Annual	2558	1643	2467	1554	1434	1338	1247	1849	2963	3187
8	**Dameracherla**	Monsoon	383	1146	473	765	387	8	40	255	1146	978
		Non-Monsoon	117	339	171	267	152	7	0	247	399	510
		Annual	500	1484	644	1032	540	16	40	503	1545	1488
9	**Dhond**	Monsoon	4868	3868	2129	1009	864	1590	968	2767	8792	7869
		Non-Monsoon	249	0	0	0	0	0	0	0	0	1
		Annual	5117	3868	2129	1009	864	1590	968	2767	8792	7870
10	**Gokak Falls (Seasonal)**	Monsoon	3042	857	1948	851	517	560	355	770	3999	3087
		Non-Monsoon	79	70	85	63	3	0	0	0	0	
		Annual	3121	927	2033	914	520	560	355	770	3999	3087

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Table 5 : Flow of Water by season site and river basin

VI Basin : Krishna Unit : MCM

S.No.	Site Name	Season	1997-1998	1998-1999	1999-2000	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
1	2	3	4	5	6	7	8	9	10	11	12	13
11	**Gotur**	Monsoon	1617	1113	1473	915	840	840	688	983	2051	1854
		Non-Monsoon	0	0	0	0	0	0	0	0	0	0
		Annual	1617	1113	1473	915	840	840	688	983	2051	1854
12	**Halia**	Monsoon	21	118	15	101	201	2	17	107	853	124
		Non-Monsoon	4	9	4	8	6	0	0	8	51	47
		Annual	24	126	19	109	207	2	18	115	904	171
13	**Huvinhedigi**	Monsoon	21440	15914	16548	7372	7276	3713	2403	9272	25841	25860
		Non-Monsoon	617	631	556	683	692	914	1107	948	922	939
		Annual	22057	16545	17104	8054	7968	4627	3510	10220	26763	26799
14	**Jewangi**	Monsoon	49	876	83	340	201	31	143	3	213	
		Non-Monsoon	2	9	3	2	5	1	2	0	10	
		Annual	50	885	86	342	206	32	145	3	222	
15	**K Agraharam**	Monsoon	29629	40653	22128	13114	12260	4830	2893	13537	45822	45358
		Non-Monsoon	1152	978	357	730	650	1589	887	403	616	743
		Annual	30782	41631	22485	13844	12910	6419	3780	13941	46437	46101
16	**Karad**	Monsoon	6506	3065	4661	1780	1720	2097	1779	4611	10046	10401
		Non-Monsoon	672	558	630	607	523	499	544	434	435	488
		Annual	7178	3622	5291	2386	2243	2596	2323	5045	10481	10889
17	**Keesara**	Monsoon	749	2727	1447	2776	465	226	762	677	2898	2134
		Non-Monsoon	239	284	150	171	81	0	39	32	317	138
		Annual	988	3011	1597	2947	546	226	801	709	3214	2272
18	**Kokangaon**	Monsoon	15	270	18	20	89	0	1	0	0	7
		Non-Monsoon	1	1	0	0	0	0	1	0	0	
		Annual	16	271	18	20	89	0	2	0	0	7
19	**Koyna**	Monsoon	2336	571	1580	302	245	419	280	1254	3013	3597
		Non-Monsoon	494	439	475	412	398	437	414	398	342	352
		Annual	2830	1010	2054	714	642	856	694	1652	3355	3949
20	**Kurundwad**	Monsoon	15382	8273	10622	5356	6029	5918	4707	10831	23769	24652
		Non-Monsoon	0	0	0	0	0	0	0	0	0	0
		Annual	15382	8273	10622	5356	6029	5918	4707	10831	23769	24652
21	**Lakshmipuram**	Monsoon	49	572	2	223	172	2	2	49	155	
		Non-Monsoon	0	10	0	0	7	0	0	0	0	
		Annual	50	582	2	224	178	2	2	49	155	

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Table 5 : Flow of Water by season site and river basin

VI Basin : Krishna Unit : MCM

S.No.	Site Name	Season	1997-1998	1998-1999	1999-2000	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
1	2	3	4	5	6	7	8	9	10	11	12	13
22	**Madhira**	Monsoon	196	544	418	649	91	61	86	176	781	446
		Non-Monsoon	83	122	69	76	55	0	13	13	164	71
		Annual	278	666	487	725	145	61	99	190	945	517
23	**Malkhed**	Monsoon	125	3031	449	1012	542	208	208	154	1064	69
		Non-Monsoon	17	71	24	34	42	21	30	33	32	27
		Annual	142	3102	472	1047	584	228	238	187	1097	95
24	**Mantralayam**	Monsoon	5140	8039	6294	5883	3619	915	846	2195	7157	5122
		Non-Monsoon	613	561	399	390	413	285	364	318	467	319
		Annual	5753	8600	6693	6273	4032	1200	1210	2513	7625	5441
25	**Mudhol**	Monsoon				751	705	532	334	1048	4082	3299
		Non-Monsoon				69	44	44	28	0	52	38
		Annual				820	749	576	363	1048	4134	3336
26	**Narasingpur**	Monsoon	4661	5436	3049	117	336	295	106	1625	10141	11393
		Non-Monsoon	0	0	87	228	142	202	206	360	307	172
		Annual	4661	5436	3136	345	477	498	312	1984	10448	11565
27	**Navalgund**	Monsoon	213	224	240	249	131	47	54	150	300	
		Non-Monsoon	82	46	70	34	35	22	14	42	90	
		Annual	295	271	310	283	166	70	68	192	390	
28	**Paleru Bridge**	Monsoon	268	558	304	504	111	39	12	34	486	268
		Non-Monsoon	94	178	58	46	99	1	2	49	186	146
		Annual	362	735	362	550	210	39	14	83	672	414
29	**Pandegaon**	Monsoon	2	136	29	6	18	1	0	3	9	44
		Non-Monsoon	0	0	0	0	0	0	0	0	0	0
		Annual	2	136	29	6	18	1	0	3	9	44
30	**Phulgaon (Seasonal)**	Monsoon	1952	1284	957	539	610	948	674	1263	2801	2720
		Non-Monsoon	0	0	0	0	0	0	0	0	0	0
		Annual	1952	1284	957	539	610	948	674	1263	2801	2720
31	**Pondugala**	Monsoon	18470	34867	11183	7162	5803	6137	1086	1845	35329	29457
		Non-Monsoon	4566	4568	6054	4447	3505	1001	903	725	1337	1382
		Annual	23036	39436	17236	11609	9308	7138	1989	2570	36666	30839

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Table 5 : Flow of Water by season site and river basin

VI Basin : Krishna Unit : MCM

S.No.	Site Name	Season	1997-1998	1998-1999	1999-2000	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
1	2	3	4	5	6	7	8	9	10	11	12	13
32	**Purushothamagudem**	Monsoon	19	296	13	319	17	2	159	13	192	
		Non-Monsoon	0	2	0	0	0	0	1	0	1	
		Annual	19	298	13	319	17	2	160	13	193	
33	**Sadalga (Seasonal)**	Monsoon	3279	1861	2398	1377	962	1577	918	1852	4921	4932
		Non-Monsoon	0	0	0	0	0	0	0	0	0	
		Annual	3279	1861	2398	1377	962	1577	918	1852	4921	4932
34	**Samdoli (Seasonal)**	Monsoon	3497	1791	2844	1399	1520	1361	1438	2630	5839	5650
		Non-Monsoon	0	0	0	0	0	0	0	0	0	
		Annual	3497	1791	2844	1399	1520	1361	1438	2630	5839	5650
35	**Sarati**	Monsoon	1251	1819	960	7	133	72	7	991	2520	3050
		Non-Monsoon	0	0	0	0	0	0	7	0	0	18
		Annual	1251	1819	960	7	133	72	14	991	2520	3068
36	**Shirdhon**	Monsoon	1	168	7	11	32	1	1	3	2	18
		Non-Monsoon	0	1	0	0	0	0	0	0	0	0
		Annual	1	169	7	11	32	1	1	3	2	18
37	**T Ramapuram (Seasonal)**	Monsoon	283	1016	734	893	1261	235	181	309	957	461
		Non-Monsoon	109	94	84	83	76	28	57	45	124	
		Annual	392	1110	818	976	1338	263	238	353	1081	461
38	**Takli**	Monsoon	4844	9071	2303	264	778	42	8	1481	9035	11671
		Non-Monsoon	69	55	12	25	0	7	0	0	0	0
		Annual	4913	9126	2315	290	778	49	8	1481	9035	11671
39	**Talikot (Seasonal)**	Monsoon	119	657	140	313	358	160	37	117	102	173
		Non-Monsoon	11	40	2	5	0	0	3	10	19	
		Annual	130	697	142	317	358	160	40	128	121	173
40	**Terwad (Seasonal)**	Monsoon	5883	2916	3588	2666	3144	3151	2524	4302	8176	8038
		Non-Monsoon	0	0	0	0	0	0	0	0	0	
		Annual	5883	2916	3588	2666	3144	3151	2524	4302	8176	8038
41	**Vandur**	Monsoon	1064	602	824	389	255	374	249	503	1432	1386
		Non-Monsoon	220	402	218	262	137	148	97	85	143	240
		Annual	1284	1004	1041	651	392	522	346	588	1575	1626

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Table 5 : Flow of Water by season site and river basin

VI Basin : Krishna Unit : MCM

S.No.	Site Name	Season	1997-1998	1998-1999	1999-2000	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
1	2	3	4	5	6	7	8	9	10	11	12	13
42	**Vijayawada**	Monsoon	14518	30784	8410	5866	2053	313	250	616	35590	26740
		Non-Monsoon	1971	2759	1920	1257	1097	62	90	31	443	1
		Annual	16488	33543	10330	7123	3150	375	340	647	36033	26741
43	**Wadakbal**	Monsoon	123	3691	199	745	189	16	1	189	311	868
		Non-Monsoon	0	5	16	6	0	3	2	0	5	4
		Annual	123	3696	215	752	189	19	3	189	316	872
44	**Wadenapally**	Monsoon	17922	30637	10369	6324	4318	3492	1460	3025	35327	32828
		Non-Monsoon	3672	4953	4192	3185	2725	598	975	1203	2530	3060
		Annual	21594	35589	14561	9509	7043	4089	2435	4228	37857	35888
45	**Warunji**	Monsoon	4200	1850	2973	1219	1161	1514	1331	2841	6110	6086
		Non-Monsoon	535	528	519	475	502	509	505	441	383	346
		Annual	4736	2378	3492	1694	1663	2023	1835	3282	6493	6432
46	**Yadgir**	Monsoon	5068	20729	3381	3634	2385	732	886	2491	13784	14191
		Non-Monsoon	136	337	122	235	69	152	731	88	57	0
		Annual	5203	21066	3503	3869	2455	884	1618	2578	13841	14191

Source : Water Year Book of Krishna Basin for 2006-07

Table 5 : Flow of Water by season site and river basin

VII Basin : Cauvery Unit : M.C.M.

S.No.	Site Name	Season	1996-97	1997-98	1998-99	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	**M.H. Halli**	Monsoon	338.0	500.0	343.0	621.0	933.0	363.6	165.9	211.3	309.9	635.5
		Non-monsoon	245.0	191.0	199.0	340.0	187.0	213.2	119.3	39.31	131.2	210.9
		Annual	583.0	691.0	542.0	961.0	1120	576.8	285.2	250.61	441.1	846.4
2	**K.M. Vadi**	Monsoon	293.0	458	298.0	330.0	297.0	203.9	101.7	61.9	224.6	542.2
		Non-monsoon	27.00	25.00	13.00	10.00	22.00	5.740	1.508	0.671	3.600	21.60
		Annual	320.0	483.0	311.0	340.0	319.0	209.6	103.2	62.57	228.2	563.8
3	**T.Bekuppe**	Monsoon	-	-	*Not Discharge Observation at this site through out the Water Year 2005-06.						298.7	*
		Non-monsoon	-	-							8.585	*
		Annual	-	-							307.3	*
4	**T.K Halli**	Monsoon	1002	588.0	858.0	727.0	1244	580.6	161.6	217.5	521.7	1055
		Non-monsoon	94.00	141.0	164.0	200.0	168.0	126.3	66.32	37.70	57.51	278.8
		Annual	1096	729.0	1022	927.0	1412	706.9	227.9	255.2	579.2	1333.8
5	**Kollegal**	Monsoon	4094	6033	4651	5514	5725	3675	2915	2301	3673	7246
		Non-monsoon	1162	1525	1158	1150	1355	972.5	930.2	710.7	1005.0	1638
		Annual	5256	7558	5809	6664	7080	4648	3845	3012	4678	8884
6	**Billigundulu**	Monsoon	5462	6195	5760	6194	7384	4361	2369	1694	4445	9154
		Non-monsoon	1526	1650	1578	1555	1656	1082	743.2	445.7	762.5	1717
		Annual	6988	7845	7338	7749	9040	5443	3112	2140	5208	10871
7	**T.Narsipur**	Monsoon	1992	2483	2259	2095	2355	1989	1587	1253	2197	2937
		Non-monsoon	323.0	482.0	511.0	283.0	487.0	212.9	347.1	354.1	259.2	789.7
		Annual	2315	2965	2770	2378	2842	2202	1934	1607	2456	3727
8	**Kudige**	Monsoon	2465	2974	2259	2430	2262	1884	1484	1267	2057	3078
		Non-monsoon	172.0	185.0	191.0	130.0	174.0	145.0	124.1	125.1	134.0	288.6
		Annual	2637	3159	2450	2560	2436	2029	1608	1392	2191	3367
9	**Hongenakkal**	Monsoon	-	56.37	41.33	122.5	145.3	24.98	3.249	11.58	14.80	126.7
		Non-monsoon	-	44.56	12.67	17.91	11.42	5.226	0	7.848	0.743	40.50
		Annual	-	100.9	54.00	140.4	156.7	30.21	3.249	19.43	15.54	167.2
10	**Bendrahalli**	Monsoon	-	-	-	-	-	-	-	-	-	Partial
		Non-monsoon	-	-	-	-	-	-	-	-	-	Water
		Annual	-	-	-	-	-	-	-	-	-	Year
11	Sakleshpur	Monsoon	-	-	-	-	-	-	601.8	412.7	788.7	1148
		Non-monsoon	-	-	-	-	-	-	32.02	46.43	21.41	101.5
		Annual	-	-	-	-	-	-	633.8	459.1	810.1	1250

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Table 5 : Flow of Water by season site and river basin

VII Basin : Cauvery Unit : M.C.M.

S.No.	Site Name	Season	1996-97	1997-98	1998-99	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
12	**Thimmanahalli**	Monsoon	-	-	-	-	-	128.7	26.14	5.45	72.46	172.0
		Non-monsoon	-	-	-	-	-	9.371	2.052	0.767	8.908	29.93
		Annual	-	-	-	-	-	138.1	28.19	6.219	81.37	201.9
13	**Akkihebbal**	Monsoon	-	-	-	-	-	-	223.3	191.9	557.1	1670
		Non-monsoon	-	-	-	-	-	-	69.50	63.44	165.20	289.6
		Annual	-	-	-	-	-	-	292.8	255.3	722.3	1960
14	**Kanakpura**	Monsoon	231.0	175.0	401.0	285.0	506.0	230.0	60.21	Site shifted to T. Bekuppe.		
		Non-monsoon	39.00	51.00	40.00	109.00	64.00	31.31	8.425			
		Annual	270.0	226.0	441.0	394.0	570.0	261.3	68.64			

Source : SE (Coord.), Cauvery & Southern Rivrs Organisation, CWC, Bangalore.

Table 5 : Flow of Water by season site and river basin

VIII Basin : East Flowing Rivers from Mahanadi to Kanyakumari Unit: M. C. M.

S.No.	Site Name	Season	1996-97	1997-98	1998-99	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	**Thammavaram**	Monsoon	-	-	-	-	-	-	-	-	-	-
		Non-monsoon	-	-	-	-	-	-	-	-	-	-
		Annual	-	-	-	-	-	-	-	-	-	-
2	**K.Bitragunda**	Monsoon	-	-	-	-	-	-	-	-	-	-
		Non-monsoon	-	-	-	-	-	-	-	-	-	-
		Annual	-	-	-	-	-	-	-	-	-	-
3	**Nellore**	Monsoon	5978	295.4	3331	27.39	1008	3427	36.02	77.59	21.20	1522
		Non-monsoon	1303	886.3	46.23	6.387	108.8	268.5	0.00	0.000	0.00	651.7
		Annual	7281	1181.7	3,377	33.78	1,117	3696	36.02	77.59	21.20	2174
4	**Nandipalli**	Monsoon	427.5	19.95	231.9	1.916	64.99	168.9	2.138	35.05	0.637	150.7
		Non-monsoon	61.00	8.855	10.80	0	0	0.297	0.000	0.000	0.000	0.942
		Annual	488.5	28.81	242.7	1.916	64.99	169.20	2.138	35.05	0.637	151.6
5	**Chennur**	Monsoon	6176	1283	3501	630.7	3066	2724	264.3	555.4	1259	3019
		Non-monsoon	374.2	292.0	288.3	437.1	284	329.2	0.000	7.523	113.1	432.3
		Annual	6550	1575	3789	1068	3350	3053	264.3	562.9	1372	3451
6	**Kamalapuram**	Monsoon	1181	132.9	132.9	0.000	11.55	333.8	7.750	90.62	0.435	112.0
		Non-monsoon	94.47	13.95	13.95	0.000	0.000	10.96	0.000	0.000	0.000	47.22
		Annual	1275	146.9	146.9	0.000	11.55	344.8	7.750	90.62	0.435	159.2
7	**Alladupalli**	Monsoon	2725	962.4	2483	780.7	3009	1249	218.9	247.0	1255	3102
		Non-monsoon	179.9	282.9	224.0	460	642.5	280.5	7.078	28.26	117.2	437.7
		Annual	2905	1245	2707	1241	3652	1530	226.0	275.3	1372	3540
8	**Tadapatri**	Monsoon	339.3	76.16	436.7	82.88	70.37	321.3	0.000	3.949	0.000	41.27
		Non-monsoon	40.55	14.20	27.27	6.356	0.00	16.31	0.000	0.000	0.000	0.000
		Annual	379.9	90.36	464.0	89.24	70.37	337.6	0.000	3.949	0.000	41.27
9	**Nagalamadike**	Monsoon	0.596	0.127	20.09	0.414	2.596	40.43	13.37	0.000	0.000	0.000
		Non-monsoon	0.000	0.280	0.268	1.798	0.000	0.900	0.000	0.000	0.000	0.000
		Annual	0.596	0.407	20.36	2.212	2.596	41.33	13.37	0.000	0.000	0.000
10	**Singavaram**	Monsoon	653.5	13.14	127.4	28.51	2.364	245.0	0.000	0.000	0.000	12.91
		Non-monsoon	13.40	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.653	12.66
		Annual	666.9	13.14	127.4	28.51	2.364	245.0	0.000	0.000	0.653	25.57

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Table 5 : Flow of Water by season site and river basin

VIII Basin : East Flowing Rivers from Mahanadi to Kanyakumari Unit: M. C. M.

S.No.	Site Name	Season	1996-97	1997-98	1998-99	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
11	**Naidupeta**	Monsoon	385.6	256.1	110.4	17.51	11.84	131.4	30.79	0.000	12.95	396.8
		Non-monsoon	813.7	324.1	86.31	4.893	32.07	124.50	4.071	0.000	0.17	523.2
		Annual	1199	580.2	196.7	22.40	43.91	255.9	34.86	0.000	13.12	920.0
12	**Sullurpet**	Monsoon	293.8	246.7	101.4	10.38	0.753	215.0	41.92	3.345	7.062	703.5
		Non-monsoon	361.7	153.8	24.5	2.07	12.5	260.9	2.459	0.000	0.000	315.9
		Annual	655.5	400.5	125.9	12.45	13.26	475.9	44.38	3.345	7.062	1019
13	**Chengalpattu**	Monsoon	336.4	526.8	872.8	12.05	1.556	32.13	3.245	3.924	14.20	132.9
		Non-monsoon	1513	561.5	454.5	15.63	5.438	38.81	2.935	0.189	0.929	331.4
		Annual	1849	1088	1327	27.68	6.994	70.94	6.180	4.113	15.13	464.3
14	**Magaral**	Monsoon	92.96	218.7	236.3	0.524	0.000	0.107	0.000	0.000	0.000	46.62
		Non-monsoon	644.8	389.4	183.6	0.541	0.000	0.130	0.000	0.000	0.000	267.0
		Annual	737.8	608.1	419.9	1.065	0.000	0.237	0.000	0.000	0.000	313.6
15	**Arcot**	Monsoon	470.5	12.38	52.54	0.000	0.000	68.03	0.000	0.000	0.000	112.0
		Non-monsoon	363.5	42.8	11.54	0.000	0.000	2.347	0.000	0.000	0.000	74.51
		Annual	834.0	55.18	64.08	0.000	0.000	70.38	0.00	0.000	0.000	186.5
16	**Annavasal**	Monsoon	-	-	-	28.37	28.64	15.06	2.144	1.321	7.023	19.61
		Non-monsoon	-	-	-	15.43	10.22	12.82	0.712	0.000	4.820	6.507
		Annual	-	-	-	43.80	38.86	27.88	2.856	1.321	11.843	26.12
17	**Kumarapalayam**	Monsoon										0.000
		Non-monsoon	<---------- Observation Started w.e.f.02.11.2004 ---------->									31.46
		Annual										31.46
18	**Villupuram**	Monsoon	415.8	369.3	372.0	51.18	181.5	103.2	0.000	0.000	151.9	1169
		Non-monsoon	1294	533.8	431.5	10.07	2.451	0.385	0.000	0.000	0.839	685.9
		Annual	1710	903.1	803.5	61.25	184.0	103.6	0.000	0.000	152.7	1854.9
19	**Vazhavachanur**	Monsoon	531.6	376.6	296.6	113.6	201.7	187.8	3.057	10.10	97.45	782.0
		Non-monsoon	732.7	381.6	280.1	94.60	78.18	50.42	0.000	37.51	97.36	470.8
		Annual	1264.3	758.2	576.7	208.2	280	238.2	3.057	47.61	194.8	1252.8
20	**Gummanur**	Monsoon	-	-	-	-	-	-	-	-	-	-
		Non-monsoon	-	-	-	-	-	-	-	-	-	-
		Annual	-	-	-	-	-	-	-	-	-	-
21	**Kudalaiyathur**	Monsoon	40.98	289.8	260.5	135.7	0.000	0.000	5.161	14	291.8	$
		Non-monsoon	370.0	408.2	620.4	131.1	98.87	2.296	0.000	5.560	0.110	$
		Annual	411.0	698.0	880.9	266.8	98.87	2.296	5.161	19.90	291.9	

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Table 5 : Flow of Water by season site and river basin

VIII Basin : East Flowing Rivers from Mahanadi to Kanyakumari Unit: M. C. M.

S.No.	Site Name	Season	1996-97	1997-98	1998-99	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
22	**Peralam**	Monsoon	-	-	-	15.18	20.77	9.158	1.963	1.875	7.472	15.73
		Non-monsoon	-	-	-	6.753	5.000	4.440	0.941	0.468	3.298	5.290
		Annual	-	-	-	21.93	25.77	13.60	2.904	2.343	10.77	21.02
23	**Menangudi**	Monsoon	-	41.28	48.46	-	-	-	-	-	15.95	36.73
		Non-monsoon	-	15.86	15.97	-	-	-	-	-	9.360	13.26
		Annual	-	57.14	64.43	-	-	-	-	-	25.31	49.99
24	**Porakudi**	Monsoon	-	-	-	77.56	91.43	44.45	15.89	12.86	80.79	98.43
		Non-monsoon	-	-	-	77.38	47.19	69.290	4.660	3.005	10.98	66.06
		Annual	-	-	-	154.9	139	113.7	20.6	15.9	91.8	164.5
25	**Thengudi**	Monsoon	-	-	94.53	88.49	110.8	100.2	19.12	16.59	100.9	154.5
		Non-monsoon	-	-	67.81	66.3	53.3	73.47	7.028	10.04	17.51	41.01
		Annual	-	-	162.3	154.8	164.1	173.7	26.15	26.63	118.4	195.5
26	**Gopurajapuram**	Monsoon	-	-	-	40.29	52.96	12.67	2.760	6.926	50.00	60.82
		Non-monsoon	-	-	-	37.80	29.20	30.04	0.322	1.946	2.650	5.479
		Annual	-	-	-	78.09	82.16	42.71	3.082	8.872	52.65	66.30
27	**Nallathur**	Monsoon	-	-	-	-	-	-	-	-	-	-
		Non-monsoon	-	-	-	-	-	-	-	-	-	-
		Annual	-	-	-	-	-	-	-	-	-	-

Source : SE (Coord.), Cauvery & Southern Rivrs Organisation, CWC, Bangalore, "Sangamam" Gandhi Maanagar, PO Coimbatore-641004 (Tamil Nadu).

Remarks : Water Year Book Published upto 2003-04.

Note : 1. Data of Site-Menangudi for the Years 1999-2000 to 2003-04 not published.

: 2. Site washed out in High flood on the night of 24.11.2005, data not published.

a, Nallathur & Gummanur site data is not available.

Table 5 : Flow of Water by season site and river basin

IX Basin : West Flowing Rivers from Kanyakumari to Tapi Unit : M.C.M.

S.No.	Site Name	Season	1996-97	1997-98	1998-99	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	**Addoor**	Monsoon	-	-	-	-	-	-	-	-	2218	2206
		Non-monsoon	-	-	-	-	-	-	-	-	14.33	69.86
		Annual	-	-	-	-	-	-	-	-	2232	2276
2	**Avershe**	Monsoon	-	-	-	-	-	-	-	1058	1077	1086
		Non-monsoon	-	-	-	-	-	-	-	14.27	11.5	25.97
		Annual	-	-	-	-	-	-	-	1072	1089	1112
3	**Bantal**	Monsoon	9795	11656	12178	10789	9126	8521	6369	8754	12105	12105
		Non-monsoon	258.2	418.3	309.1	183.2	123.5	85.83	33.18	5.500	0	209.0
		Annual	10053	12074	12487	10972	9250	8607	6402	7654	8754	12314
4	**Haladi**	Monsoon	1299	1643	1689	1681	1400	1193	990.4	1291	1363	1530
		Non-monsoon	232.4	479.0	435.5	327.3	349.2	272.1	294.1	201.9	283	323.1
		Annual	1531	2122	2125	2008	1749	1465	1285	1493	1646	1853
5	**Santeguli**	Monsoon	3620	5922	5707	5028	6045	3568	2935	2538	2144	3902
		Non-monsoon	98.4	117.5	191.3	93.00	85.30	71.78	77.80	104.1	75.20	69.82
		Annual	3718	6040	5898	5121	6130	3640	3013	2642	2219	3972
6	**Yennehole**	Monsoon	1392	1564	1770	1646	1243	1594	1019	1250	1327	1299
		Non-monsoon	16.94	47.57	33.49	19.3	8.214	24.92	13.69	22.57	7.500	32.50
		Annual	1409	1612	1803	1665	1251	1619	1033	1273	1335	1332

Source : SE (Coord.), Cauvery & Southern Rivers Organisation, CWC, Bangalore, "Sangamam" Gandhi Maanagar, PO Coimbatore-641004 (Tamil Nadu).

Table 5 : Flow of Water by season site and river basin

X Basin : Tapi Unit : M.C.M.

Sl.No.	Site Name	Season	1996-97	1997-98	1998-99	1999-2000	2000-01	2001-2002	2002-2003	2003-2004	2004-2005	2005-06
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	**Ghala**	Monsoon	1529.0	2451.8	6019.1	1687.3	687.5	959.3	2635.0	3541.6	1436.0	
		Non-Monsoon	1455.0	2318.7	1507.9	1237.0	298.4	514.4	371.8	646.6	571.0	
		Annual	2984.0	4770.5	7527.0	2924.3	985.9	1473.7	3006.8	4188.2	2007.0	
2	**Sarangkheda**	Monsoon	6254.0	5134.6	13903.0	7802.9	3154.0	3698.3	8601.0	6976.3	3071.0	
		Non-Monsoon	150.1	1383.6	524.0	293.9	0.0	11.8	16.7	17.8	94.0	
		Annual	6404.1	6518.2	14427.0	8096.8	3154.0	3710.1	8617.7	6994.1	3165.0	
3	**Gidhade**	Monsoon	4758.0	3965.2	10776.4	6756.1	2599.4	3234.5	7527.6	4926.9	2323.0	
		Non-Monsoon	124.0	1044.0	387.7	260.5	0.0	10.8	9.3	23.2	66.0	
		Annual	4882.2	5009.2	11164.1	7016.6	2599.4	3245.3	7536.9	4950.1	2389.0	
4	**Morane**	Monsoon	104.8	142.4	225.1	48.8	0.0	5.4	115.1	169.2	282.4	
		Non-Monsoon	3.0	0.6	8.7	0.0	0.0	0.0	0.0	0.0	33.4	
		Annual	107.8	143.0	233.8	48.8	0.0	5.4	115.1	169.2	315.8	
5	**Malkheda**	Monsoon	8.8	5.5	433.1	36.0	78.1	20.2	29.9	157.1	13.1	
		Non-Monsoon	8.8	13.9	2.9	0.2	0.0	0.0	0.0	0.0	0.4	
		Annual	125.3	19.5	436.0	36.3	78.1	20.2	29.9	157.1	13.5	
6	**Savkheda**	Monsoon	5994.0	4091.7	10978.0	7466.0	2646.5	3024.1	7568.9	4728.7	1937.0	
		Non-Monsoon	125.3	1181.8	530.8	300.7	0.1	18.1	13.3	10.2	448.0	
		Annual	6119.3	5273.5	11508.8	7766.7	2646.6	3042.2	7582.2	4738.9	2385.0	
7	**Dapuri**	Monsoon	442.8	96.5	984.7	430.3	291.4	20.7	278.0	604.6	117.2	
		Non-Monsoon	7.6	83.7	37.6	14.6	0.2	0.0	5.6	0.1	7.3	
		Annual	450.0	180.2	1022.3	444.9	291.6	20.7	283.6	604.7	124.5	
8	**Yerli**	Monsoon	908.7	501.6	23515.9	2198.1	749.8	1068.9	2634.3	501.0	212.2	
		Non-Monsoon	43.1	698.7	197.5	56.3	1.0	17.2	15.4	2.6	10.4	
		Annual	951.8	1200.3	23713.4	2254.4	750.8	1086.1	2649.7	503.6	222.6	

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----------Not Available Data----------

Table 5 : Flow of Water by season site and river basin

X Basin : Tapi Unit : M.C.M.

Sl.No.	Site Name	Season	1996-97	1997-98	1998-99	1999-2000	2000-01	2001-2002	2002-2003	2003-2004	2004-2005	2005-06
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
9	**Gopalkheda**	Monsoon	684.0	416.3	1663.3	1187.5	372.6	448.9	1205.7	167.3	392.3	<------ Not Available Data ------>
		Non-Monsoon	24.3	557.3	115.5	33.7	170.5	4.9	7.9	1.6	12.4	
		Annual	708.3	973.6	1778.8	1221.2	543.1	453.8	1213.6	168.9	404.7	
10	**Lakhpuri**	Monsoon	453.8	252.1	837.2	633.9	296.6	273.4	569.4	197.3	116.1	
		Non-Monsoon	15.3	241.5	61.4	28.6	2.4	3.0	3.2	1.9	6.1	
		Annual	469.1	493.6	898.6	662.5	299.0	276.4	572.6	199.2	122.2	
11	**Burhanpur**	Monsoon	4728.0	5224.0	7002.0	6494.0	1255.0	3036.0	3106.7	3219.2	2351.0	
		Non-Monsoon	171.8	605.9	326.1	196.8	21.7	35.5	60.9	77.3	56.0	
		Annual	4899.8	5829.9	7328.1	6690.8	1276.7	3071.5	3167.6	3296.5	2407.0	
12	**Dedtalai**	Monsoon	3617.0	3242.1	4611.3	5134.9	1055.4	2204.0	2422.0	2260.8	1868.0	
		Non-Monsoon	129.0	428.0	181.9	154.0	17.2	34.0	40.2	49.4	15.0	
		Annual	3746.0	3670.1	4793.2	5288.9	1072.6	2238.0	2462.2	2310.2	1883.0	

Source : SE (Coord.), Hydrological Observation Circle, Water Year Books of Tapi Basin, Central Water Commission, Sector-10 A, Gandhi

Remarks : Water Year Book Published upto 2004-05.

Note : N.A. : Not Available Data.

Table 5 : Flow of Water by season site and river basin

XI Basin : Narmada Unit : M.C.M.

S.No.	Site Name	Season	1996-97	1997-98	1998-99	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	**Orsang at Chandawada**	Monsoon	2111.96	1810.66	1262.28	1058.89	41.89	789.95	415.84	1531.47	2234.58	-
		Non-Monsoon	13.52	22.76	22.76	0.03	0.00	0.00	0.00	0.00	0.00	-
		Annual	2125.48	1833.42	1285.04	1058.92	41.89	789.95	415.84	416.84	417.84	-
2	**Narmad at Garudeswar**	Monsoon	21616.87	25047.40	18495.24	40999.04	9561.94	18972.48	17974.15	28800.67	16217.14	-
		Non-Monsoon	5342.5	8751.70	4363.10	7258.11	1921.28	4308.83	2811.76	16217.14	1703.79	-
		Annual	26959.37	33799.10	22858.35	48257.14	11483.23	23281.32	20785.92	45017.81	17920.93	-
3	**Hathni at Jobat**	Monsoon						55.18	178.46	157.36	546.25	and closed on 01.04.2006 (NCA site)
		Non-Monsoon	<----Discharge started w.e.from 09.08.2001----->					0.00	0.00	5.44	1.84	
		Annual						55.18	178.46	162.81	548.09	
4	**Goi at Pati**	Monsoon				188.85	72.01	188.43	440.84	726.28	438.32	
		Non-Monsoon	Discharge started w.e.from 23.02.1999			3.07	0.00	1.30	7.37	23.69	7.52	
		Annual				191.92	72.01	189.72	448.20	749.97	445.84	
5	**Uri at Dhulsar**	Monsoon				55.92	9.13	31.97	85.91	143.34	161.77	
		Non-Monsoon	Discharge started w.e.from 15.03.1999			0.00	0.00	0.00	0.00	1.09	0.00	
		Annual				55.92	9.13	31.97	85.91	144.43	161.77	
6	**Narmada at Rajghat**	Monsoon	21103.58	25512.59	23917.09	52457.94	10800.94	17431.34	19927.40	32236.41	17516.55	Site closed w.e.f. 01.07.2007
		Non-Monsoon	4072	9959.81	5483.89	6123.09	1762.46	3691.56	3923.76	3351.52	4444.83	
		Annual	25175.58	35462.40	29400.98	58581.03	12563.39	21122.91	23851.16	35587.93	21961.38	
7	**Narmada at Mandleswar**	Monsoon	19129.97	24201.14	23082.45	51063.29	10584.46	18773.50	18601.32	30763.81	15680.24	-
		Non-Monsoon	4485.45	9388.92	4771.19	5120.58	2071.98	4149.91	3817.22	3766.14	3834.63	-
		Annual	23615.42	33590.06	27853.64	56183.88	12656.44	22923.41	22418.54	34529.95	19514.87	-
8	**Kundi at Kogaon**	Monsoon	1292.87	929.56	2261.26	552.68	385.15	169.97	1498.31	1240.85	748.05	-
		Non-Monsoon	38.56	57.69	72.89	11.15	0.00	0.00	3.73	23.22	8.02	-
		Annual	1331.43	987.25	2334.15	563.83	385.15	169.97	1502.04	1264.07	756.07	-
9	**Chhota Tawa at Ginnore**	Monsoon	2086.9	1502.85	2001.19							-
		Non-Monsoon	80.31	184.78	71.61	<----Site closed w.e.f. 01.04.1999---->						-
		Annual	2167.2	1687.63	2072.80							-
10	**Narmada at Motakka**	Monsoon				41398.96	9427.57	16164.18	16278.45	27419.81	15441.98	and closed on 1.7.2007
		Non-Monsoon	Discharge Started on 23.08.1999			5557.96	2232.08	3786.52	3486.25	3396.72	5106.23	
		Annual				46956.91	11659.66	19950.70	19764.71	30816.52	20548.21	
11	**Narmada at Handia**	Monsoon	9483.75	17861.71	15697.91	43674.22	9011.91	14219.42	15949.03	29766.20	15164.93	-
		Non-Monsoon	3570.39	8886.75	5355.11	4573.29	2862.91	3870.68	4805.78	6318.20	3382.79	-
		Annual	13054.13	26748.46	21053.02	48247.50	11874.81	18090.10	20754.81	36084.40	18547.72	-

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Table 5 : Flow of Water by season site and river basin

XI Basin : Narmada Unit : M.C.M.

S.No.	Site Name	Season	1996-97	1997-98	1998-99	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
12	**Ganjal at Chhidgaon**	Monsoon	886.6	1118.63	1057.45	1682.14	260.43	498.90	496.67	959.56	577.37	-
		Non-Monsoon	64.79	150.48	85.07	69.34	15.01	15.69	17.30	46.77	20.35	-
		Annual	951.39	1269.11	1142.51	1751.48	275.44	514.58	513.97	1006.34	597.72	-
13	**Narmada at Hoshangabad**	Monsoon	6694.39	14984.49	12449.60	39047.76	8806.14	13261.35	12701.14	16758.33	14203.15	-
		Non-Monsoon	4308.48	7921.97	4617.02	4517.21	2119.41	3833.19	4661.56	5224.36	4034.84	-
		Annual	11002.87	22906.46	17066.63	43564.96	10925.55	17094.54	17362.69	21982.69	18237.99	-
14	**Tawa at Tawakati**	Monsoon	<---Discharge started w.e.from 10.05.2001--->					459.29	418.77	749.55	187.87	and closed on 01.04.2006 (NCA site)
		Non-Monsoon						24.80	23.07	34.52	14.53	
		Annual						484.09	441.84	784.07	202.40	
15	**Machna at Shapur**	Monsoon	<--Discharge started w.e.from 20.06.2000-->				38.69	80.22	297.48	313.13	93.81	and closed on 01.04.2006 (NCA site)
		Non-Monsoon					0.50	2.65	3.95	9.54	2.16	
		Annual					39.19	82.87	301.44	322.68	95.97	
16	**Narmada at Sandia**	Monsoon	5080.22	10227.09	8870.15	27791.23	7120.62	11052.73	8614.98	18289.02	9150.31	-
		Non-Monsoon	3868.51	6462.98	4168.22	3934.76	1643.27	3253.68	2907.12	4406.20	3631.03	-
		Annual	8948.73	16690.08	13038.36	31725.98	8763.89	14306.40	11522.10	22695.23	12781.34	-
17	**Shakkar at Gadarwara**	Monsoon	608.08	-	671.35	3404.34	675.51	477.63	955.43	1484.85	579.89	-
		Non-Monsoon	48.3	-	71.07	123.48	36.90	38.85	51.51	61.44	30.32	-
		Annual	656.38	-	742.42	3527.82	712.40	516.48	1006.93	1546.29	610.21	-
18	**Narmada at Barmanghat**	Monsoon	3698.3	7529.59	6277.19	19522.66	5600.62	9834.93	5944.82	14103.07	7970.24	-
		Non-Monsoon	2720.56	5916.69	3226.50	3364.59	1426.42	2591.85	2874.38	3822.09	3015.21	-
		Annual	6418.86	13446.28	9503.69	22887.25	7027.04	12426.78	8819.20	17925.16	10985.46	-
19	**Sher at Belkheri**	Monsoon	236.46	508.68	490.54	1425.71	385.69	794.36	719.55	848.99	409.30	-
		Non-Monsoon	14.5	317.08	51.09	24.46	10.28	14.01	14.16	15.94	12.73	-
		Annual	250.95	825.76	541.63	1450.18	395.97	808.37	733.71	864.93	422.03	-
20	**Hiran at Patan**	Monsoon	496.41	1540.28	616.01	2852.67	778.39	1401.69	1583.10	2776.97	936.73	-
		Non-Monsoon	63.68	502.71	93.69	130.08	31.53	99.75	137.64	172.99	164.00	-
		Annual	560.09	2042.99	709.70	2982.75	809.92	1501.44	1720.74	2949.95	1100.73	-
21	**Bamni at Banjar**	Monsoon	-	-	-	0.00	51.65	922.04	584.15	1359.84	700.16	-
		Non-Monsoon	-	-	-	22.82	8.42	18.93	13.60	39.16	32.41	-
		Annual	-	-	-	22.82	60.07	940.97	597.75	1399.00	732.57	-
22	**Narmada at Jamtara**	Monsoon	2906.78	5225.135904	5456.70	11924.39	4084.40	<----------Closed on 1.4.2001---------->				
		Non-Monsoon	3148.44	5348.774304	3858.27	3598.85	1292.78					
		Annual	6055.22	10573.91021	9314.97	15523.00	5377.19					

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Table 5 : Flow of Water by season site and river basin

XI Basin : Narmada Unit : M.C.M.

S.No.	Site Name	Season	1996-97	1997-98	1998-99	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
23	**Banjar at Hridyanagar**	Monsoon	796.49	1743.79	1353.75	3209.73	700.90	1397.09	-	-	-	-
		Non-Monsoon	1792	183.08	124.21	92.79	11.94	24.05	-	-	-	-
		Annual	814.41	1926.87	1477.96	3302.52	712.83	1421.15	-	-	-	-
24	**Burhner at Mohgaon**	Monsoon	1256.43	1838.77	1955.97	2820.79	1523.23	2661.74	1186.51	3387.42	2371.22	-
		Non-Monsoon	54.16	644.97	179.23	138.65	49.39	80.62	58.21	340.31	79.09	-
		Annual	1310.58	2483.74	2135.20	2959.44	1572.63	2742.36	2371.22	2327.46	2054.99	-
25	**Narmada at Amgaon**	Monsoon						550.77	2478.23	5700.24	4612.46	and closed on
		Non-Monsoon	<---Discharge started w.e.from 07.09.2001--->					153.29	202.37	293.93	378.96	01.04.2006
		Annual						704.06	2680.60	5994.16	4991.43	(NCA site)
26	**Narmada at Manot**	Monsoon	2027.91	2814.15	2040.58	3872.75	1859.61	3593.68	1887.27	4226.38	3272.97	-
		Non-Monsoon	138.9	1066.23	202.55	170.26	97.36	115.77	85.87	197.11	178.25	-
		Annual	2166.81	3880.38	2243.12	4043.01	1956.97	3709.45	1973.14	4423.49	3451.21	-
27	**Narmada at Dindori**	Monsoon	1099.62	899.84	978.12	1092.68	584.32	1181.83	700.23	1978.41	1270.90	-
		Non-Monsoon	80.38	486.09	175.11	148.57	69.75	108.28	99.58	151.08	115.27	-
		Annual	1180	1385.94	1153.24	1241.25	654.07	1290.11	799.81	2129.49	1386.17	-

Source : SE, Office of the Chief Engineer, Narmada Basin Organisation, Central Water Commission, Bhopal.

Table 5 : Flow of Water by season site and river basin

XII Basin : Mahi and Sabarmati Unit : M.C.M.

Sl.No.	Site Name	Season	1996-97	1997-98	1998-99	1999-2000	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	**Pingalwada**	Monsoon	547.5	706.2	426.9	32.17	150.5	397.2	246.1	466.9	526.3	Water Year Books Published upto 2004-2005.
		Non-Monsoon	18.5	15.8	24.0	14.69	6.1	18.9	20.44	20	29.39	
		Annual	566	722	450.9	46.86	156.6	416.1	266.6	487	595.7	
2	**Motinaroli**	Monsoon	189.4	227.2	360.5	176.3	101.8	319.5	197.1	695.7	549.12	
		Non-Monsoon	29.5	33.5	43.97	43.6	34.2	22.4	44.8	77.8	64.07	
		Annual	218.9	260.7	404.5	219.9	136	341.9	241.9	773.5	613.2	
3	**Mahuwa**	Monsoon	1120.6	982.8	1468.1	877.8	374.4	972.8	1207.3	1823.4	2123.2	
		Non-Monsoon	42.5	37.4	65.9	57.8	10	16.6	22.47	34.3	66.8	
		Annual	1163.1	1020.2	1534	935.6	384.4	989.4	1230	1858	2190	
4	**Gadat**	Monsoon	1330.5	1156.6	1540.5	1277.6	677.8	1284.4	1062.9	1580.6	1541.9	
		Non-Monsoon	43.42	48.9	86.5	141.9	16.9	4.6	0	0	53.1	
		Annual	673.8	1205.5	1627	1419.5	687.7	1289	1063	1581	1595	
5	**Ozerkheda**	Monsoon	710.5	1104.7	1287	899.1	453.6	579.5	839.8	1042.4	1551.1	
		Non-Monsoon	8.9	15.8	45.44	18	5.1	12.8	18.8	15.6	25.86	
		Annual	719.4	1120.5	1332	917.1	458.7	592.3	858.6	1058	1577	
6	**Nanipalsan**	Monsoon	502.4	454	800	627.1	797.2	858	686.1	782.6	1007.5	
		Non-Monsoon	10.8	12.98	14.1	41.4	43.3	39.1	5.5	25.8	23.5	
		Annual	513.2	466.9	814.1	668.5	840.5	897.1	673.6	808.4	1031	
7	**Durvesh**	Monsoon	2215.2	2826.8	3621.4	2446.2	2315.8	2985.3	3158.7	4156.9	3836.6	
		Non-Monsoon	10.6	15.06	52.4	27	18.5	72.4	20.9	35.8	157.36	
		Annual	2226.0	2842	367.4	2673.2	2334.3	3058	3180	4192.7	3994	

Source: Water Year Book of Tapi, Narmada & Independent Basins for 2004-2005

Table 6 : Maximum and minimum observed water levels and discharges by site and river basin

I Basin: Mahanadi

Sl. No.	Site Name	Maximum Water Level			Minimum Water Level			Maximum Observed Discharge		Minimum Observed Discharge		Period of Record
		Water Level (m)	Date	Discharge (Cumecs)	Water Level (m)	Date	Discharge (Cumecs)	Date	Discharge (Cumecs)	Date	Discharge (Cumecs)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	**Basantpur**	219.320	20-09-1980	26874	195.870	22-05-1975	18.90	30-08-2003	33088	22-05-1975	0.965	1971-2007
2	**Rampur**	229.665	29-08-2003	10958	219.000	28-04-1979	0.000	29-08-2003	10958	23-04-1982	0.030	1971-2007
3	**Bamnidhi**	228.883	22-08-1975	12700	224.295	07-06-1978	1.847	22-08-1975	12700	26-04-1987	0.060	1971-2007
4	**Rajim**	282.680	30-08-1994	8017	275.000	19-06-2003	0.000	21-07-1976	9954	13-05-1973	0.000	1971-2007
5	**Simga**	257.590	13-07-1994	10821	244.000	27-06-2003	0.000	16-09-2005	11000	10-06-2001	0.000	1971-2007
6	**Salebhata**	139.580	29-08-2003	7916	130.000	02-06-2002	0.000	30-08-1982	14545	24-05-1977	0.000	1971-2007
7	**Kantamal**	131.415	30-08-1982	7900	101.000	07-08-1971	0.000	28-07-1992	16263	21-05-1973	0.000	1971-2007
8	**Kotni**	279.610	12-07-1994	5269	268.000	06-05-1993	0.000	12-07-1994	5269	09-06-1985	0.000	1976-2007
9	**Andhiyarkore**	258.930	09-08-1979	694.6	253.330	16-03-1978	2.209	09-10-1994	990.0	22-05-2004	0.000	1976-2007
10	**Baronda**	289.330	18-09-1980	6250	283.000	23-05-1992	0.000	09-07-2001	6287	02-05-1992	0.000	1976-2007
11	**Jondhra**	230.570	14-07-1994	12700	219.293	13-09-1979	56.00	14-07-1994	12700	25-05-2001	0.000	1978-2007
12	**Ghotora**	253.500	21-07-1994	2872	246.000	10-05-2001	0.000	21-07-1994	2872	06-06-2001	0.000	1976-2007
13	**Kurubhata**	220.280	18-07-1995	2200	215.000	04-05-2003	0.000	18-07-1995	2200	19-05-2001	0.000	1976-2007
14	**Sundargarh**	222.600	23-06-1996	6341	214.000	10-05-2003	0.000	11-09-1998	10404	19-05-2001	0.000	1976-2007
15	**Kesinga**	177.630	28-07-1992	17568	166.000	13-05-1999	0.000	28-07-1992	17568	02-06-1989	0.000	1977-2007
16	**Pathardhi**	279.210	12-07-1994	1695	271.000	16-05-2004	0.000	14-09-2005	2000	15-05-2003	0.000	1987-2007
17	**Manendragarh**	420.440	12-07-1990	2329	411.000	24-05-2002	0.000	12-07-1990	2329	03-05-1997	0.000	1987-2007
18	**Seorinaryan**	224.310	30-08-2003	22800	211.665	13-06-1997	0.576	30-08-2003	22800	07-12-1985	0.000	1985-2007
19	**Tikarapara**	74.980	30-08-1982	41400	53.330	23-05-1973	110.0	29-08-1978	30863	22-12-1988	22.74	1971-2007

Source : The Superintending Engineer, Wainganga Division, Central Water Commission

Table 6 : Maximum and minimum observed water levels and discharges by site and river basin

II Basin : Subarnarekha, Burhabalang & Baitarni

Sl. No.	Site Name	Maximum Water Level			Minimum Water Level			Maximum Observed		Minimum Observed		Period of Record
		Water Level (m)	Date	Discharge (Cumecs)	Water Level (m)	Date	Discharge (Cumecs)	Date	Discharge (Cumecs)	Date	Discharge (Cumecs)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	**Muri**	237.000	09.07.1994	507.0	233.460	17.04.2007	0.022	07.09.1991	431.3	04.05.2005	0.000	-
2	**Jamshedpur**	139.850	03.09.1975	10100	123.250	03.03.1973	1.900	20.08.1975	6416	18.10.1972	0.000	1988 to 2007
3	**Adityapur**	129.820	12.10.1973	13127	113.720	08.04.1976	1.300	23.08.2006	12425	03.08.1972	0.000	1971 to 2007
4	**Ghatsila**	86.835	13.10.1973	14400	73.945	26.05.1969	1.100	08.08.1997	10582	30.04.1973	0.600	1971 to 2007
5	**Govindapur**	8.940	31.10.1999	1891	0.950	30.03.2006	2.259	15.09.2000	1649	31.01.1997	0.053	1978 to 2007
6	**Champua**	376.540	29.08.2005	1058	366.550	01.05.1980	3.639	13.08.1991	1010	15.05.1993	1.331	1980 to 2007
7	**Anandpur**	41.150	19.08.1975	12200	32.125	04.05.1980	1.218	19.08.1975	10394	11.05.1989	0.500	1972 to 2007

Source : The Superintending Engineer, Wainganga Division, Central Water Commission

Table 6 : Maximum and minimum observed water levels and discharges by site and river basin

III Basin : Brahmani

Sl. No.	Site Name	Maximum Water Level			Minimum Water Level			Maximum Observed		Minimum Observed		Period of Record
		Water Level (m)	Date	Discharge (Cumecs)	Water Level (m)	Date	Discharge (Cumecs)	Date	Discharge (Cumecs)	Date	Discharge (Cumecs)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	**Tilga**	379.420	28.08.1987	3012	373.300	28.05.1980	0.000	28.08.1987	2830	16.04.2007	0.000	1978 to 2007
2	**Gomlai**	147.000	26.07.1996	-	138.295	10.05.2002	9.079	26.07.1996	10552	17.05.1982	1.110	1977 to 2007
3	**Panposh**	180.400	06.08.1997	11120	170.985	18.04.2008	8.010	25.07.1996	11011	18.04.2008	8.000	1972 to 2007
4	**Jaraikela**	194.055	06.08.1977	12800	185.305	22.11.1972	25.20	05.08.1997	12539	10.05.1980	0.410	1971 to 2007
5	**Jenapur**	23.475	18.08.1984	10800	15.920	10.05.1980	4.880	31.07.2005	10314	10.05.1980	4.880	1977 to 2007

Source : The Superintending Engineer, Wainganga Division, Central Water Commission

Table 6 : Maximum and minimum observed water levels and discharges by site and river basin

IV Basin : Rushikulya, Vamsadhara, Sarada & Nagavali

Sl. No.	Site Name	Maximum Water Level			Minimum Water Level			Maximum Observed		Minimum Observed		Period of Record
		Water Level (m)	Date	Discharge (Cumecs)	Water Level (m)	Date	Discharge (Cumecs)	Date	Discharge (Cumecs)	Date	Discharge (Cumecs)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	**Purushottampur**	18.970	04.11.1990	4243	12.000	25.05.1995	0.000	08.10.2003	2279.0	10.05.1993	0.000	1978 to 2007
2	**Gunupur**	87.670	17.09.1980	-	79.570	15.02.1990	1.420	29.07.1991	5255	08.06.2003	0.000	1978 to 2007
3	**Kashi Nagar**	58.935	18.09.1980	16790	50.790	17.04.1981	3.400	23.09.1972	6589	02.08.2003	0.000	1971 to 2007
4	**Srikakulam**	14.530	12.05.1990	7669	7.450	20.08.2004	3.500	04.08.2005	5625	31.03.1994	0.000	1988 to 2007
5	**Ankapali**	28.450	10.05.1990	5364	19.600	08.05.2000	0.000	15.10.2005	572.7	14.03.2001	0.000	1967 to 2007

Source : The Superintending Engineer, Wainganga Division, Central Water Commission

Table 6 : Maximum and minimum observed water levels and discharges by site and river basin

V Basin : Godavari

Sl. No.	Site Name	Maximum Water Level			Minimum Water Level			Maximum observed		Minimum observed		Period of record
		Water Level (m)	Date	Discharge (cumec)	Water Level (m)	Date	Discharge (cumec)	Date	Discharge (cumec)	Date	Discharge (cumec)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	**Polavaram**	28.017	16.08.1986	86739	12.077	14.05.1973	65.07	25.07.1986	44302	04.06.1966	46.51	1966 to 5/2006
2	**Koida**	47.260	16.08.1986	71323	13.920	07.06.1988	85.10	15.08.1983	57978	31.05.2003	53.18	1977 to 5/2006
3	**Konta**	50.130	16.08.1986	14350*	30.700	15.05.1967	23.81	04.10.1968	10414	28.03.1973	17.64	1966 to 5/2006
4	**Injaram**	50.140	16.08.1986	15002	36.242	02.06.1966	5.544	14.08.1986	10267	12.06.1997	4.115	1966 to 5/2006
5	**Potteru**	132.030	04.08.2006	2167	121.480	02.06.1997	0.013	28.08.1997	542.8	Many days Dry Bed		1997 to 5/2006
6	**Saradaput**	238.272	09.08.2006	5305	224.647	23.05.1975	6.200	14.08.1986	7052	009.06.1977	5.133	1970 to 5/2006
7	**Sangam**	57.300	26.08.2000	1101	Many days Dry Bed			24.07.2004	410.8	Many days Dry Bed		1996 to 5/2006
8	**Perur**	87.420	15.08.1986	62889	68.490	10.06.1966	15.89	14.08.1986	54144	07.06.2003	5.129	1966 to 5/2006
9	**Pathagudem**	103.610	23.08.1990	32455	86.080	12.06.2003	0.000	21.07.1976	24862	08.06.2003	0.000	1965 to 5/2006
10	**Tumnar**	326.837	04.09.1994	1713	Many days Dry Bed			21.08.2001	1179	Many days Dry Bed		1992 to 5/2006
11	**Chindnar**	339.330	20.08.2001	10531	327.532	26.05.1975	5.630	24.07.1995	12223	04.12.2003	0.000	1971 to 5/2006
12	**Cherribeda**	572.610	15.06.2001	966.3	Many days Dry Bed			13.09.2005	579.8	Many days Dry Bed		1996 to 5/2006
13	**Ambabal**	542.086	05.09.1994	1292	534.490	01.02.2002	0.000	06.08.2001	722.4	Many days Dry Bed		1993 to 5/2006
14	**Sonarpal**	542.566	24.07.1973	1417	534.100	07.04.2002	0.000	30.08.2000	689.3	Many days Dry Bed		1992 to 5/2006
15	**Jagdalpur**	544.686	09.07.1973	2532	532.627	12.07.1965	10.86	22.07.1976	2499	13.06.1995	0.133	1965 to 5/2006
16	**Kosagumda**	556.500	20.08.1994	1462	547.850	24.05.2002	0.000	28.07.2004	498.9	Many days Dry Bed		1998 to 5/2006
17	**Murthahandi**	544.770	05.09.1994	1624	534.11	14.03.2003	1.152	29.07.1992	1554	13.03.2003	1.166	1989 to 5/2006
18	**Nowrangpur**	561.456	04.09.7966	2333	549.840	01.05.1999	0.000	07.07.1973	2610	Many days Dry Bed		1966 to 5/2006
19	**Somanpalli**	127.924	13.08.1986	4935	Many days Dry Bed			21.07.1976	3457	Many days Dry Bed		1967 to 5/2006
20	**Mancherial**	138.616	20.10.1995	38790	124.616	31.05.2005	0.000	25.07.1989	24900	Many days Dry Bed		1966 to 5/2006
21	**Gandlapet**	318.500	30.08.1990	2067	Many days Dry Bed			30.08.1990	1656	Many days Dry Bed		1987 to 5/2006
22	**Betmogra**	356.200	02.10.2001	1295	Many days Dry Bed			02.10.2001	1129	Many days Dry Bed		1997 to 5/2006
23	**Degloor**	364.600	21.08.2003	3027	Many days Dry Bed			24.08.2000	2732	Many days Dry Bed		1988 to 5/2006
24	**Saigaon**	555.973	06.09.1969	4308	Many days Dry Bed			07.10.1983	3395	Many days Dry Bed		1967 to 5/2006
25	**Bhatkheda**	581.960	16.10.1998	1912	Many days Dry Bed			26.08.2000	901	Many days Dry Bed		1991 to 4/2006
26	**Yelli**	351.100	13.08.1983	9393	Many days Dry Bed			13.08.1983	9815	Many days Dry Bed		1978 to 5/2006
27	**Purna**	372.720	27.07.2005	12288	Many days Dry Bed			24.07.1989	6133	Many days Dry Bed		1969 to 5/2006
28	**Zari**	387.385	26.07.2005	3150	Many days Dry Bed			03.09.1992	1474	Many days Dry Bed		1987 to 5/2006
29	**G.R.Bridge**	377.370	25.07.1989	4369	Many days Dry Bed			25.08.2000	4764	Many days Dry Bed		1977 to 5/2006

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Table 6 : Maximum and minimum observed water levels and discharges by site and river basin

V Basin : Godavari

Sl. No.	Site Name	Maximum Water Level			Minimum Water Level			Maximum observed		Minimum observed		Period of record
		Water Level (m)	Date	Discharge (cumec)	Water Level (m)	Date	Discharge (cumec)	Date	Discharge (cumec)	Date	Discharge (cumec)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
30	**Dhalegaon**	399.295	13.09.1969	6582	Many days Dry Bed			25.07.1989	6732	Many days Dry Bed		1965 to 5/2006
31	**Pachegaon**	481.810	12.10.1990	1429	Many days Dry Bed			26.08.1997	1363	Many days Dry Bed		1983 to 5/2006
32	**Ghargaon**	608.520	03.08.2004	1363	Many days Dry Bed			28.07.2003	1592	Many days Dry Bed		1992 to 5/2006
33	**Tekra**	114.670	15.08.1986	47000	95.81	01.05.2004	17.62	11.08.1981	33732	16.06.1972	1.364	1964 to 5/2006
34	**Ghugus**	183.651	14.07.1994	11100	166.411	06.06.2003	0.00	07.11.1973	6000	01.06.2003	0.000	1964 to 5/2006
35	**Sirpur**	160.08	15.08.1986	21360	145.49	30.05.2005	0.00	14.07.1994	15027	30.05.2005	0.000	1968 to 5/2006
36	**P.G.Bridge**	214.18	28.07.2005	9551	197.168	07.06.2005	0.00	20.10.1995	6591	02.06.1973	0.000	1965 to 5/2006
37	**Bamini**	176.45	14.08.1986	21720	157.51	03.05.1972	0.50	06.09.1994	17390	31.05.1972	0.000	1966 to 5/2006
38	**Marlegaon**	399.109	10.08.1983	4610	Many days Dry Bed			05.09.1969	3022	Many days Dry Bed		1965 to 5/2005
39	**Pauni**	237.115	07.09.1994	27500	219.40	28.04.2005	2.296	11.08.1979	18500	03.06.2002	0.115	1965 to 5/2005
40	**Ashti**	155.350	09.08.1994	28800	137.976	31.05.1988	0.800	20.07.2000	24276	30.05.2005	0.070	1965 to 5/2006
41	**Mirdapalli**	243.620	22.08.1990	13700	229.560	01.06.1985	10.000	01.08.1969	11947	01.06.1991	2.508	1973 to 5/1997 6/2001 to 5/2006
42	**Medapalli**	216.670	22.08.1990	9800	204.150	17.06.2003	0.000	09.08.1983	2534	15.04.2004	0.000	1967 to 5/1997 6/2001 to 5/2005
43	**Bhisnur**	302.980	06.09.1994	4452	288.060	20.06.1995	0.000	15.09.1998	2163	23.03.1990	0.000	1988 to 5/2005
44	**Hivra**	248.410	12.07.1994	8724	Many days Dry Bed			06.09.1994	7699	Many days Dry Bed		1987 to 5/2006
45	**Nandagaon**	213.630	12.07.1994	2488	Many days Dry Bed			15.09.1998	2583	Many days Dry Bed		1986 to 5/2006
46	**Ramakona**	349.900	30.07.1991	3040	Many days Dry Bed			16.08.1991	1437	Many days Dry Bed		1987 to 5/2006
47	**Satrapur**	277.610	06.09.1994	14173	263.620	10.04.2001	0.160	27.07.2003	14173	11.05.2002	0.090	1986 to 5/2006
48	**Keolari**	440.800	21.07.1994	4850	Many days Dry Bed			06.09.1994	4726	Many days Dry Bed		1987 to 5/2006
49	**Kumhari**	305.500	21.07.1994	9650	290.230	01.06.2003	0.006	15.09.1999	7046	Many days Dry Bed		1987 to 5/2006
50	**Rajegaon**	285.015	15.09.2005	8146	Many days Dry Bed			17.09.1999	6415	Many days Dry Bed		1986 to 5/2006
51	**Salebardi**	233.550	15.09.2005	3041	Many days Dry Bed			18.07.1994	2044	Many days Dry Bed		1986 to 5/2006
52	**Rajoli**	191.860	14.08.1986	2110	Many days Dry Bed			03.08.1999	2227	Many days Dry Bed		1986 to 5/2006
53	**Bhatpalli**	171.720	29.08.1990	5004	158.330	27.06.1996	1.422	20.10.1995	7862	Many days Dry Bed		1987 to 5/2006
54	**Kanergaon**	476.005	02.09.2002	2807	Many days Dry Bed			26.08.2002	1270	Many days Dry Bed		1992 to 5/2006
55	**Mangrul**	290.385	26.08.2002	1955	Many days Dry Bed			02.09.1995	698.4	Many days Dry Bed		1993 to 5/2006
56	**Wairagarh**	215.325	18.07.2000	2750	Many days Dry Bed			18.07.2000	1736	Many days Dry Bed		1993 to 5/2006

Source : SE, Godavari Circle, Central Water Commission, Hyderabad-

: * : Backwater effect

Table 6 : Maximum and minimum observed water levels and discharges by site and river basin

VI Basin : Krishna

SL. No.	Site Name	Maximum Water Level			Minimum Water Level			Maximum Observed Discharge		Minimum Observed Discharge		Period of
		Water Level (m)	Date	Discharge (Cumecs)	Water Level (m)	Date	Discharge (Cumecs)	Date	Discharge (Cumecs)	Date	Discharge (Cumecs)	From
1	2	3	4	5	6	7	8	9	10	11	12	13
1	**Arjunwad (Seasonal)**	543.685	05-08-2005	5271.52	522.450	16-01-1969	0.000	6500	540.795	20-08-1990	0.000	1/1969 to 11/2006
2	**Bastawade**	546.860	28-06-1983	1489.045	535.150	18-02-1987	0.000	505.0	544.560	30-07-1982	0.000	6/1979 to 5/2007
3	**Bawapuram**	280.495	19-11-1992	14106.79	270.255	16-03-2004	0.000	13879	280.445	19-11-1992	0.000	6/1965 to 5/2007
4	**Boriomerga**	434.950	15-09-1983	887.4753	427.640	19-01-2001	0.000	1093	434.100	06-09-1998	0.000	7/1979 to 5/2006
5	**Chincholi**	532.800	17-07-1989	2190.664	526.010	03-04-1989	0.000	518.8	530.500	15-09-1983	0.000	8/1979 to 4/2006
6	**Cholachguda (Seasonal)**	535.600	18-11-1992	2578.227	522.890	25-08-2004	0.000	1472	531.637	29-06-1991	0.000	6/1982 to 11/2006
7	**Daddi**	681.003	28-06-1983	3165.741	674.153	02-12-1999	1.674	2185	679.603	24-07-1989	0.000	12/1978 to 5/2007
8	**Dameracherla**	62.040	24-07-1989	3335.449	54.500	02-09-2002	0.000		61.065	06-10-1983	0.000	6/1968 to 5/2007
9	**Dhond**	508.395	02-08-1976	8066.801	496.000	24-07-2000	99.60	8210	508.100	15-07-1994	0.000	12/1967 to 5/2007
10	**Gokak Falls (Seasonal)**	546.880	23-09-2005	2266.452	538.120	03-04-2004	0.000	3147	545.364	10-08-1979	0.000	7/1971 to 11/2006
11	**Gotur**	626.470	28-06-1983	1230.165	615.870	31-01-2003	0.000	1270	625.390	25-07-1989	0.000	6/1980 to 5/2007
12	**Halia**	134.405	23-09-1991	5821.407	127.900	07-07-2006	0.000	2647	133.507	22-09-1991	0.000	6/1984 to 5/2007
13	**Huvinhedigi**	356.350	08-08-2005	10458.68	341.958	11-05-1979	0.800	9510.4	353.860	02-07-1983	0.100	2/1976 to 5/2007
14	**Jewangi**	426.960	15-08-1990	1653.56	421.100	03-02-2001	0.120	1500.21	426.615	01-08-1984	0.000	11/1978 to 5/2006
15	**K Agraharam**	282.300	09-08-2005	19885.89	270.660	30-05-1993	3.423	19808.44	282.280	09-08-2005	0.000	6/1981 to 5/2007
16	**Karad**	567.162	07-06-1976	8736.187	549.775	20-03-2005	0.000	6312	564.815	03-08-2005	0.000	6/1965 to 5/2007
17	**Keesara**	35.810	24-07-1989	14128.18	27.595	06-06-1979	0.000	5179.7	33.000	15-08-1978	0.000	6/1965 to 5/2007
18	**Kokangaon**	458.350	27-09-1979	1164.271	453.100	05-08-2001	0.000	634	456.420	22-09-1981	0.000	7/1979 to 10/2006
19	**Koyna**	582.750	29-07-2006	4024.48	569.830	15-06-1979	0.000	3174	581.500	02-08-2005	0.000	10/1972 to 5/2007
20	**Kurundwad**	539.760	05-08-2005	9797.981	519.705	08-02-1973	0.000	7786	537.715	29-07-2005	0.000	5/1972 to 5/2007
21	**Lakshmipuram**	290.360	02-10-1996	2797.688	285.650	14-10-2004	0.000	1084	289.185	02-10-1996	0.000	9/1984 to 5/2006
22	**Madhira**	52.010	20-09-2005	3048.408	44.440	16-03-2005	0.000	1306	49.280	22-09-1991	0.000	6/1984 to 5/2007
23	**Malkhed**	400.910	16-08-1990	5007.121	391.100	08-03-1999	0.000	2215	398.270	15-10-1998	0.000	8/1990 to 5/2007

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Table 6 : Maximum and minimum observed water levels and discharges by site and river basin

VI Basin : Krishna

SL. No.	Site Name	Maximum Water Level			Minimum Water Level			Maximum Observed Discharge		Minimum Observed Discharge		Period of Record
		Water Level (m)	Date	Discharge (Cumecs)	Water Level (m)	Date	Discharge (Cumecs)	Date	Discharge (Cumecs)	Date	Discharge (Cumecs)	From
1	2	3	4	5	6	7	8	9	10	11	12	13
24	**Mantralayam**	315.800	19-11-1992	12483.64	305.760	25-06-2003	0.000	12132	315.670	19-11-1992	0.000	6/1972 to 5/2007
25	**Mudhol**	532.350	06-08-2005	1537.921	521.100	13-03-2002	0.000	1094.34	529.795	24-09-2005	0.000	7/2000 to 5/2007
26	**Narasingpur**	462.393	10-08-2006	8873.277	448.013	05-12-2004	0.000	7601.8	460.181	17-08-1983	0.000	12/1966 to 5/2007
27	**Navalgund**	565.310	18-09-2000	391.1234	558.000	06-06-2005	0.000	356	564.340	23-09-2001	0.000	6/1991 to 5/2006
28	**Paleru Bridge**	78.877	23-07-1989	2514.115	70.877	10-04-2003	0.000	2249.5	78.002	06-10-1983	0.000	6/1965 to 5/2007
29	**Pandegaon**	582.245	26-09-1979	816.5215	576.890	22-06-2004	0.000	224.8	580.545	26-09-1988	0.000	10/1979 to 5/2007
30	**Phulgaon (Seasonal)**	93.950	23-08-1997	5998.052	81.005	07-05-1991	0.000	3028.5	91.475	27-07-2005	0.000	6/1992 to 11/2006
31	**Pondugala**	60.934	15-10-1998	32577.08	42.384	29-11-1975	0.000	31018	60.334	15-10-1998	4.600	11/1975 to 5/2007
32	**Purushothamagudem**	154.250	23-07-1989	1751.5	144.165	02-10-1993	0.000	928.6	149.600	24-08-2000	0.000	9/1987 to 5/2006
33	**Sadalga (Seasonal)**	538.950	29-06-1983	2457.294	525.080	26-04-1966	0.000	1759	537.548	11-07-1975	0.000	6/1969 to 11/2006
34	**Samdoli (Seasonal)**	546.324	05-08-2005	2305.221	529.499	16-04-1966	0.000	2412	543.424	27-07-1989	0.000	12/1966 to 11/2006
35	**Sarati**	476.788	02-08-1976	3232.886	466.628	05-03-2006	0.000	2757.1	476.089	02-08-1976	0.000	6/1965 to 5/2007
36	**Shirdhon**	442.200	26-09-1979	1858.937	437.680	20-07-2005	0.000	162.6	439.99	12-10-1998	0.000	7/1979 to 5/2007
37	**T Ramapuram (Seasonal)**	354.328	14-10-1971	2587.877	349.368	27-03-2001	5.100	1923	353.858	14-10-1971	5.100	12/1965 to 11/2006
38	**Takli**	423.718	12-08-2006	7661.959	409.628	22-06-2005	0.000	8333	422.753	31-07-1967	0.000	6/1965 to 5/2007
39	**Talikot (Seasonal)**	56.010	08-10-2001	593.8414	48.005	23-03-1994	0.000	534.2	55.84	08-10-2001	0.000	9/1995 to 11/2006
40	**Terwad (Seasonal)**	540.390	05-08-2005	3940.818	520.180	02-06-1985	0.000	3590	538.395	10-08-1997	0.000	8/1979 to 11/2006
41	**Vandur**	542.020	24-07-1989	689.0822	531.980	17-02-1980	0.000	562.1	540.56	09-08-1986	0.000	6/1979 to 5/2007
42	**Vijayawada**	19.052	16-10-1998	24618.69	8.512	23-07-1997	13.520	25082	18.947	16-10-1998	0.000	6/1965 to 5/2007
43	**Wadakbal**	430.563	29-09-1989	3270.743	418.888	21-04-1966	0.000	3070	427.753	19-09-1970	0.000	6/1965 to 5/2007
44	**Wadenapally**	41.144	16-10-1998	23824.25	23.999	07-06-1987	4.500	23689	41.144	16-10-1998	0.000	12/1965 to 5/2007
45	**Warunji**	568.047	06-06-1976	4900.641	550.757	22-04-1971	0.000	4641	565.732	02-08-2005	0.000	1/1966 to 5/2007
46	**Yadgir**	361.913	07-09-1969	10609.86	348.903	31-05-1973	0.000	10254.51	361.873	07-09-1969	0.000	6/1965 to 5/2007

Source : Water Year Book of Krishna Basin for 2006-07

Table 6 : Maximum and minimum observed water levels and discharges by site and river basin

VII Basin : Cauvery

Sl. No.	Site Name	Maximum Water Level			Minimum Water Level			Maximum observed		Minimum observed		Period of record
		Water Level (m)	Date	Discharge (cumec)	Water Level (m)	Date	Discharge (cumec)	Date	Discharge (cumec)	Date	Discharge (cumec)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	**Annavasal**	102.450	18.10.2001	2918	Dry	13.07.1987	0.000	18.10.2001	2758	08.06.2005	0.000	1988 to 2006
2	**Kumarapalayam**	230.340	04.11.1975	1867	Dry	01.06.1972	0.000	04.11.1975	1867	04.11.1975	0.000	1972 to 2006
3	**Peralam**	9.295	22.11.1999	6.000	Dry	01.06.1999	0.000	21.11.2000	5.359	01.06.1999	0.000	1999 to 2006
4	**Menangudi**	7.380	09.12.1998	12.20	Dry	01.06.1997	0.000	22.08.1996	18.03	01.06.1997	0.000	1997 to 2006*
5	**Porakudi**	6.000	31.10.2004	65.49	Dry	01.06.1999	0.000	23.11.2000	75.63	01.06.1999	0.000	1999 to 2006
6	**Thengudi**	9.200	08.11.1997	74.00	Dry	01.06.1998	0.000	09.11.2005	82.60	01.06.1999	0.000	1998 to 2006
7	**Gopurajapuram**	3.340	08.11.2005	58.21	Dry	01.06.1999	0.000	08.11.2005	51.80	01.06.1999	0.000	1999 to 2006
8	**Nallathur**	-	-	-	-	-	-	-	-	-	-	-

Source : SE (Coord.), Cauvery & Southern Rivrs Organisation, CWC, Bangalore

Remarks : Water Year Book Published upto 2006.

Note : 1. Data of Site-Menangudi for the Years 1999-2000 to 2003-04 not published.

: 2. Site washed out in High flood on the night of 24.11.2005, data not published.

: 3. Thammavaram, K.Bitragunda, & Gummanur site data is not available.

: 4. Nallathur site "Q" commenced w.e.f. 01.06.2006 only, hence not considered.

: 5. Partial W. Yeat not considered.

: 6. Data of Site Menangudi for the period 1999-2000 to 2003-04 not considered.

: 7. Site washed ou in High flood on the night of 24.11.2005-06 not published.

Table 6 : Maximum and minimum observed water levels and discharges by site and river basin

VIII Basin : East Flowing Rivers from Mahanadi to Kanyakumari

Sl. No.	Site Name	Maximum Water Level			Minimum Water Level			Maximum observed		Minimum observed		Period of record
		Water Level (m)	Date	Discharge (cumec)	Water Level (m)	Date	Discharge (cumec)	Date	Discharge (cumec)	Date	Discharge (cumec)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	**Thammavaram**	-	-	-	-	-	-	-	-	-	-	-
2	**K.Bitragunda**	-	-	-	-	-	-	-	-	-	-	-
3	**Nellore**	25.950	14.11.1984	2525	Dry	01.06.1979	0.000	15.11.1991	1876	01.06.1979	0.000	1978 to 2006
4	**Nandipalli**	+ 6.47	04.12.2005	1009	Dry	01.06.1989	0.000	16.10.2001	888.9	01.06.1989	0.000	1989 to 2006
5	**Chennur**	29.500	14.11.1985	3210	Dry	01.06.1981	0.000	14.11.1985	2690	01.06.1981	0.000	1979 to 2006
6	**Kamalapuram**	62.400	15.12.1996	1533	Dry	01.06.1972	0.000	14.11.1977	680.0	01.06.1972	0.000	1972 to 2006
7	**Alladupalli**	161.180	18.11.1991	1500	Dry	01.06.1980	0.000	18.11.1991	1229	01.06.1980	0.000	1980 to 2006
8	**Tadapatri**	12.50	14.12.2005	102.6	Dry	01.06.2005	0.000	09.11.2004	242.2	26.11.2004	0.000	2005 to 2006
9	**Nagalamadike**	45.970	17.12.1996	3210	Dry	01.06.1973	0.000	11.12.1996	2305	01.06.1972	0.000	1973 to 2006
10	**Singavaram**	139.650	15.11.1991	1935	Dry	09.07.1983	0.000	29.10.1981	1935	20.09.1980	0.000	1979 to 2006
11	**Naidupeta**	49.100	11.12.1998	2027	Dry	01.06.1990	0.000	05.12.1993	2087	01.06.1990	0.000	1990 to 2005**
12	**Sullurpet**	51.920	17.10.2001	13847	Dry	11.03.1997	0.000	18.10.2001	8673	11.03.1997	0.000	1989 to 2006
13	**Chengalpattu**	104.300	19.10.1996	3970	Dry	01.06.1993	0.000	29.10.2005	812.0	10.07.1982	0.000	1991 to 2006
14	**Magaral**	123.545	16.07.1989	7903	Dry	20.06.1993	0.000	24.08.2000	6718	03.08.1990	0.000	1990 to 2006
15	**Arcot**	139.250	20.10.1996	1540	Dry	01.06.1991	0.000	17.11.1991	1066	01.06.1991	0.000	1991 to 2006
16	**Villupuram**	550.500	12.09.1988	1357	Dry	01.09.1979	0.000	12.09.1988	966.6	01.09.1979	0.000	1979 to 2006
17	**Vazhavachanur**	261.085	07.07.1989	1377	Dry	01.06.1980	0.000	12.09.1988	878.0	01.06.1980	0.000	1980 to 2006
18	**Gummanur**	-	-	-	-	-	-	-	-	-	-	-
19	**Kudalaiyathur**	6.070	24.11.1999	11.45	Dry	01.06.1999	0.000	24.11.1999	11.28	01.06.1999	0.000	1999 to 2006

Source : SE (Coord.), Cauvery & Southern Rivrs Organisation, CWC, Bangalore

Remarks : Water Year Book Published upto 2006.

Note : 1. Data of Site-Menangudi for the Years 1999-2000 to 2003-04 not published.

: 2. Site washed out in High flood on the night of 24.11.2005, data not published.

Table 6 : Maximum and minimum observed water levels and discharges by site and river basin

IX Basin : West Flowing Rivers from Kanyakumari to Tapi

Sl. No.	Site Name	Maximum Water Level			Minimum Water Level			Maximum observed		Minimum observed		Period of record
		Water Level (m)	Date	Discharge (cumec)	Water Level (m)	Date	Discharge (cumec)	Date	Discharge (cumec)	Date	Discharge (cumec)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	**Ashramam**	5.110	09.11.2002	133.2	1.005	09.05.2000	0.000	09.11.2002	120.4	01.06.2000	0.000	2000-01 to 2005-06
2	**Perumannu**	14.120	27.07.1991	2819	5.825	19.04.1989	0.000	18.07.1999	2380	01.06.1986	0.000	1985-86 to 2005-06
3	**Kuniyil**	10.630	14.07.1994	3177	0.030	16.03.1997	0.000	14.07.1994	3086	29.02.1996	0.000	1979-80 to 2005-06
4	**Pattazhy**	13.805	15.11.1992	2367	1.050	25.01.2005	1.681	15.11.1992	2367	27.04.1990	0.000	1978-79 to 2005-06
5	**Karathodu**	13.430	15.07.1994	806.7	Dry	01.03.1992	0.000	16.07.1994	784.4	01.06.1987	0.000	1987-88 to 2005-06
6	**Ramamangalam**	8.305	28.06.1985	1533	0.560	10.03.2004	0.000	09.07.2001	1450	06.04.1987	12.50	1978-79 to 2005-06
7	**Kalampur**	14.960	09.07.2001	829.7	6.960	03.04.2005	0.000	09.07.2001	805.5	19.02.1989	0.000	1987-88 to 2005-06
8	**Erinjipuzha**	19.080	12.07.1995	1445	5.225	14.05.1987	0.000	18.07.1999	1388	01.06.1986	0.000	1986-87 to 2005-06
9	**Kumbidi**	9.650	27.06.1985	3898	Dry	17.03.1984	0.000	29.07.1992	2519	02.03.1980	0.000	1979-80 to 2005-06
10	**Mankara**	51.550	14.11.1992	1220	46.340	28.03.2004	0.000	14.11.1992	1220	08.06.1986	0.000	1986-87 to 2005-06
11	**Pudur**	65.550	14.11.1992	610	Dry	01.06.1996	0.000	14.12.1998	316.9	10.06.1986	0.000	1986-87 to 2005-06
12	**Pulamanthole**	19.070	14.07.1994	1429	10.400	02.04.1988	0.000	28.07.1992	1410	06.04.1987	0.000	1986-87 to 2005-06
13	**Neeleswaram**	11.105	27.07.1974	4430	0.170	21.02.2004	0.000	16.08.1975	3502	13.05.1983	1.500	1971-72 to 2005-06
14	**Arangaly**	7.620	27.06.1985	1149	0.000	16.05.2000	0.000	03.08.1994	915.3	20.12.1994	0.000	1978-79 to 2005-06
15	**Vandiperiyar**	793.800	03.08.2005	231.5	790.865	21.03.2004	0.000	09.07.2001	206.1	16.12.2000	0.000	2000-01 to 2005-06
16	**Kidangoor**	8.015	03.08.1984	842.0	-0.180	25.03.2004	0.000	03.08.1994	819.9	02.02.1987	0.000	1986-87 to 2005-06
17	**Kuttyadi**	7.480	23.06.2001	557.2	0.550	24.05.2005	0.000	27.08.2000	476.5	12.03.2004	0.000	2000-01 to 2005-06
18	**Kuzhithurai**	3.120	25.09.2001	53.40	0.575	24.03.2004	0.000	31.10.2002	46.14	21.06.2001	0.000	2001-02 to 2005-06
19	**Ayilam**	10.685	10.10.1992	974.8	-0.360	27.03.2004	0.000	10.10.1992	974.8	02.03.1982	0.000	1979-80 to 2005-06
20	**Malakkara**	8.200	09.07.2001	1294	-0.410	07.04.1992	0.000	03.08.1994	1988	11.02.1996	0.000	1986-87 to 2005-06
21	**Thumpamon**	13.735	07.11.1978	829.0	5.090	15.02.2002	0.000	10.07.2001	677.5	07.03.1983	0.000	1978-79 to 2005-06
22	**Kallooppara**	9.310	09.07.2001	922.0	0.170	24.03.2004	0.000	26.08.2000	888.5	01.06.1986	0.000	1986-87 to 2005-06
23	**Muthankera (Cauvery)**	712.870	22.06.1992	1636	706.870	28.03.2004	0.000	10.07.1973	1199	25.02.2004	0.000	1972-73 to 2005-06

Source : Cauvery & Southern Rivrs Organisation, CWC, Bangalore.

Remarks : Water Year Book Published upto 2006.

Note : 1. Data of Site-Menangudi for the Years 1999-2000 to 2003-04 not published.

: 2. Site washed out in High flood on the night of 24.11.2005, data not published.

: 3. Thammavaram, K.Bitragunda, & Gummanur site data is not available.

: 4. Nallathur site "Q" commenced w.e.f. 01.06.2006 only, hence not considered.

: 5. Partial W. Yeat not considered.

: 6. Data of Site Menangudi for the period 1999-2000 to 2003-04 not considered.

: 7. Site washed ou in High flood on the night of 24.11.2005-06 not published.

Table 6 : Maximum and minimum observed water levels and discharges by site and river basin

X Basin : Tapi Unit: M. C. M.

Sl. No.	Site Name	Maximum Water Level			Minimum Water Level			Maximum observed		Minimum observed		Period of record
		Water Level (m)	Date	Discharge (cumec)	Water Level (m)	Date	Discharge (cumec)	Date	Discharge (cumec)	Date	Discharge (cumec)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	**Dedtalai**	293.000	15.09.1998	15000	0.000	01.06.1984	0.000	06.09.1994	17628	01.06.1978	0.000	1977-2004
2	**Burhanpur**	239.500	29.08.1978	26683	0.000	30.04.1987	0.000	29.08.1978	26683	30.04.1987	0.000	1972-2004
3	**Lakhpuri**	271.015	10.08.1979	3140	0.000	05.05.1978	0.000	05.08.1979	2400	05.05.1979	0.000	1977-2004
4	**Gopalkheda**	252.100	10.08.1979	1872	0.000	20.02.1985	0.000	07.09.1994	3289	17.05.1980	0.000	1977-2004
5	**Yerli**	230.670	11.08.1979	10570	0.000	20.05.1985	0.000	10.08.1979	6828	20.05.1985	0.000	1973-2004
6	**Dapuri**	196.700	28.08.1975	7100	0.000	14.05.1987	0.000	07.09.1994	3826	14.05.1987	0.000	1972-2004
7	**Savkheda**	159.650	07.09.1994	18250	0.000	08.05.1993	0.000	30.08.1978	24856	08.05.1993	0.000	1972-2004
8	**Malkheda**	175.610	10.10.1992	1305	0.000	01.11.1977	0.000	11.08.1998	479.5	01.11.1977	0.000	1977-2004
9	**Morane**	268.500	22.09.1988	1250	0.000	03.06.1978	0.000	15.09.1998	644.7	03.06.1978	0.000	1978-2004
10	**Gidhade**	138.820	07.09.1994	18434	0.000	07.06.1990	0.000	16.09.1998	1578	07.06.1990	0.000	1989-2004
11	**Sarangkheda**	123.640	08.09.1994	18569	0.000	01.05.1987	0.000	16.09.1998	21292	01.05.1987	0.000	1977-2004
12	**Ghala**	19.835	17.09.1998	10200	3.900	08.05.1983	0.000	09.09.1994	16887	25.04.1980	0.000	1978-2004

Source : Hydrological Observation Circle, Water Year Books of Tapi Basin, Central Water Commission

Remarks : Water Year Book Published upto 2004-05.

Table 6 : Maximum and minimum observed water levels and discharges by site and river basin

XI Basin : Narmada Unit: M. C. M.

Sl. No.	Site Name	Maximum Water Level			Minimum Water Level			Maximum observed		Minimum observed		Period of record
		Water Level (m)	Date	Discharge (cumec)	Water Level (m)	Date	Discharge (cumec)	Date	Discharge (cumec)	Date	Discharge (cumec)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	**Orsang at Chandawada**	33.500	07.09.94	9070	18.540	07.11.99	0.000	4076	14.08.04	0.004	08.02.97	80-81 to 2004-05
2	**Narmad at Garudeswar**	39.780	07.09.94	60642	13.030	13.05.99	55.00	60642	07.09.94	1.842	16.03.01	73-74 to 2004-05
3	**Hathni at Jobat**	233.950	05.08.04	2175	226.340	12.12.01	0.00	1822	05.08.04	0.148	23.08.01	01-02 to 2004-05
4	**Goi at Pati**	195.85	05.08.01	2250	188.740	29.03.05	0.00	1391	13.07.00	0.019	19.02.05	99-00 to 2004-05
5	**Uri at Dhulsar**	155.100	05.08.04	616	150.230	05.09.00	0.00	545.8	05.08.04	0.069	26.06.01	99-00 to 2004-05
6	**Narmada at Rajghat**	134.510	19.08.84	56610	112.500	03.06.89	13.40	56610	19.08.84	3.938	01.12.03	72-73 to 2004-05
7	**Narmada AT Mandleswar**	157.290	31.08.73	48000	139.035	27.05.80	37.60	44422	07.09.94	3.458	07.11.03	72-73 to 2004-05
8	**Kundi at Kogaon**	163.010	26.06.79	7900	151.120	01.03.00	0.000	5653	03.09.02	0.015	16.02.89	78-79 to 2004-05
9	**Chhota Tawa at Ginnore**	237.650	06.09.94	5950	219.750	15.06.98	0.000	12158	29.08.78	0.100	14.01.99	71-72 to 1998-99
10	**Narmada at Motakka**	169.000	26.07.97	N.A	155.590	15.06.97	43.00	31464	26.07.97	3.554	21.11.03	99-00 to 2004-05
11	**Narmada at Handia**	273.580	19.08.84	26240	258.965	08.06.77	18.50	26210	20.09.99	11.00	01.06.89	77-78 to 2004-05
12	**Ganjal at Chhidgaon**	300.300	15.09.98	6660	287.155	19.05.88	0.410	5805	16.07.93	0.100	20.05.80	77-78 to 2004-05
13	**Narmada at Hoshangabad**	301.330	30.08.73	33593	283.770	29.05.80	14.40	31463	31.08.73	14.30	30.05.80	72-73 to 2004-05
14	**Tawa at Tawakati**	373.050	27.07.03	1335	362.950	26.05.05	0.248	466.8	26.07.03	0.246	02.06.03	01-02 to 2004-05
15	**Machna at Shapur**	385.080	22.08.04	1110	377.860	20.06.00	0.640	215.9	25.07.03	0.006	25.02.05	01-02 to 2004-05
16	**Narmada at Sandia**	316.890	19.09.99	24500	298.900	18.05.96	36.48	16683	29.07.94	9.290	09.05.89	78-79 to 2004-05
17	**Shakkar at Gadarwara**	332.470	18.09.99	5850	322.351	22.05.97	0.000	3835	15.09.99	0.043	21.04.96	77-78 to 2004-05
18	**Narmada at Barmanghat**	331.320	30.08.73	19000	307.360	01.06.80	4.500	20658	30.08.73	2.900	31.05.84	72-73 to 2004-05
19	**Sher at Belkheri**	359.950	21.07.94	7600	340.850	01.12.03	0.000	4961	16.09.84	0.100	09.06.77	77-78 to 2004-05
20	**Hiran at Patan**	356.080	13.09.92	1880	341.590	17.06.97	0.000	1339	15.07.94	0.176	15.05.97	79-80 to 2004-05
21	**Bamni at Banjar**	448.500	18.09.99	N.A	440.590	31.05.00	0.000	658.2	15.09.03	0.046	08.04.00	99-00 to 2004-05
22	**Narmada at Jamtara**	382.000	24.08.91	17250	361.790	05.06.80	0.000	21355	30.08.72	0.090	12.05.88	72-73 to 2000-01
23	**Banjar at Hridyanagar**	445.930	17.07.94	4790	436.250	10.05.01	0.000	6265	18.09.99	0.025	01.04.93	77.78 to 2001-02
24	**Burhner at Mohgaon**	467.300	08.08.04	11600	448.490	20.06.79	0.000	7182	23.08.91	0.007	09.06.82	78-79 to 2004-05
25	**Narmada at Amgaon**	445.520	08.08.04	8900	431.110	01.06.01	0.000	7450	08.08.04	0.470	28.02.04	01-02 to 2004-05
26	**Narmada at Manot**	459.650	18.08.84	5660	442.360	31.05.80	0.000	7528	23.08.91	0.051	14.06.93	77-78 to 2004-05
27	**Narmada at Dindori**	669.640	23.08.91	4710	662.520	20.05.03	0.500	4577	23.08.91	0.497	10.06.03	88-89 to 2004-05

Source : Narmada Basin Organisation, Central Water Commission, Bhopal.

Table 6 : Maximum and minimum observed water levels and discharges by site and river basin

XII Basin : Mahi and Sabarmati

S.No.	Site Name	Maximum Water Level			Minimum Water Level			Maximum Observed Discharge		Minimum Observed Discharge		Period of Record
		Water Level (m)	Date	Discharge (Cumecs)	Water Level (m)	Date	Discharge (Cumecs)	Date	Discharge (Cumecs)	Date	Discharge (Cumecs)	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	**Pingalwada**	19.250	09.09.1994	1085	4.980	29.03.2001	0.231	26.08.1990	990	05.08.1980	0.185	1989-2004
2	**Motinaroli**	18.150	16.06.1994	1324	7.095	14.04.2003	0.278	20.07.1994	744	05.06.1991	0.000	1991-2004
3	**Mahuwa**	24.800	16.06.1994	5124	9.100	09.05.2001	0.000	31.07.1976	4380	05.05.2001	0.000	1971-2004
4	**Gadat**	13.985	16.06.1994	4018	0.000	06.06.1983	0.000	28.07.2003	3680	16.06.1981	0.000	1978-2004
5	**Ozerkheda**	110.030	03.08.2004	9500	96.160	04.06.2001	0.000	13.07.2003	1979	02.05.1985	0.000	1991-2004
6	**Nanipalsan**	96.100	04.08.2004	5420	81.070	08.06.2001	0.000	13.07.2004	1522	01.06.1991	0.000	1991-2004
7	**Durvesh**	16.130	17.09.1998	9100	0.700	01.01.1981	0.000	31.07.1976	7744	26.01.1971	0.000	1971-2004
8	**Mataji (Mahi)**	309.035	28.07.1996	16100*	295.540	20.10.2002	0.000	28.07.1996	10257	10.03.1983	0.000	1983-2005
9	**Dhariawad**	207.400	24.08.2004	682.4	River Dry	01.11.1988	0.000	24.08.2004	682.4	17.10.1988	0.000	1988-2004
10	**Rangeli**	157.900	31.07.1991	5130	River Dry	01.11.1988	0.000	02.08.1994	4391	07.01.1979	0.000	1979-2006
11	**Paderdidai**	147.040	19.08.1984	14200*	132.07	01.06.1981	0.000	20.08.1984	9343	21.05.1979	0.000	1979-2006
12	**Chackeliya**	192.500	17.07.1993	6090*	180.450	13.03.1994	0.000	14.08.2004	14006	01.04.1992	0.000	1992-2006
13	**Khanpur**	28.270	24.08.1990	25680	8.435	09.04.1981	0.000	07.09.1994	21058	07.05.1984	0.000	1984-2006
14	**Vautha(Sanbarmati)**	19.110	25.05.2003	2220*	12.970	14.05.2003	0.000	25.08.2003	2220	30.11.2000	0.000	2000-2006
15	**Kheda**	28.200	25.08.1990	1889*	River Dry	River Dry	0.000	08.09.1994	2066	River Dry	0.000	-
16	**Rantanpur**	48.200	28.07.1997	2614	River Dry	River Dry	0.000	27.07.1997	2614	River Dry	0.000	-
17	**Deori Bridge**	95.830	17.07.1993	3913*	River Dry	River Dry	0.000	18.07.1993	4513	River Dry	0.000	-
18	**Kharoj**	216.700	27.07.1992	1084*	River Dry	River Dry	0.000	20.08.1994	1017	River Dry	0.000	-
19	**Jotsan**	288.700	28.09.2003	145.0*	River Dry	River Dry	0.000	16.07.1996	63.4	River Dry	0.000	-
20	**Gandhav(Luni)**	37.626	07.07.1990	4510*	River Dry	River Dry	0.000	19.07.1992	4300	River Dry	0.000	-
21	**Balotra**	107.665	06.07.1990	2334*	River Dry	River Dry	0.000	09.09.1992	2907	River Dry	0.000	-
22	**Kamalpur(Banas)**	38.980	08.09.1992	8010*	River Dry	River Dry	0.000	09.09.1994	4816	River Dry	0.000	-
23	**Chitrasani**	187.900	28.07.1992	1012*	River Dry	River Dry	0.000	08.09.1992	274.8	River Dry	0.000	-
24	**Sarotry**	190.960	08.09.1992	3880*	River Dry	River Dry	0.000	08.09.1992	2672	River Dry	0.000	-
25	**Aburoad**	265.400	31.08.1973	N.A.	River Dry	River Dry	0.000	20.08.1994	2022	River Dry	0.000	-
26	**Lowara(Shetrinji)**	66.930	11.09.1982	880.0*	River Dry	River Dry	0.000	27.06.2002	946.5	River Dry	0.000	-
27	**Ganod(Bhadar)**	34.100	22.06.1983	2750*	River Dry	River Dry	0.000	11.08.1997	4098	River Dry	0.000	-
28	**Gungan(Machu)**	24.595	11.08.1979	N.A.	River Dry	River Dry	0.000	14.07.1994	3539	River Dry	0.000	-
29	**Sapawada(Rupen)**	43.000	27.07.1997	325.0*	River Dry	River Dry	0.000	03.08.1994	1621	River Dry	0.000	-

Source : Hydrological Observation Circle, Water Year Books of Tapi Basin, Central Water Commission.

Remarks : Water Year Book Published upto 2004-05.

Note : * Estimated NA - Highflood

Table 7 : Annual dependable flow of water by site and river basin

I Basin : Mahanadi *Unit: M. C. M.*

Sl.No.	Site Name	Period/Years	Dependable flow									
			10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	**Basantpur**	1970-71 to 2006-07	6978	30077	24863	22724	19905	18070	16002	10937	9128	0.000
2	**Rampur**	1970-71 to 2006-07	2671	1977	1609	1298	1188	961.3	854.8	577.5	260.9	0.000
3	**Bamnidhi**	1970-71 to 2006-07	7803	7242	5306	4654	4267	3908	3254	2602	2355	0.000
4	**Rajim**	1970-71 to 2006-07	6334	4945	4020	3274	2415	1789	1609	894.8	629.7	0.000
5	**Simga**	1971-72 to 2006-07	8852	7237	5997	5394	4623	3790	2888	2477	1869	0.000
6	**Salebhata**	1971-72 to 2006-07	3553	2957	2535	2065	1541	1289	1200	959.1	528.7	0.000
7	**Kantamal**	1971-72 to 2006-07	21336	15173	13098	10681	9630	7565	6456	5591	3608	0.000
8	**Kotni**	1978-79 to 2006-07	3498	2588	2438	1838	1542	1431	1139	802.3	450.2	0.000
9	**Andhiyarkore**	1977-78 to 2006-07	641.2	470.7	439.7	370.9	295.8	262.1	239.3	209.4	145.3	0.000
10	**Baronda**	1977-78 to 2006-07	2602	2050	1619	1337	1222	918.1	599.3	416.6	165.6	0.000
11	**Jondhra**	1979-80 to 2006-07	13113	12259	9730	8747	7554	6700	6178	4868	2870	0.000
12	**Ghotara**	1979-80 to 2006-07	1612	1274	1127	1068	1004	935.6	647.7	539.4	457.0	0.000
13	**Kurubhata**	1977-78 to 2006-07	3580	2944	2769	2578	2360	2157	1894	1744	1129	0.000
14	**Sundargarh**	1977-78 to 2006-07	4320	4196	3831	3407	3068	2868	2301	2207	1808	0.000
15	**Kesinga**	1978-79 to 2006-07	14399	9928	8017	6548	5327	5006	4375	3220	2354	0.000
16	**Pathardhi**	1988-89 to 2006-07	2001	1378	1212	1090	965.4	829.9	797.6	435.8	323.3	0.000
17	**Manendragarh**	1989-90 to 2006-07	569.1	480.1	434.8	411.8	346.2	292.4	278.9	235.6	214.6	0.000
18	**Seorinaryan**	1985-86 to 2006-07	28771	22181	19971	16257	15058	13599	9722	7251	4955	0.000
19	**Tikarapara**	1971-72 to 2006-07	70424	62631	56962	52743	48162	41906	36815	26213	22420	0.000

Source : Wainganga Division, Central Water Commission

Table 7 : Annual dependable flow of water by site and river basin

II Basin : Subarnarekha, Burhabalang & Baitarni *Unit: M. C. M.*

Sl.No.	Site Name	Period/Years	Dependable flow									
			10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	**Muri**	08/1988 to 05/2007	1150	987.2	920.5	815.2	731.3	512	487.4	388.5	275.9	-
2	**Jamshedpur**	06/1971 to 05/2007	11521	10381	8818	7127	6075	5385	4582	3848	2718	-
3	**Adityapur**	06/1971 to 05/2007	4387	3953	3678	2743	2113	2053	1878	1530	1089	-
4	**Ghatsila**	03/1971 to 05/2007	10872	10872	9586	7931	6847	5450	5001	4424	3842	-
5	**Govindapur**	06/1978 to 05/2007	4424	3793	3517	3192	3143	2926	2254	2044	1329	-
6	**Champua**	02/1980 to 05/2007	1728	1228	1160	1099	1004	939.1	888.1	771.1	466.1	-
7	**Anandpur**	05/1972 to 05/2007	7760	6074	5523	5066	4670	4286	3545	3143	2565	-

Source : Wainganga Division, Central Water Commission

Table 7 : Annual dependable flow of water by site and river basin

III Basin : Brahmani *Unit: M. C. M.*

Sl.No.	Site Name	Period/Years	Dependable flow									
			10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	**Tilga**	04/1978 to 05/2007	2778	2600	2176	1918	1819	1672	1591	1501	1175	-
2	**Gomlai**	08/1977 to 05/2007	15450	13291	11660	10752	10170	9088	8169	7407	5056	-
3	**Panposh**	07/1972 to 05/2007	14125	13421	12504	11460	9879	9176	7722	7289	6776	-
4	**Jaraikela**	07/1971 to 05/2007	7197	6132	5399	4836	4347	4197	3630	3274	2461	-
5	**Jenapur**	07/1977 to 05/2007	23377	21464	19281	16738	16463	15245	14809	11568	10768	-

Source : Wainganga Division, Central Water Commission.

Table 7 : Annual dependable flow of water by site and river basin

IV Basin : Rushikulya, Vamsadhara, Sarada & Nagavali *Unit: M. C. M.*

Sl.No.	Site Name	Period/Years	Dependable flow									
			10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	**Purushottampur**	07/1978 to 05/2007	3350	2925	2705	2552	2085	1587	1389	1096	970.1	-
2	**Gunupur**	05/1978 to 05/2007	3423	2997	2444	2187	1677	1215	1131	964.0	614.6	-
3	**Kashi Nagar**	05/1971 to 05/2007	4164	3454	2955	2489	2259	2096	1754	1383	1112	-
4	**Srikakulam**	02/1988 to 05/2007	3917	3208	3087	2519	2365	1936	1569	1295	1089	-
5	**Ankapali**	12/1987 to 05/2007	1176	973	631.4	449.9	312.5	271.9	230.8	167.6	95.64	-

Source : Wainganga Division, Central Water Commission.

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Table 7 : Annual dependable flow of water by site and river basin

V Basin : Godavari *Unit: M. C. M.*

Sl.No.	Site Name	Period/Years	Dependable flow									
			10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	**Polavaram**	1966 to 5/2006	135014	106631	100696	93973	85950	74892	61102	56510	48780	35224
2	**Koida**	1977 to 5/2006	152962	105810	99377	94094	87804	80217	63551	58984	52573	36383
3	**Konta**	1966 to 5/2006	19135	17840	15366	14850	14322	13560	12620	10909	9936	6265
4	**Injaram**	1966 to 5/2006	14318	13168	11826	11222	10296	9375	8810	7597	6309	4756
5	**Potteru**	1997 to 5/2006	<---------- SUFFICIENT DATA IS NOT AVAILABLE ---------->									
6	**Saradaput**	1970 to 5/2006	6432	5867	5673	5409	4784	4326	4165	3778	3160	2274
7	**Sangam**	1996 to 5/2006	<---------- SUFFICIENT DATA IS NOT AVAILABLE ---------->									
8	**Perur**	1966 to 5/2006	112128	96926	82067	70814	65477	63296	44383	41623	35303	24222
9	**Pathagudem**	1965 to 5/2006	31424	28273	26469	22733	20090	18606	17085	15653	12876	8919
10	**Tumnar**	1992 to 5/2006	1967	1705	1455	1273	1240	1126	869	793	539	506
11	**Chindnar**	1971 to 5/2006	11967	10266	9225	8684	7997	7440	6202	5911	4482	3243
12	**Cherribeda**	1996 to 5/2006	<---------- SUFFICIENT DATA IS NOT AVAILABLE ---------->									
13	**Ambabal**	1993 to 5/2006	1530	1183	995	832	748	569	514	482	396	393
14	**Sonarpal**	1992 to 5/2006	1114	941	803	785	688	637	558	395	362	353
15	**Jagdalpur**	1965 to 5/2006	5444	4792	4598	3966	3778	3349	2984	2425	1937	1167
16	**Kosagumda**	1998 to 5/2006	<---------- SUFFICIENT DATA IS NOT AVAILABLE ---------->									
17	**Murthahandi**	1989 to 5/2006	2776	2049	1865	1777	1528	1391	1332	1124	837	832
18	**Nowrangpur**	1966 to 5/2006	4036	3815	3237	3101	2828	2492	2039	1652	1014	479
19	**Somanpalli**	1967 to 5/2006	3546	1935	1468	1283	937	743	571	456	287	11
20	**Mancherial**	1966 to 5/2006	28716	18976	14922	11150	8203	6456	4501	2964	2006	291
21	**Gandlapet**	1987 to 5/2006	786	419	196	169	72	36	19	6	3	1

Table 7 : Annual dependable flow of water by site and river basin

V Basin : Godavari *Unit: M. C. M.*

Sl.No.	Site Name	Period/Years	Dependable flow									
			10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
22	**Betmogra**	1997 to 5/2006	<---------- SUFFICIENT DATA IS NOT AVAILABLE ---------->									
23	**Degloor**	1988 to 5/2006	784	540	481	430	308	191	109	95	57	22
24	**Saigaon**	1967 to 5/2006	2947	2109	1341	795	704	441	228	166	27	18
25	**Bhatkheda**	1991 to 4/2006	1198	394	248	220	163	40	25	9	6	3
26	**Yelli**	1978 to 5/2006	13581	9402	4970	3665	3109	2619	1886	1367	858	187
27	**Purna**	1969 to 5/2006	4974	3314	2386	1751	1361	905	512	381	267	173
28	**Zari**	1987 to 5/2006	1504	790	619	470	424	338	252	108	48	24
29	**G.R.Bridge**	1977 to 5/2006	4627	3692	2723	1843	1189	973	593	454	178	111
30	**Dhalegaon**	1965 to 5/2006	5638	4511	3953	2839	2238	1119	719	402	223	59
31	**Pachegaon**	1983 to 5/2006	935	598	346	315	131	79	39	21	15	9
32	**Ghargaon**	1992 to 5/2006	1211	866	735	685	666	623	515	429	399	398
33	**Tekra**	1964 to 5/2006	56396	51322	42239	37910	32287	27588	23781	20736	15980	10936
34	**Ghugus**	1964 to 5/2006	9148	8138	5998	4643	3244	2696	2475	2077	1366	717.8
35	**Sirpur**	1968 to 5/2006	22694	18737	16278	14514	12317	10472	6254	4964	3583	1538
36	**P.G.Bridge**	1965 to 5/2006	7091	5742	5415	4349	4015	3090	2374	1749	952.4	266
37	**Bamini**	1966 to 5/2006	22939	16988	14489	12806	10269	8912	6144	5137	3369	1278
38	**Marlegaon**	1965 to 5/2005	2948	2073	1640	1280	1137	852.6	525.6	386.8	356.3	32.76
39	**Pauni**	1965 to 5/2005	17904	15652	14525	12312	10933	9318	8452	7474	4800	1989
40	**Ashti**	1965 to 5/2006	31085	27708	24359	20779	20006	18476	16549	12157	8766	5778
41	**Mirdapalli**	1973 to 5/1997 & 06/2001 to 05/2006	50143	45385	37587	24616	16726	15854	14276	11555	10145	4494
42	**Medapalli**	1967 to 5/1997 & 06/2001 & 05/2005	2337	2011	1854	1751	1356	1166	1064	983.9	614.2	408

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Table 7 : Annual dependable flow of water by site and river basin

V Basin : Godavari *Unit: M. C. M.*

Sl.No.	Site Name	Period/Years	Dependable flow									
			10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
43	**Bhisnur**	1988 to 5/2005	1481	1184	685.3	617	577.5	366.2	326.5	177.9	125.4	85.64
44	**Hivra**	1987 to 5/2006	3041	2684	1661	1318	1100	900.6	848.7	544.7	453.1	318
45	**Nandagaon**	1986 to 5/2006	1243	1067	1045	888.8	638.5	551.3	443.1	366.6	230.3	105.3
46	**Ramakona**	1987 to 5/2006	1563	1339	934.4	821.3	677.4	509.1	466.3	409.7	210.4	181.7
47	**Satrapur**	1986 to 5/2006	3919	2402	2290	1974	1548	1406	1041	880.8	624.8	413.3
48	**Keolari**	1987 to 5/2006	2115	1321	1187	1112	968.3	805.9	447	378.7	274.6	255.4
49	**Kumhari**	1987 to 5/2006	5017	3866	3563	3456	2731	2258	1692	1200	618	44.06
50	**Rajegaon**	1986 to 5/2006	3916	3234	3125	2483	2196	2068	1625	1140	1014	483.9
51	**Salebardi**	1986 to 5/2006	833.7	770	657.9	635.7	603.1	576.7	530.6	360.3	243.4	120.9
52	**Rajoli**	1986 to 5/2006	1441	1089	833.4	606.7	588.4	491.7	425.6	286.9	224.8	182.7
53	**Bhatpalli**	1987 to 5/2006	2608	2307	1754	1382	1066	961.5	767.6	549	307.7	238.6
54	**Kanergaon**	1992 to 5/2006	1218	1194	360.7	331	296.1	247	202.9	167.3	116.4	31.86
55	**Mangrul**	1993 to 5/2006	621.6	541.9	381	373.5	339.5	132.5	113	58.76	52.18	8.30
56	**Wairagarh**	1993 to 5/2006	1524	1396	1082	987.4	804.9	596.1	595.1	565.4	527.8	508.8

Source : Godavari Circle, Central Water Commission, Hyderabad-

Table 7 : Annual dependable flow of water by site and river basin

VI Basin : Krishna Unit: MCM

Sl. No.	Site Name	Period/ Year	Dependable flow									
			10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
1	2	3	4	5	6	7	8	9	10	11	12	13
1	**Arjunwad (Seasonal)**	1/1969 to 11/2006	11529.424	10047.938	8948.664	8114.783	7602.379	6272.768	5236.117	4350.296	2930.602	17639.662
2	**Bastawade**	6/1979 to 5/2007	1786.099	1610.893	1427.444	1308.705	1219.603	1148.661	1034.901	943.008	809.020	1762.178
3	**Bawapuram**	6/1965 to 5/2007	9619.145	6938.955	6140.020	5524.928	4916.304	4511.031	3606.189	2382.596	1407.022	4586.795
4	**Boriomerga**	7/1979 to 5/2006	637.131	386.793	157.350	123.012	64.282	26.670	16.223	11.491	2.504	
5	**Chincholi**	8/1979 to 4/2006	202.473	56.708	29.530	18.821	11.586	3.151	0.000	0.000	0.000	
6	**Cholachguda (Seasonal)**	6/1982 to 11/2006	1386.156	1222.751	1028.653	997.226	885.477	752.180	673.305	520.733	322.310	785.316
7	**Daddi**	12/1978 to 5/2007	2963.101	2557.658	2347.953	2157.563	1972.208	1848.970	1571.314	1434.242	1246.762	3187.330
8	**Dameracherla**	6/1968 to 5/2007	1702.456	1545.236	1132.142	963.997	797.517	743.621	643.904	560.632	499.958	1487.742
9	**Dhond**	12/1967 to 5/2007	7849.856	6711.708	5778.967	5034.076	4421.705	3743.825	2933.708	2181.167	1040.173	7870.287
10	**Gokak Falls (Seasonal)**	7/1971 to 11/2006	3398.894	2979.960	2425.734	2176.423	1974.517	1477.596	1038.747	858.369	548.174	3086.894
11	**Gotur**	6/1980 to 5/2007	1893.658	1569.260	1450.232	1342.044	1158.615	1115.870	1011.331	840.127	749.655	1854.338
12	**Halia**	6/1984 to 5/2007	377.880	168.009	135.762	127.439	109.370	65.113	39.318	24.146	18.297	170.810
13	**Huvinhedigi**	2/1976 to 5/2007	26055.508	23240.494	21814.893	20218.465	17255.703	14228.987	11281.206	9808.170	5629.257	26799.021
14	**Jewangi**	11/1978 to 5/2006	743.096	373.739	269.016	227.705	191.759	138.659	91.045	71.532	30.946	
15	**K Agraharam**	6/1981 to 5/2007	44456.141	38579.066	35829.707	30370.607	24613.617	19495.814	16075.059	13882.588	10962.981	46101.317
16	**Karad**	6/1965 to 5/2007	7130.697	6770.327	5313.999	5035.292	4239.498	3655.828	3334.008	2791.314	2413.986	10888.923
17	**Keesara**	6/1965 to 5/2007	4125.247	2972.447	2495.002	1985.767	1512.956	1153.588	924.400	735.445	406.131	2271.612
18	**Kokangaon**	7/1979 to 10/2006	279.829	153.673	101.705	70.007	44.766	29.843	17.140	5.870	0.033	6.912
19	**Koyna**	10/1972 to 5/2007	3062.035	2007.159	1475.226	1123.723	926.942	838.214	706.492	563.975	421.017	3949.165
20	**Kurundwad**	5/1972 to 5/2007	16736.469	15000.924	13200.113	12565.268	10726.973	9084.491	8301.411	5963.423	5325.250	24651.942
21	**Lakshmipuram**	9/1984 to 5/2006	427.929	197.581	157.124	99.423	63.397	56.551	46.151	18.691	1.851	
22	**Madhira**	6/1984 to 5/2007	1105.605	787.988	679.074	624.698	515.696	405.062	280.873	234.669	117.715	516.944
23	**Malkhed**	8/1990 to 5/2007	1968.798	1101.394	1042.765	590.129	472.180	363.177	232.190	168.949	100.468	95.264
24	**Mantralayam**	6/1972 to 5/2007	11666.942	8574.554	7289.563	6579.322	6151.706	5413.141	3969.544	3286.912	2453.983	5441.096
25	**Mudhol**	7/2000 to 5/2007	Sufficient data not available									
26	**Narasingpur**	12/1966 to 5/2007	10445.013	7925.543	7206.285	6153.970	5436.479	4115.090	2918.786	1985.901	365.654	11564.696
27	**Navalgund**	6/1991 to 5/2006	391.575	332.649	298.117	277.997	257.639	231.368	210.202	171.069	69.071	
28	**Paleru Bridge**	6/1965 to 5/2007	889.432	678.044	498.247	433.712	414.095	372.407	319.552	126.531	62.921	414.213
29	**Pandegaon**	10/1979 to 5/2007	99.694	46.719	35.507	19.120	6.927	3.119	1.908	0.596	0.187	43.791
30	**Phulgaon (Seasonal)**	6/1992 to 11/2006	2752.498	2559.688	1572.708	1328.543	1262.514	1038.524	929.957	711.328	581.876	2720.069

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Table 7 : Annual dependable flow of water by site and river basin

VI Basin : Krishna Unit: MCM

Sl. No.	Site Name	Period/ Year	Dependable flow									
			10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
1	2	3	4	5	6	7	8	9	10	11	12	13
31	**Pondugala**	11/1975 to 5/2007	41523.266	37668.609	34131.273	29368.115	22018.746	17537.822	11379.305	8195.264	5593.778	30839.077
32	**Purushothamagudem**	9/1987 to 5/2006	542.991	297.730	239.902	159.997	63.041	45.620	19.122	13.008	12.194	
33	**Sadalga (Seasonal)**	6/1969 to 11/2006	3904.116	3294.172	3111.927	2867.001	2647.698	2454.975	2219.512	1808.461	1411.865	4932.198
34	**Samdoli (Seasonal)**	12/1966 to 11/2006	4555.335	4066.342	3550.897	3342.896	3153.565	2813.360	2457.960	1732.263	1450.817	5649.791
35	**Sarati**	6/1965 to 5/2007	2281.272	1888.768	1661.418	1512.347	1230.477	1029.478	857.697	463.348	150.427	3068.033
36	**Shirdhon**	7/1979 to 5/2007	107.953	47.179	29.236	17.005	12.834	6.717	3.231	1.485	1.027	18.497
37	**T Ramapuram (Seasonal)**	12/1965 to 11/2006	1271.249	1089.306	993.134	864.091	777.422	685.915	515.102	436.382	333.069	461.311
38	**Takli**	6/1965 to 5/2007	10994.937	9074.489	8196.807	7252.383	5935.279	5114.939	2847.824	2212.181	436.119	11670.583
39	**Talikot (Seasonal)**	9/1995 to 11/2006	595.394	344.954	319.091	170.051	151.047	132.497	126.868	100.773	49.273	172.589
40	**Terwad (Seasonal)**	8/1979 to 11/2006	7268.322	5484.591	4912.056	4208.852	3872.707	3517.605	3149.062	2896.608	2498.253	8037.897
41	**Vandur**	6/1979 to 5/2007	1575.507	1301.380	1150.887	1094.972	1039.474	930.234	882.818	659.255	508.953	1626.128
42	**Vijayawada**	6/1965 to 5/2007	41155.527	35747.684	32713.398	29064.162	26375.629	19311.262	10322.258	5980.165	3489.759	26740.858
43	**Wadakbal**	6/1965 to 5/2007	2340.160	1620.274	1309.667	866.189	616.455	445.800	241.845	187.156	73.763	871.722
44	**Wadenapally**	12/1965 to 5/2007	45588.426	40259.215	36041.789	35161.500	29462.436	21668.889	16283.638	10455.798	5072.290	35887.585
45	**Warunji**	1/1966 to 5/2007	4821.689	3578.167	3287.781	2792.130	2400.335	2299.144	2016.509	1749.525	1543.631	6431.854
46	**Yadgir**	6/1965 to 5/2007	15144.910	14114.684	12996.817	10990.171	9014.579	8100.120	4321.235	3579.445	2618.919	14190.746

Source : Water Year Book of Krishna Basin for 2006-07, Krishna & Coordination Circle, CWC

Table 7 : Annual dependable flow of water by site and river basin

VII Basin : Cauvery Unit : M.C.M

Sl. No.	Site Name	Period/ Years	Dependable flow									
			10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	**Kumarapalayam**	1999-2000 to 2005-06	31.46	31.46	31.46	31.46	31.46	31.46	31.46	31.46	31.46	31.46
2	**Annavasal**	1999-2000 to 2005-06	43.80	38.86	27.88	26.12	26.12	11.84	2.856	1.321	1.321	1.321
3	**Peralam**	1999-2000 to 2005-06	25.77	21.93	21.02	13.6	13.6	10.77	2.904	2.343	2.343	2.343
4	**Menangudi***	2004-2005 to 2005-06	49.99	49.99	49.99	25.31	25.31	25.31	25.31	25.31	25.31	25.31
5	**Porakudi**	1999-2000 to 2005-06	164.5	154.9	138.6	113.7	113.7	91.77	20.55	15.87	15.87	15.87
6	**Thengudi**	1998-1999 to 2005-06	195.6	173.7	164.1	162.3	154.8	118.4	26.63	26.15	26.15	26.15
7	**Gopurajapuram**	1999-2000 to 2005-06	82.16	78.09	66.30	52.65	52.65	42.71	8.872	3.082	3.082	3.082
8	**Nallathur**	-	-	-	-	-	-	-	-	-	-	-

Source : Cauvery & Southern Rivrs Organisation, CWC, Bangalore.

Remarks : Water Year Book Published upto 2003-04.

for calculation of dependebility.

: 2. Nallathur site data is not available.

Table 7 : Annual dependable flow of water by site and river basin

VIII Basin : East Flowing Rivers from Mahanadi to Kanyakumari Unit : M.C.M

Sl. No.	Site Name	Period/ Years	Dependable flow									
			10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	**Thammavaram**	-	-	-	-	-	-	-	-	-	-	-
2	**K.Bitragunda**	-	-	-	-	-	-	-	-	-	-	-
3	**Nellore**	1988-89 to 2005-06	4094	3696	2174	1140	782.1	555.9	77.59	33.78	14.77	14.77
4	**Nandipalli**	1990-91 to 2005-06	242.7	190.6	151.6	64.99	52.01	35.05	28.81	2.138	0.637	0.637
5	**Chennur**	1990-91 to 2005-06	3789	3350	1671	1575	1372	1068	893.2	598.5	264.3	264.3
6	**Kamalapuram**	1990-91 to 2005-06	813.7	200.1	146.9	90.52	47.52	16.68	12.53	7.800	0.000	0.000
7	**Alladupalli**	1986-87 to 2005-06	2905	2109	1372	1245	1215	1138	765.1	709.3	265.4	226.0
8	**Tadapatri**	1972-73 to 2005-06	628.4	433.3	206.4	99.70	89.77	77.76	47.26	41.27	3.949	0.000
9	**Nagalamadike**	1978-79 to 2005-06	154.1	21.43	5.011	3.110	2.246	1.596	0.950	0.000	0.000	0.000
10	**Singavaram**	1980-81 to 2005-06	314.3	163.2	33.44	28.51	17.63	6.826	2.364	0.259	0.000	0.000
11	**Naidupeta**	1979-80 to 2005-06	920.0	531.5	386.2	255.9	205.2	139.6	74.65	43.91	13.12	0.000
12	**Sullurpet**	1989-90 to 2005-06	655.5	400.5	246.6	144.5	129.5	44.40	24.54	12.45	3.345	3.345
13	**Chengalpattu**	1979-80 to 2005-06	1088	689.8	231.3	89.19	72.12	34.62	27.68	12.83	6.180	4.113
14	**Magaral**	1972-73 to 2005-06	419.9	301.2	90.64	53.47	9.299	1.065	0.000	0.000	0.000	0.000
15	**Arcot**	1979-80 to 2005-06	604.9	186.5	70.38	51.83	13.95	0.000	0.000	0.000	0.000	0.000
16	**Villupuram**	1972-73 to 2005-06	1131	803.5	263.0	184.0	91.45	56.53	42.49	1.404	0.000	0.000
17	**Vazhavachanur**	1978-79 to 2005-06	1051	707.1	298.5	222.9	176.6	147.2	101.0	41.16	9.245	3.057
18	**Gummanur**	-	-	-	-	-	-	-	-	-	-	-
19	**Kudalaiyathur**	1990-91 to 2005-06	880.9	691.0	493.5	291.9	266.8	98.87	19.90	5.161	0.000	0.000

Source : Cauvery & Southern Rivrs Organisation, CWC, Bangalore.

Remarks : Water Year Book Published upto 2003-04.

or calculation of dependebility.

: 2. Thammavaram, K.Bitragunda & Gummanur site data is not available.

Table 7 : Annual dependable flow of water by site and river basin

Unit: M. C. M.

IX Basin : West Flowing Rivers from Kanyakumari to Tapi

Sl. No.	Site Name	Period/ Years	Dependable flow									
			10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	**Kumbidi**	1980-2005	6041	5539	4329	4107	3974	3808	3686	3466	2645	2143
2	**Mankara**	1986-2005	1274	907.8	638.9	546.5	448.4	439.5	407.1	354.7	289.3	177.5
3	**Pudur**	1986-2005	426.7	306.1	289.9	213.7	206.3	204.6	181.2	154.6	117.0	88.08
4	**Pulamanthole**	1986-2005	2197	2005	1816	1729	1634	1606	1444	1275	1043	778.0
5	**Ayilam**	1979-2005	933.7	808.2	749.6	651.0	615.3	542.4	532.2	443.9	347.3	268.1
6	**Pattazhy**	1978-2005	2054	1895	1565	1472	1379	1304	1208	1037	902.2	768.4
7	**Malakkara**	1986-2005	5104	4355	4247	3785	3666	3595	3430	3163	2441	1969
8	**Kallooppara**	1986-2005	2147	2059	1284	1934	1803	1549	1414	1316	1248	1161
9	**Thumpamon**	1978-2005	1614	1449	124.6	1195	1091	973.8	918.4	840.2	720.6	638.0
10	**Kuzhithurai**	2000-2005	139.6	124.6	90.60	95.67	95.67	86.95	25.21	25.21	25.00	25.00
11	**Ashramam**	2000-2005	228.2	123.5	1961	90.60	77.72	75.9	75.9	10.04	10.04	10.04
12	**Arangaly**	1978-2005	2663	2353	1761	1835	1682	1619	1423	1393	1169	1115
13	**Kidangoor**	1986-2005	2153	1893	5420	1752	1723	1465	1413	1362	1206	1159
14	**Ramamangalam**	1978-2005	6120	5598	1257	5178	4897	4529	4247	4105	3611	3575
15	**Kalampur**	1987-2005	1496	1340	8143	1238	1148	1049	952.5	930.2	977.3	839.7
16	**Neeleswaram**	1971-2005	9968	8761	180.2	7331	6626	6305	5908	5630	4678	3825
17	**Vandiperiyar**	2000-2005	334.5	185.0	3695	180.2	156.5	121.9	121.9	100.2	100.2	100.2
18	**Perumannu**	1986-2005	4688	4166	4617	3636	3355	3084	3028	2906	2608	1904
19	**Kuniyil**	1981-2005	5775	4853	1404	4054	3940	3628	3399	3268	2127	2104
20	**Karathodu**	1987-2005	1815	1543	2476	1195	1105	1033	1001	859.0	802.5	530.0
21	**Erinjipuzha**	1986-2005	2798	2522	2305	2305	2244	1948	1863	1817	1532	1371
22	**Kuttyadi**	2000-2005	1314	1010	932.8	932.5	872.2	738.5	738.5	738.5	738.5	738.5
23	**Muthankera (Cauvery)**	1972-2005	3352	3116	2605	2536	2301	2215	2075	1922	1468	1051

Source : Cauvery & Southern Rivrs Organisation, CWC, Bangalore.

Table 7 : Annual dependable flow of water by site and river basin

X Basin : Tapi Unit : M.C.M

Sl. No.	Site Name	Period/ Years	Dependable flow									
			10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	**Dedtalai**	1997-2004	5391	4347	3712	2835	2310	2248	1961	1656	1047	-
2	**Burhanpur**	1972-2004	8299	6624	5641	4848	3941	3790	3156	2526	1609	-
3	**Lakhpuri**	1977-2004	952.4	619.6	526	462.4	366	304.5	279.8	193.5	162.6	-
4	**Gopalkheda**	1977-2004	1840	1688	1219	1043	753.3	600	421.1	360.3	308.5	-
5	**Yerli**	1973-2004	4553	3351	2667	2350	1876	1349	1096	1001	728.7	-
6	**Dapuri**	1972-2004	920	716.6	612.9	471.5	431.2	280.6	233.4	150.9	96.29	-
7	**Savkheda**	1972-2004	14200	11448	9544	7732	7316	6361	4879	4097	2811	-
8	**Malkheda**	1977-2004	196.6	158.8	88.38	77.27	56.25	37.54	19.84	16.67	11.21	-
9	**Morane**	1978-2004	298.1	202.6	168.1	126.3	108.2	77.2	68.32	49.27	22.92	-
10	**Gidhade**	1989-2004	11533	9152	6782	5785	4980	4922	4845	3245	2918	-
11	**Sarangkheda**	1977-2004	14989	12441	9525	8471	6860	3435	4803	3299	3164	-
12	**Ghala**	1978-2004	13851	11830	7412	4953	3878	2918	2075	1665	995.8	-

Source: Water Year Book of Tapi, Narmada & Independent Basins for 2004-2005

Table 7 : Annual dependable flow of water by site and river basin

XI Basin: Narmada *Unit: M. C. M.*

Sl. No.	Site Name	Period/ Years	Dependable flow									
			10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	**Orsang at Chandawada**	80-81 to 2004-05	2462.04	2146.91	1727.69	1387.59	1026.92	832.44	631.34	468.17	250.95	41.89
2	**Narmad at Garudeswar**	72-73 to 2004-05	50344.74	43535.43	37099.94	34059.85	28118.54	25070.63	23056.77	21155.64	18255.47	6571.78
3	**Hathni at Jobat**	01-02 to 2004-05	Discharge started w.e.from 09.08.2001 and closed on 1.4.2006									
4	**Goi at Pati**	99-00 to 2004-05	Discharge started w.e.from 23.02.1999 and closed on 1.4.2006									
5	**Uri at Dhulsar**	99-00 to 2004-05	Discharge started w.e.from 15.03.1999 and closed on 1.4.2006									
6	**Narmada at Rajghat**	73-74 to 2004-05	47866.40	42163.62	36514.06	35170.43	28823.31	26565.83	24186.37	22065.14	19754.26	12563.39
7	**Narmada AT Mandleswar**	71-72 to 2004-05	49401.44	42901.41	37493.62	33227.68	27303.21	24481.06	23484.10	22076.87	19410.28	12656.44
8	**Kundi at Kogaon**	78-79 to 2004-05	1955.39	1506.66	1356.56	980.27	909.15	677.83	577.13	420.89	254.88	163.64
9	**chhota tawa at Ginnore**	71-72 to 1998-99	3109.94	2690.57	2465.16	2267.08	2129.72	1962.16	1524.33	1147.95	738.18	502.63
10	**Narmada at Motakka**	99-00 to 2004-05	Discharge started w.e.from 23.08.1999 and closed on 1.7.2007									
11	**Narmada at Handia**	77-78 to 2004-05	36698.53	32285.73	29654.36	26137.37	22408.43	20993.38	19116.10	17203.79	12766.36	10396.57
12	**Ganjal at Chhidgaon**	77-78 to 2004-05	1661.38	1478.96	1256.45	1031.38	788.50	690.91	577.64	514.22	381.92	234.88
13	**Narmada at Hoshangabad**	72-73 to 2004-05	37959.53	29035.89	25122.88	21357.48	19473.65	18062.93	17053.71	16085.30	11173.46	5100.51
14	**Tawa at Tawakati**	01-02 to 2004-05	Discharge started w.e.from 10.05.2001 and closed on 1.4.2006									
15	**Machna at Shapur**	01-02 to 2004-05	Discharge started w.e.from 20.06.2000 and closed on 1.4.2006									
16	**Narmada at Sandia**	78-79 to 2004-05	23079.41	17763.00	16230.59	14550.08	13038.36	12779.03	11422.94	9224.23	8122.20	5470.61
17	**Shakkar at Gadarwara**	77-78 to 2004-05	2326.31	1688.62	1418.18	1384.12	1057.09	950.28	838.45	704.41	593.65	438.21
18	**Narmada at Barmanghat**	72-73 to 2004-05	18590.73	17464.24	13350.74	12520.94	11262.17	9915.41	8831.65	7263.35	6540.50	3978.26
19	**Sher at Belkheri**	77-78 to 2004-05	1347.15	849.19	779.25	720.85	648.37	631.67	544.00	457.11	414.20	207.94
20	**Hiran at Patan**	80-81 to 2004-05	2969.63	2118.72	1866.09	1633.85	1547.48	1403.44	1324.77	1042.56	622.15	479.91
21	**Bamni at Banjar**	99-00 to 2004-05	Discharge started w.e.from 30.11.1999 and closed on 1.4.2006									
22	**Narmada at Jamtara**	72-73 to 2000-01	13121.02	11553.22	10634.51	10468.20	9314.97	8929.18	7661.38	5907.31	5040.68	2680.85
23	**Banjar at Hridyanagar**	77.78 to 2001-02	2917.33	2051.66	1863.55	1463.39	1384.33	1164.04	1053.44	937.47	753.47	512.71
24	**Burhner at Mohgaon**	78-79 to 2004-05	3459.49	2733.27	2500.06	2436.14	2193.95	2137.18	1915.75	1549.10	1284.24	543.51
25	**Narmada at Amgaon**	01-02 to 2004-05	Discharge started w.e.from 07.09.2001 and closed on 1.4.2006									
26	**Narmada at Manot**	77-78 to 2004-05	4355.39	3985.82	3700.96	3485.65	3168.66	2854.32	2527.17	2050.61	1924.92	939.06
27	**Narmada at Dindori**	88-89 to 2004-05	1754.86	1386.12	1309.27	1223.43	1180.00	1136.20	1070.54	830.38	747.67	654.07

Source : Narmada Basin Organisation, Central Water Commission, Bhopal.

Table 7 : Annual dependable flow of water by site and river basin

XII Basin : Mahi and Sabarmati *Unit: M. C. M.*

Sl. No.	Site Name	Period/ Years	Dependable flow									
			10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
1	**Pingalwada**	1989-2004	818.5	621.5	548	463.4	416.1	321	291.8	202	149.9	46.85
2	**Motinaroli**	1991-2004	984	696.6	579	423.3	346	270.2	246	219.6	186	136
3	**Mahuwa**	1971-2004	2355	1856	1428	1224	1157	1020	923.8	835.2	449.2	36.73
4	**Gadat**	1978-2004	2303	1763	1694	1395	1277	1171	1075	941.1	828.5	13.79
5	**Ozerkheda**	1991-2004	1673	1381	1108	1033	943	906	865	706	617.0	458.70
6	**Nanipalsan**	1991-2004	1154.0	1033	927.0	868.0	814	875.0	970	609.0	483	439.0
7	**Durvesh**	1971-2004	4152	3960	3596	3204	2849	2712	2316	2006	1638	1398
8	**Mataji (Mahi)**	1983-2005	8804	5777	4534	3487	2645	2001	1081	663	343	0.0
9	**Dhariawad**	1988-2005	3870	2920	1845	1598	1006	778	421	275	82	0.0
10	**Rangeli**	1997-2005	3822	3063	2211	1843	1328	958	753	348	79.5	0.0
11	**Paderdidai**	1997-2005	1217	817	661	621	556	384	312	160	109.9	0.0
12	**Chackeliya**	1992-2005	345	321	170	76	46	39	33.0	31.0	26	0.0
13	**Khanpur**	1984-2005	2279	1712	1437	1316	1081	743	477.0	243.0	164.4	0.0
14	**Vautha(Sanbarmati)**	2000-2005	3182	2491	1365	239	449	187	134.0	80	40	0.0
15	**Kheda**	2004-2005	1009	473.0	331	243	152.0	68.0	28.0	8	0.0	0.0
16	**Rantanpur**	- do -	673	539	263	180	115	50.0	39.00	33	20	0.0
17	**Deori Bridge**	- do -	811	613	214	165	23.0	14.0	11.0	4	0	0.0
18	**Kharoj**	- do -	689	384	239	208	163	117	50.0	27	0	0.0
19	**Jotsan**	- do -	103	100	82	51	47	43	33.0	19	14	0.0
20	**Gandhav(Luni)**	- do -	929.2	548.7	219.5	130.8	59.5	25.3	1.7	0.0	0.0	0.0
21	**Balotra**	- do -	81.6	37.8	26.2	12.1	9	6.2	2.7	0.3	0.3	0.0
22	**Kamalpur(Banas)**	- do -	81.6	230.7	150	84.8	66.07	39.72	25.31	10.87	4.94	0.0
23	**Chitrasani**	- do -	902.9	76.7	68.2	48.2	25.8	21.1	12.20	8.20	2.60	0.0
24	**Sarotry**	- do -	955	578	219	83.6	18	57	0.3	0.0	0.0	0.0
25	**Aburoad**	- do -	663	272	165	28.9	2.7	0.0	0.0	0.0	0.0	0.0
26	**Lowara(Shetrinji)**	- do -	394.1	292.6	206.3	155.7	118.3	99.6	47	23.5	23.5	23.5
27	**Ganod(Bhadar)**	- do -	1126.9	442.1	339.3	196.7	143.1	85.3	62.4	35.9	3.3	0.0
28	**Gungan(Machu)**	- do -	441	248.9	163.3	49	40.5	17.1	13.6	6.5	1.5	0.0
29	**Sapawada(Rupen)**	2004-2005	221.2	104.5	49.6	27.7	23.8	16.7	5.2	2.4	0.0	0.0

Source: Water Year Book of Tapi, Narmada & Independent Basins for 2004-2005,

Table 8 : Monthly average flow per unit drainage area by site and river basin

I Basin : Mahanadi *Unit : Millimeter*

Sl.No.	Site Name	Reference Period	June	July	August	September	October	November	December	January	February	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1	**Basantpur**	1970-71 to 2006-07	14.47	71.61	134.0	87.24	30.88	10.33	5.150	3.694	2.932	2.247	1.689	1.414
2	**Rampur**	1970-71 to 2006-07	19.54	104.6	188.1	110.3	26.20	6.732	1.412	0.891	0.620	0.428	0.345	0.125
3	**Bamnidhi**	1970-71 to 2006-07	28.50	110.3	150.9	94.59	28.54	15.77	14.17	11.06	8.910	8.670	7.920	7.908
4	**Rajim**	1970-71 to 2006-07	12.71	65.71	131.9	73.34	23.82	5.037	1.197	0.655	0.532	0.331	0.211	0.318
5	**Simga**	1971-72 to 2006-07	5.071	28.76	59.94	42.57	16.03	3.914	1.416	0.988	0.800	0.431	0.287	0.255
6	**Salebhata**	1971-72 to 2006-07	15.91	89.50	172.5	92.12	22.66	5.360	1.233	1.176	1.335	1.035	0.650	0.443
7	**Kantamal**	1971-72 to 2006-07	24.03	109.0	182.0	117.5	42.09	18.38	8.437	4.690	3.112	2.566	2.261	3.701
8	**Kotni**	1978-79 to 2006-07	11.76	52.44	109.7	60.94	22.46	3.965	1.055	0.632	0.644	0.088	0.020	0.035
9	**Andhiyarkore**	1977-78 to 2006-07	7.366	28.83	44.03	34.87	13.48	5.252	3.465	3.140	2.503	1.579	0.792	0.554
10	**Baronda**	1977-78 to 2006-07	16.66	83.17	158.9	90.75	26.38	5.152	1.541	0.773	0.584	0.311	0.125	0.354
11	**Jondhra**	1979-80 to 2006-07	9.056	52.81	100.1	76.55	28.27	7.877	2.764	1.927	1.479	0.802	0.400	0.315
12	**Ghatora**	1979-80 to 2006-07	11.40	63.58	101.6	89.46	25.22	7.187	4.088	3.758	1.909	0.956	0.533	0.463
13	**Kurubhata**	1977-78 to 2006-07	25.12	127.5	160.2	120.7	37.04	14.75	8.444	7.301	4.193	2.225	0.782	0.817
14	**Sundargarh**	1977-78 to 2006-07	37.89	142.5	154.7	128.8	36.40	14.95	5.955	6.457	3.297	1.825	0.820	1.039
15	**Kesinga**	1978-79 to 2006-07	33.35	118.4	179.4	105.4	41.04	17.26	9.886	4.774	4.159	4.103	4.042	6.285
16	**Pathardhi**	1988-89 to 2006-07	10.89	86.89	156.5	91.94	39.61	6.603	1.857	1.438	1.799	0.805	0.741	0.935
17	**Manendragarh**	1989-90 to 2006-07	17.35	90.85	95.31	79.04	24.86	7.629	6.155	4.542	3.445	3.34	1.234	0.064
18	**Seorinaryan**	1985-86 to 2006-07	12.80	66.93	118.2	81.96	31.55	8.733	2.840	1.837	1.483	0.744	0.417	0.337
19	**Tikarapara**	1971-72 to 2006-07	13.45	71.08	129.9	90.55	29.78	12.14	7.432	6.703	5.915	6.450	6.333	6.087

Source : Wainganga Division, Central Water Commission.

Table 8 : Monthly average flow per unit drainage area by site and river basin

II Basin : Subarnarekha, Burhabalang & Baitarni *Unit : Millimeter*

Sl.No.	Site Name	Reference Period	June	July	August	September	October	November	December	January	February	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1	**Muri**	1988 to 2007	12.35	68.51	106.7	108.7	76.79	50.15	47.16	30.98	19.00	12.28	7.138	5.860
2	**Adityapur**	1971 to 2007	30.73	80.85	146.1	107.5	43.83	10.91	3.292	2.558	2.059	1.445	1.286	2.065
3	**Jamshedpur**	1972 to 2007	31.92	99.10	168.1	140.6	63.30	21.14	8.556	5.407	3.166	2.016	1.783	2.596
4	**Ghatsila**	1973 to 2007	31.82	84.00	136.2	116.8	50.26	15.61	6.630	3.952	3.000	2.191	1.983	2.591
5	**Govindapur**	1978 to 2007	37.16	95.27	171.2	184.7	106.0	50.87	16.05	7.007	5.060	4.176	4.354	9.935
6	**Champua**	1980 to 2007	33.12	100.1	170.7	136.2	79.18	34.27	15.20	13.09	9.108	7.882	6.419	8.422
7	**Anandpur**	1972 to 2007	40.55	91.55	180.4	134.5	66.61	21.05	6.839	5.022	3.747	3.031	2.477	6.206

Source : Wainganga Division, Central Water Commission.

Table 8 : Monthly average flow per unit drainage area by site and river basin

IV Basin : Brahmani *Unit : Millimeter*

Sl.No.	Site Name	Reference Period	June	July	August	September	October	November	December	January	February	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1	**Tilga**	1978 to 2007	37.47	151.7	171.4	143.8	53.65	19.84	9.241	7.624	4.828	3.101	1.688	2.271
2	**Gomlai**	1971 to 2007	34.06	116.1	154.6	122.0	45.72	14.40	6.795	5.197	3.877	2.478	1.513	2.452
3	**Panposh**	1972 to 2007	46.04	121.9	156.2	125.8	50.81	15.83	7.530	7.365	4.687	3.144	2.567	3.113
4	**Jaraikela**	1977 to 2007	32.68	118.0	149.2	113.0	39.21	12.09	5.499	4.743	3.219	2.453	1.807	2.555
5	**Jenapur**	1977 to 2007	20.83	89.81	137.0	106.1	50.57	21.79	14.77	12.87	10.31	11.54	10.56	10.60

Source : Wainganga Division, Central Water Commission.

Table 8 : Monthly average flow per unit drainage area by site and river basin

IV	**Basin : Rushikulya, Vamsadhara, Sarada & Nagavali**													
	<---------- Data is not available ---------->													

Table 8 : Monthly average flow per unit drainage area by site and river basin

V Basin : Godavari Unit : Millimeter

Sl.No.	Site Name	Period	June	July	August	September	October	November	December	January	February	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1	**Polavaram**	1966 to 5/2006	7.52	50.18	101.78	68.63	29.36	8.04	4.47	3.16	2.46	2.32	1.85	1.90
2	**Koida**	1977 to 5/2006	9.43	53.55	110.88	67.69	29.74	8.05	4.80	3.59	3.05	2.88	2.32	2.33
3	**Konta**	1966 to 5/2006	35.30	117.93	203.55	134.71	70.10	34.46	27.90	24.17	21.66	22.54	20.21	20.48
4	**Injaram**	1966 to 5/2006	37.53	145.83	259.75	165.59	76.35	31.33	23.48	18.50	15.47	15.74	14.49	15.24
5	**Potteru**	1997 to 5/2006	159.93	250.80	336.27	194.30	136.99	122.78	115.79	111.73	113.70	135.73	124.00	129.24
6	**Saradaput**	1970 to 5/2006	62.14	185.62	309.90	204.73	95.37	41.73	29.67	22.54	18.87	18.21	16.89	20.23
7	**Sangam**	1996 to 5/2006	2.13	34.41	77.60	55.03	18.34	5.89	2.97	0.71	0.44	0.17	0.01	0.60
8	**Perur**	1966 to 5/2006	7.83	48.56	95.39	64.62	25.96	6.37	3.06	1.88	1.41	1.15	0.67	0.58
9	**Pathagudem**	1965 to 5/2006	19.49	117.86	220.04	128.15	43.29	11.84	5.36	3.34	1.95	1.32	0.98	1.37
10	**Tumnar**	1992 to 5/2006	35.91	144.30	259.51	173.64	58.71	19.91	8.72	5.54	3.20	2.02	2.26	2.05
11	**Chindnar**	1971 to 5/2006	22.00	99.08	171.70	108.59	40.09	12.44	6.23	4.37	2.77	2.23	1.80	2.69
12	**Cherribeda**	1996 to 5/2006	39.17	130.35	220.10	136.12	58.38	15.54	6.10	3.91	2.47	1.00	1.91	0.62
13	**Ambabal**	1993 to 5/2006	17.37	87.00	140.00	99.27	38.59	9.79	5.76	6.00	3.15	1.99	2.58	2.70
14	**Sonarpal**	1992 to 5/2006	22.03	105.85	166.79	113.85	33.22	8.31	3.13	2.29	1.57	0.93	1.22	1.29
15	**Jagdalpur**	1965 to 5/2006	28.17	105.09	165.43	112.26	42.19	15.12	10.07	7.49	5.08	4.86	4.05	5.36

Contd/…

Table 8 : Monthly average flow per unit drainage area by site and river basin

V Basin : Godavari Unit : Millimeter

Sl.No.	Site Name	Period	June	July	August	September	October	November	December	January	February	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
16	**Kosagumda**	1998 to 5/2006	41.70	98.74	181.42	98.68	46.42	13.21	4.62	2.31	2.22	1.03	1.17	2.90
17	**Murthahandi**	1989 to 5/2006												
18	**Nowrangpur**	1966 to 5/2006	42.17	158.28	237.32	166.72	65.10	28.67	23.26	17.83	11.72	11.69	9.46	11.85
19	**Somanpalli**	1967 to 5/2006	2.13	16.95	38.76	26.24	17.57	4.26	1.46	0.98	0.74	0.69	0.50	0.65
20	**Mancherial**	1966 to 5/2006	1.95	14.08	35.29	34.68	20.23	3.54	1.59	1.01	0.83	0.88	0.48	0.31
21	**Gandlapet**	1987 to 5/2006	10.42	35.20	56.22	32.54	31.97	1.97	0.32	3.18	0.00	0.00	0.00	0.00
22	**Betmogra**	1997 to 5/2006	1.38	9.05	46.10	34.61	45.01	3.00	0.44	0.27	0.17	0.36	0.04	0.09
23	**Degloor**	1988 to 5/2006	6.07	25.80	65.72	61.95	37.39	4.41	1.07	0.76	0.14	0.21	0.09	2.82
24	**Saigaon**	1967 to 5/2006	4.31	10.92	20.22	42.95	26.73	3.88	1.22	1.24	0.49	0.75	0.05	0.80
25	**Bhatkheda**	1991 to 4/2006	1.50	5.67	13.70	27.35	23.88	2.88	1.38	2.01	1.72	0.00	0.00	0.00
26	**Yelli**	1978 to 5/2006	5.61	14.08	23.18	27.32	14.95	1.93	1.02	0.72	0.65	0.57	0.43	0.68
27	**Purna**	1969 to 5/2006	7.88	18.79	31.12	41.43	16.13	2.59	1.31	0.82	0.86	0.64	0.74	0.97
28	**Zari**	1987 to 5/2006	8.99	20.85	20.37	27.27	19.44	4.05	0.69	0.15	0.02	0.13	0.08	0.60
29	**G.R.Bridge**	1977 to 5/2006	3.48	8.54	13.54	18.95	9.77	1.85	1.29	0.79	0.69	0.71	0.41	0.46
30	**Dhalegaon**	1965 to 5/2006	3.96	13.73	24.36	25.97	10.34	2.00	1.50	0.72	0.62	0.50	0.34	0.45
31	**Pachegaon**	1983 to 5/2006	6.13	11.20	22.00	14.53	10.13	2.30	0.48	0.05	0.03	0.00	0.00	0.00
32	**Ghargaon**	1992 to 5/2006	74.64	428.19	393.51	156.94	47.35	11.76	10.64	0.93	0.00	0.00	0.00	0.00
33	**Tekra**	1964 to 5/2006	12.62	68.35	125.60	79.81	25.98	6.25	3.30	2.16	1.79	1.28	0.63	0.51
34	**Ghugus**	1964 to 5/2006	13.28	43.29	85.06	52.76	16.46	2.75	1.94	1.34	1.16	0.80	0.21	0.26
35	**Sirpur**	1968 to 5/2006	17.38	51.44	98.25	62.84	21.70	4.21	2.23	1.64	1.30	0.83	0.39	0.39
36	**P.G.Bridge**	1965 to 5/2006	15.85	43.08	83.61	61.32	22.38	4.52	2.16	1.33	0.81	0.60	0.23	0.19
37	**Bamini**	1966 to 5/2006	15.32	50.22	94.85	63.83	20.70	4.07	2.44	1.65	1.24	0.95	0.39	0.35
38	**Marlegaon**	1965 to 5/2005	10.85	29.65	65.39	56.60	18.34	3.27	1.83	0.91	0.56	0.42	0.46	0.49
39	**Pauni**	1965 to 5/2005	11.33	71.03	133.36	79.73	21.85	6.51	4.31	2.83	2.27	1.49	1.01	0.71
40	**Ashti**	1965 to 5/2006	12.69	85.84	166.25	99.05	27.67	7.23	3.84	2.43	2.03	1.35	0.76	0.58
41	**Mirdapalli**	1973 to 5/1997 & 06/2001 to 05/2006	41.04	185.40	366.20	207.40	100.10	41.50	21.47	17.40	13.78	13.27	12.66	11.28
42	**Medapalli**	1967 to 5/1997 & 06/2001 & 05/2005	12.95	152.70	349.50	178.90	63.37	20.82	11.02	7.30	4.19	2.82	1.54	0.99

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Table 8 : Monthly average flow per unit drainage area by site and river basin

V Basin : Godavari Unit : Millimeter

Sl.No.	Site Name	Period	June	July	August	September	October	November	December	January	February	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
43	**Bhisnur**	1988 to 5/2005	10.28	20.03	25.73	40.65	12.02	3.04	3.79	4.09	3.67	2.81	1.76	5.35
44	**Hivra**	1987 to 5/2006	12.62	24.91	39.96	38.05	11.56	2.58	2.77	2.10	1.58	1.38	0.53	1.39
45	**Nandagaon**	1986 to 5/2006	13.23	34.31	63.10	39.44	10.99	2.78	3.01	3.28	2.17	1.78	0.74	0.48
46	**Ramakona**	1987 to 5/2006	15.23	60.20	93.01	89.73	29.04	6.75	5.47	2.39	1.30	1.44	0.28	0.12
47	**Satrapur**	1986 to 5/2006	10.94	33.67	48.55	57.92	14.91	5.63	5.11	3.95	2.15	1.87	1.68	1.22
48	**Keolari**	1987 to 5/2006	11.04	78.95	92.49	99.86	22.89	4.09	8.03	5.14	3.39	2.74	2.73	1.57
49	**Kumhari**	1987 to 5/2006	11.47	103.80	147.50	98.20	21.46	5.64	6.26	4.35	2.77	1.70	0.70	0.77
50	**Rajegaon**	1986 to 5/2006	13.77	136.11	190.86	123.35	32.39	6.85	3.27	2.13	1.51	1.30	0.77	1.31
51	**Salebardi**	1986 to 5/2006	10.69	77.92	143.39	77.60	19.34	4.71	1.60	0.67	0.84	0.02	0.03	0.00
52	**Rajoli**	1986 to 5/2006	7.76	95.26	171.79	70.81	25.30	5.31	0.70	0.32	0.70	0.01	0.00	0.57
53	**Bhatpalli**	1987 to 5/2006	28.26	87.80	146.40	68.51	55.67	11.27	5.25	3.73	2.41	2.12	2.06	2.53
54	**Kanergaon**	1992 to 5/2006	8.57	198.81	41.74	39.84	20.73	4.37	0.83	0.09	0.03	0.04	0.00	0.00
55	**Mangrul**	1993 to 5/2006	13.58	25.33	40.37	37.01	9.97	2.09	1.70	2.32	1.09	0.83	0.54	0.39
56	**Wairagarh**	1993 to 5/2006	17.43	89.09	147.60	86.88	18.86	3.11	0.82	0.41	0.29	0.00	0.00	0.00

Source : Godavari Circle, Central Water Commission, Hyderabad-

Table 8 : Monthly average flow per unit drainage area by site and river basin

VI Basin : Krishna Unit: Millimeter

Sl. No.	Site Name	Reference Period	June	July	August	September	October	November	December	January	February	March	April	May
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	**Arjunwad (Seasonal)**	1/1969 to 11/2006	35.501	202.492	248.903	82.252	38.938	4.806	0.556	0.103	0.228	0.181	0.687	0.450
2	**Bastawade**	6/1979 to 5/2007	150.523	766.971	771.292	189.399	79.213	5.940	0.000	0.000	0.120	0.036	0.091	0.000
3	**Bawapuram**	6/1965 to 5/2007	1.797	6.056	26.744	17.949	16.530	4.948	1.348	0.611	0.384	0.248	0.295	0.959
4	**Boriomerga**	7/1979 to 5/2006	1.669	3.791	10.843	35.974	14.446	2.999	0.423	0.116	0.035	0.003	0.000	0.359
5	**Chincholi**	8/1979 to 4/2006	2.117	8.352	5.199	22.685	10.402	1.238	0.140	0.044	0.002	0.000	0.000	0.000
6	**Cholachguda (Seasonal)**	6/1982 to 11/2006	10.331	5.545	11.432	19.801	21.518	8.620	5.066	4.007	2.479	1.432	0.781	2.491
7	**Daddi**	12/1978 to 5/2007	172.075	719.654	640.560	172.633	69.832	13.624	3.007	0.204	0.012	0.003	0.003	0.284
8	**Dameracherla**	6/1968 to 5/2007	0.739	3.263	11.354	17.554	21.484	10.872	4.421	4.567	4.412	4.486	2.824	0.978
9	**Dhond**	12/1967 to 5/2007	15.744	118.105	152.060	66.527	25.293	4.107	2.366	1.500	0.784	0.606	0.608	1.073
10	**Gokak Falls (Seasonal)**	7/1971 to 11/2006	32.776	233.067	299.034	69.611	27.727	10.466	6.102	4.527	2.894	2.546	2.534	2.929
11	**Gotur**	6/1980 to 5/2007	92.701	465.496	424.166	107.751	43.951	3.429	0.000	0.000	0.000	0.000	0.000	0.000
12	**Halia**	6/1984 to 5/2007	0.810	2.159	3.564	12.190	18.670	4.550	0.941	0.741	0.556	0.594	0.458	0.282
13	**Huvinhedigi**	2/1976 to 5/2007	10.968	83.063	124.446	47.463	27.854	5.533	2.894	2.138	1.948	1.786	1.272	1.465
14	**Jewangi**	11/1978 to 5/2006	1.899	15.582	37.799	45.411	32.620	4.235	1.419	0.788	0.422	0.293	0.282	0.714
15	**K Agraharam**	6/1981 to 5/2007	5.250	40.095	72.256	37.591	28.640	4.848	1.709	1.149	0.955	0.802	0.627	0.661
16	**Karad**	6/1965 to 5/2007	51.127	264.417	307.917	106.609	45.193	13.940	12.692	12.648	12.655	14.667	15.320	15.723
17	**Keesara**	6/1965 to 5/2007	2.666	21.985	56.567	47.113	34.306	11.691	5.124	2.597	1.408	1.183	0.822	2.183
18	**Kokangaon**	7/1979 to 10/2006	4.816	2.273	2.444	21.706	17.412	3.428	0.813	0.200	0.078	0.037	0.018	0.232
19	**Koyna**	10/1972 to 5/2007	48.166	220.732	538.108	181.237	32.409	22.063	50.334	60.174	65.311	80.637	83.222	77.731
20	**Kurundwad**	5/1972 to 5/2007	43.911	258.299	309.665	92.014	39.804	4.376	0.710	0.132	0.122	0.165	0.228	0.356
21	**Lakshmipuram**	9/1984 to 5/2006	1.381	3.359	5.682	11.802	26.692	2.591	0.250	0.347	0.188	0.118	0.168	0.222
22	**Madhira**	6/1984 to 5/2007	3.625	20.295	73.337	75.082	56.421	25.188	14.485	8.883	6.169	5.278	3.755	6.259
23	**Malkhed**	8/1990 to 5/2007	2.325	9.114	17.992	26.815	32.040	4.070	1.694	1.005	0.642	0.359	0.278	0.440
24	**Mantralayam**	6/1972 to 5/2007	2.216	8.476	32.945	22.333	20.301	7.991	3.136	2.320	1.903	1.960	1.388	0.919
25	**Mudhol**	7/2000 to 5/2007	8.541	39.224	119.075	38.702	19.048	4.707	3.870	0.481	0.000	0.654	0.029	0.799

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Table 8 : Monthly average flow per unit drainage area by site and river basin

VI Basin : Krishna Unit: Millimeter

Sl. No.	Site Name	Reference Period	June	July	August	September	October	November	December	January	February	March	April	May
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
26	**Narasingpur**	12/1966 to 5/2008	6.992	56.647	87.907	46.469	23.041	3.391	1.945	1.293	0.754	0.900	0.784	1.011
27	**Navalgund**	6/1991 to 5/2006	9.022	4.028	6.324	18.526	22.902	7.475	5.836	4.408	2.606	1.146	0.575	1.154
28	**Paleru Bridge**	6/1965 to 5/2007	2.996	11.223	27.270	29.477	30.438	14.862	8.314	5.243	4.496	5.220	4.296	3.484
29	**Pandegaon**	10/1979 to 5/2007	2.009	2.044	2.020	13.077	17.414	2.627	0.292	0.016	0.000	0.000	0.000	0.000
30	**Phulgaon (Seasonal)**	6/1992 to 5/2008	18.674	216.692	264.293	95.072	33.660	3.207	0.000	0.000	0.000	0.000	0.000	0.000
31	**Pondugala**	11/1975 to 5/2007	2.435	10.143	34.282	23.200	17.223	3.885	2.895	2.691	2.846	3.892	3.142	1.933
32	**Purushothamagudem**	9/1987 to 5/2006	0.407	12.027	16.750	16.426	11.840	1.825	0.307	0.104	0.009	0.000	0.005	0.601
33	**Sadalga (Seasonal)**	6/1969 to 11/2006	70.839	426.958	464.798	121.094	52.915	3.956	0.000	0.000	0.000	0.000	0.004	0.087
34	**Samdoli (Seasonal)**	12/1966 to 11/2006	101.868	581.023	646.134	186.176	70.015	4.080	0.551	0.041	0.000	0.000	0.006	0.000
35	**Sarati**	6/1965 to 5/2008	5.733	40.533	62.047	39.324	23.049	3.989	2.379	1.293	0.662	0.295	0.105	1.229
36	**Shirdhon**	7/1979 to 5/2007	2.180	1.452	1.821	18.350	18.338	2.878	1.141	0.278	0.083	0.021	0.000	0.000
37	**T Ramapuram (Seasonal)**	12/1965 to 11/2006	1.258	1.245	2.748	9.113	10.755	4.591	2.429	1.189	0.582	0.264	0.151	0.670
38	**Takli**	6/1965 to 5/2008	4.784	34.779	60.637	38.797	23.306	3.872	1.744	0.904	0.449	0.308	0.182	0.583
39	**Talikot (Seasonal)**	9/1995 to 11/2006	8.428	4.463	8.605	27.427	36.208	3.161	0.810	0.306	0.134	0.065	0.044	2.005
40	**Terwad (Seasonal)**	8/1979 to 11/2006	104.066	656.952	745.484	186.218	61.515	0.835	0.050	0.060	0.106	0.068	0.066	0.027
41	**Vandur**	6/1979 to 5/2007	118.643	552.380	710.019	192.349	77.950	21.619	23.962	21.376	25.414	28.694	29.036	28.174
42	**Vijayawada**	6/1965 to 5/2007	0.965	8.448	31.826	21.375	18.227	4.281	1.702	1.216	1.018	1.369	1.423	1.638
43	**Wadakbal**	6/1965 to 5/2008	4.000	5.414	9.759	31.080	17.568	3.723	1.000	0.384	0.231	0.148	0.074	0.702
44	**Wadenapally**	12/1965 to 5/2007	2.195	11.376	36.211	24.745	21.388	5.926	3.203	3.049	2.811	3.262	2.479	1.527
45	**Warunji**	1/1966 to 5/2007	93.117	436.258	547.582	184.013	62.859	18.628	25.122	30.152	32.034	38.491	39.905	36.589
46	**Yadgir**	6/1965 to 5/2007	4.468	18.350	38.184	33.994	26.488	5.258	1.996	0.988	0.531	0.294	0.143	0.584

Source : Water Year Book of Krishna Basin for 2006-07

Table 8 : Monthly average flow per unit drainage area by site and river basin

VII Basin : Cauvery Unit: Millimeter

Sl. No.	Site Name	Reference Period	Jun	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	**Mukundur Hosahalli**	1979-2006	17.83	65.50	100.69	54.26	42.58	33.61	22.44	15.30	17.04	17.62	21.03	18.95
2	**Kattemalalavadi**	1979-2006	31.30	83.30	68.16	20.60	17.54	9.19	4.05	1.10	0.19	0.10	0.18	0.61
3	**T.Bekuppe**	2004-2006	3.530	21.60	3.890	24.42	23.69	7.750	2.450	0.000	0.000	0.000	0.000	0.000
4	**T.K Halli**	1978-2006	2.752	2.994	7.477	20.33	26.30	13.56	7.154	2.736	1.353	1.429	1.299	2.390
5	**Kollegal**	1971-2006	14.34	60.05	83.47	41.73	37.27	23.95	15.36	8.735	5.981	5.632	6.395	7.853
6	**Biligundulu**	1972-2006	8.213	33.01	48.71	31.08	32.16	19.70	11.76	5.944	4.001	3.619	4.129	5.608
7	**T.Narsipur**	1971-2006	30.41	106.6	111.1	50.54	39.07	26.15	15.59	7.259	6.082	7.031	10.39	14.83
8	**Kudige**	1974-2006	143.5	434.6	448.8	145.8	93.06	46.34	24.41	13.93	10.870	7.598	9.123	15.01
9	**Hongenakkal**	1997-2006	0.043	0.006	1.460	2.018	22.180	11.430	5.84	1.948	0.666	0.291	0.200	0.621
10	**Bendrehalli**	Not considered, Partial Water Year.												
11	**Sakleshpur**	2002-2006	156.5	261.8	477.6	135.6	106.9	57.37	34.90	16.22	7.34	4.55	2.58	16.02
12	**Thimmanahalli**	2001-2006	6.543	8.520	18.74	12.98	18.99	14.38	4.07	0.998	0.869	1.256	1.541	1.368
13	**Akkihebbal**	2002-2006	3.430	4.218	42.79	22.18	35.90	17.65	11.430	3.341	2.445	1.695	5.156	4.001
14	**Kanakpura**	1979-2006	2.770	2.026	4.987	16.40	21.16	6.680	2.762	1.138	0.719	0.790	0.838	1.468

Source : Cauvery & Southern Rivrs Organisation, CWC, Bangalore.

Table 8 : Monthly average flow per unit drainage area by site and river basin

VIII Basin : East Flowing Rivers from Mahanadi to Kanyakumari Unit: Millimeter

Sl. No.	Site Name	Reference Period	Jun	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	**Thammavaram**	-	-	-	-	-	-	-	-	-	-	-	-	-
2	**K.Bitragunda**	-	-	-	-	-	-	-	-	-	-	-	-	-
3	**Nellore**	1988-89 to 2005-06	0.165	0.328	1.239	5.007	13.08	8.549	3.987	0.463	0.021	0.013	0.007	0.176
4	**Nandipalli**	1990-91 to 2005-06	1.025	1.014	2.746	3.662	23.20	8.902	2.312	0.696	0.388	0.126	0.095	0.138
5	**Chennur**	1990-91 to 2005-06	1.292	1.998	6.612	9.774	16.66	5.690	3.342	1.432	0.426	0.104	0.045	0.128
6	**Kamalapuram**	1990-91 to 2005-06	1.024	0.038	0.816	4.078	10.11	9.207	2.268	0.356	0.039	0.000	0.007	0.005
7	**Alladupalli**	1986-87 to 2005-06	3.622	10.53	27.61	34.24	53.97	16.28	11.45	5.970	1.657	0.539	0.262	0.690
8	**Tadapatri**	1972-73 to 2005-06	0.316	1.106	0.806	5.720	8.20	5.738	1.217	0.477	0.098	0.026	0.009	0.154
9	**Nagalamadike**	1978-79 to 2005-06	0.005	0.104	0.550	4.645	1.834	0.874	0.048	0.007	0.014	0.000	0.000	0.063
10	**Singavaram**	1980-81 to 2005-06	0.470	1.157	0.899	6.382	5.118	2.274	0.144	0.027	0.008	0.040	0.000	0.005
11	**Naidupeta**	1979-80 to 2005-06	0.656	0.072	0.423	0.634	7.619	54.06	30.93	7.085	4.291	0.098	0.002	0.452
12	**Sullurpet**	1989-90 to 2005-06	0.829	0.073	0.085	0.052	5.825	16.97	10.30	3.011	0.037	0.000	0.001	0.150
13	**Chengalpattu**	1979-80 to 2005-06	0.055	0.056	0.093	0.361	0.815	9.659	7.304	0.481	0.178	0.815	0.002	0.002
14	**Magaral**	1972-73 to 2005-06	0.000	0.214	0.131	0.714	2.174	32.68	31.89	2.190	0.977	0.615	0.000	0.013
15	**Arcot**	1979-80 to 2005-06	0.006	0.002	0.047	1.885	2.553	5.493	2.423	0.202	0.064	0.050	0.000	0.002
16	**Kumarapalayam**	1999-2000 to 2005-06	0.000	0.000	0.000	0.000	0.000	0.000	14.25	0.000	0.000	0.000	0.000	0.000
17	**Villupuram**	1972-73 to 2005-06	0.000	0.009	0.016	0.176	3.455	13.06	8.720	0.708	0.104	0.066	0.027	0.055
18	**Vazhavachanur**	1978-79 to 2005-06	0.090	0.132	0.104	0.709	6.463	10.95	8.003	1.464	1.074	0.902	0.885	0.383
19	**Gummanur**	-	-	-	-	-	-	-	-	-	-	-	-	-
20	**Kudalaiyathur**	1990-91 to 2005-06	0.000	0.000	0.000	0.029	1.626	25.69	18.77	1.079	0.149	0.088	0.000	0.031
21	**Annavasal**	1999-2000 to 2005-06	-	-	-	-	-	-	-	-	-	-	-	-
22	**Peralam**	1999-2000 to 2005-06	-	-	-	-	-	-	-	-	-	-	-	-
23	**Menangudi***	2004-05 to 2005-06	-	-	-	-	-	-	-	-	-	-	-	-
24	**Porakudi**	1999-2000 to 2005-06	-	-	-	-	-	-	-	-	-	-	-	-
25	**Thengudi**	1998-99 to 2005-06	-	-	-	-	-	-	-	-	-	-	-	-
26	**Gopurajapuram**	1999-2000 to 2005-06	-	-	-	-	-	-	-	-	-	-	-	-
27	**Nallathur**	-	-	-	-	-	-	-	-	-	-	-	-	-

Source : Cauvery & Southern Rivrs Organisation, CWC, Bangalore.

Remarks : Water Year Book Published upto 2003-04.

Note : 1. * Since data of Site Memangudi for the year 1999-2000 to 2003-04 is not published, data of Water Years 2004-05 & 2005-06 is only considered or calculation of dependebility.

: 2. Thammavaram, K.Bitragunda, Nallathur & Gummanur site data is not available.

Table 8 : Monthly average flow per unit drainage area by site and river basin

IX Basin : West Flowing Rivers from Kanyakumari to Tapi *Unit : Millimeter*

Sl. No.	Site Name	Reference Period	Jun	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	**Ashramam**	2000-01 to 2005-06												
2	**Perumannu**	1986-87 to 2005-06	17.26	35.98	25.45	44.73	72.63	109.77	13.58	16.04	16.09	12.1	16.86	11.08
3	**Kuniyil**	1981-82 to 2005-06	411.3	1093	923.9	391.9	258.9	110.7	28.25	13.85	6.438	6.517	4.574	34.24
4	**Pattazhy**	1978-79 to 2005-06	355.0	627.2	511.7	242.8	216.2	124.6	44.66	23.77	7.648	5.730	4.330	27.01
5	**Karathodu**	1987-88 to 2005-06	145.8	194.8	169.7	139.2	193.7	182.3	66.07	34.69	20.43	22.13	23.33	40.26
6	**Ramamangalam**	1978-79 to 2005-06	202.8	480.4	326.9	164.7	211.9	129.4	32.720	10.250	4.311	4.243	4.766	14.37
7	**Kalampur**	1987-88 to 2005-06	432.4	768.1	595.0	367.1	366.5	182.5	47.69	11.71	1.520	0.705	4.708	58.52
8	**Erinjipuzha**	1986-87 to 2005-06	209.3	708.1	712.7	298.2	220.0	114.3	43.75	18.55	6.040	1.420	1.221	13.830
9	**Kumbidi**	1980-81 to 2005-06	104.7	213.2	166.7	80.56	84.17	54.72	17.14	8.564	2.766	0.965	2.436	7.703
10	**Mankara**	1986-87 to 2005-06	21.54	62.56	41.55	26.72	29.38	33.74	11.60	5.156	2.343	1.231	1.630	2.755
11	**Pudur**	1987-88 to 2005-06	16.91	43.16	31.30	17.46	22.25	31.23	14.38	6.363	3.309	2.950	3.026	3.264
12	**Pulamanthole**	1986-87 to 2005-06	213.3	462.2	269.1	214.4	253.9	140.8	40.04	14.43	6.27	5.36	11.82	32.98
13	**Neeleswaram**	1971-72 to 2005-06	230.8	407.6	377.6	199.3	179.1	114.8	41.43	21.55	17.99	20.39	27.47	52.93
14	**Arangaly**	1978-79 to 2005-06	180.8	378.0	326.9	160.7	130.5	88.3	27.18	17.58	11.87	11.37	13.61	23.88
15	**Vandiperiyar**	2000-01 to 2005-06	35.64	59.73	72.58	25.59	30.42	15.22	5.605	1.478	0.467	0.017	0.033	5.630
16	**Kidangoor**	1986-87 to 2005-06	493.1	614.1	477.5	290.6	400.4	234.2	40.40	7.72	2.50	4.25	28.79	144.4
17	**Kuttyadi**	2000-01 to 2005-06	680.8	1080.5	999.9	414.5	321.0	155.9	87.21	38.22	16.79	13.62	16.06	133.9
18	**Kuzhithurai**	2001-02 to 2005-06	0.000	13.23	8.445	13.79	21.41	28.99	13.31	5.054	1.377	0.429	1.420	1.411
19	**Ayilam**	1979-80 to 2005-06	180.4	167.4	131.9	133.4	228.2	175.8	59.70	17.34	9.328	11.25	24.54	51.91
20	**Malakkara**	1986-87 to 2005-06	332.4	461.8	388.2	267.4	321.7	207.2	63.48	35.96	19.69	19.14	32.07	91.72
21	**Thumpamon**	1978-79 to 2005-06	227.9	293.4	216.6	158.8	231.7	196.7	36.72	10.45	4.821	3.621	14.11	45.18
22	**Kallooppara**	1986-87 to 2005-06	430.4	554.2	394.1	266.4	358.2	232.2	35.7000	5.860	4.687	2.778	22.05	120.8
23	**Muthankera (Cauvery)**	1972-73 to 2005-06	274.2	599.0	531.8	205.8	140.1	81.45	39.24	18.93	9.429	6.291	12.53	24.63

Source : Cauvery & Southern Rivrs Organisation, CWC, Bangalore.

Note : * Since data of inception to 2005-06, Partial Water Year not considered.

Table 8 : Monthly average flow per unit drainage area by site and river basin

X Basin : Tapi *Unit : Millimeter*

Sl.No.	Site Name	Reference Period	June	July	August	September	October	November	December	January	February	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1	**Dedtalai**	2004-2005	1.24	19.22	120.88	69	61.68	8.36	1.08	0.76	0.34	0.11	0.06	0
2	**Burhanpur**	2004-2005	8.73	14.46	127.1	61.5	39.14	2.88	1.67	0.74	0.38	0.23	0.17	0
3	**Lakhpuri**	2004-2005	2.27	5.56	13.01	8.68	3.08	1.04	0	0	0	0	0	0
4	**Gopalkheda**	2004-2005	2.53	6.99	14.04	11.12	4.31	2.38	0.39	0.29	0.23	0.25	0.14	0
5	**Yerli**	2004-2005	0	2.18	5.48	3.41	1.21	0.32	0	0	0	0	0	0
6	**Dapuri**	2004-2005	2.81	1.64	2.1	3.8	4.64	0.98	0	0.82	0	0	0	0
7	**Savkheda**	2004-2005	0	8.21	19.41	13.53	4.11	1.46	0	0	0	0	0	0
8	**Malkheda**	2004-2005	2	1.03	2.09	2.25	1.07	0.91	0	0	0	0	0	0
9	**Morane**	2004-2005	2.00	1.94	46.13	8.02	15.98	0.506	0	21.5	22.69	20.11	17.68	7.96
10	**Gidhade**	2004-2005	2.37	7.03	13.26	16.19	3.56	1.22	0	0	0	0	0	0
11	**Sarangkheda**	2004-2005	2.76	8.68	20.19	16.17	5.06	1.6	0	0	0	0	0	0
12	**Ghala**	2004-2005	3.08	4.1	8.43	5.59	1.6	1.48	1.58	1.56	1.14	1.24	0.98	0.92

Source: Water Year Book of Tapi, Narmada & Independent Basins for 2003-2004-2005.

Table 8 : Monthly average flow per unit drainage area by site and river basin

XI Basin : Narmada *Unit : Millimeter*

Sl.No.	Site Name	Reference Period	June	July	August	September	October	November	December	January	February	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1	**Orsang at Chandwada**	80-81 to 2004-05	15.38	74.20	177.18	98.51	12.75	2.01	0.62	0.19	0.05	0.03	0.01	0.01
2	**Narmada at Garudeshwar**	72-73 to 2004-05	9.75	61.30	144.41	107.84	28.96	10.33	8.42	6.03	5.15	4.12	3.08	2.80
3	**Hathni at Jobat**	01-02 to 2004-05	Discharge started w.e.from 09.08.2001 and closed on 1.4.2006											
4	**Goi at Pati**	99-00 to 2004-05	Discharge started w.e.from 23.02.1999 and closed on 1.4.2006											
5	**Uri at Dhulsar**	99-00 to 2004-05	Discharge started w.e.from 15.03.1999 and closed on 1.4.2006											
6	**Narmada at Rajghat**	73-74 to 2004-05	11.38	75.17	171.17	124.25	28.81	11.12	9.42	6.54	6.14	5.11	3.45	2.71
7	**Narmada at Mandleshwar**	71-72 to 2004-05	12.19	79.43	174.99	123.36	35.51	11.36	9.75	6.92	6.53	5.69	4.06	3.23
8	**Kundi at Kogaon**	78-79 to 2004-05	19.41	38.51	91.10	91.49	28.84	5.46	1.82	0.82	0.72	0.25	0.17	0.12
9	**Chhota tawa at Ginnore**	71-72 to 1998-99	18.15	93.16	7.42	4.59	1.49	0.35	0.18	0.20	0.13	0.10	0.08	0.07
10	**Narmada at Mortakka**	99-00 to 2004-05	Discharge started w.e.from 23.08.1999 and closed on 1.4.2006											
11	**Narmada at Handia**	77-78 to 2004-05	14.01	84.14	186.95	120.86	32.20	14.03	13.82	9.60	9.58	8.64	6.20	4.72
12	**Ganjal at chhidgaon**	77-78 to 2004-05	19.65	110.24	265.02	151.13	26.11	7.95	5.57	3.91	2.49	1.78	1.10	0.88
13	**Narmada at Hoshangabad**	72-73 to 2004-05	18.14	89.73	210.04	125.69	34.67	15.31	13.51	9.61	9.25	8.34	6.35	5.40
14	**Tawa at Tawakati**	01-02 to 2004-05	Discharge started w.e.from 10.05.2001 and closed on 1.4.2006											
15	**Machna at Shapur**	01-02 to 2004-05	Discharge started w.e.from 20.06.2000 and closed on 1.4.2006											
16	**Narmada at Sandia**	78-79 to 2004-05	12.11	75.57	163.82	111.95	33.33	17.35	15.70	10.91	10.96	10.08	7.97	6.95
17	**Shakkar at Gadarwara**	77-78 to 2004-05	19.78	104.03	247.65	155.71	34.75	10.80	8.27	5.36	4.75	3.43	2.26	1.81
18	**Narmada at Barmanghat**	72-73 to 2004-05	11.57	75.02	171.45	102.15	33.35	15.39	12.56	7.99	9.00	7.36	6.33	4.54
19	**Sher at Belkheri**	77-78 to 2004-05	20.14	109.58	223.21	124.49	24.27	9.11	6.73	2.90	2.66	2.16	1.09	0.86
20	**Hiran at Patan**	80-81 to 2004-05	8.95	60.88	162.74	135.65	38.34	12.23	7.05	4.90	4.28	3.25	2.31	1.50
21	**Banjar at Bamni**	99-00 to 2004-05	Discharge started w.e.from 30.11.1999 and closed on 1.4.2006											
22	**Narmada at Jamtara**	72-73 to 2000-01	13.94	104.47	204.07	106.21	38.42	19.75	15.60	8.52	12.46	10.46	9.61	6.99
23	**Banjar at Hirdaya Nager**	77.78 to 2001-02	18.67	127.18	190.36	114.51	28.37	7.95	3.80	3.26	2.51	1.38	0.29	0.06
24	**Burhner at Mohgaon**	78-79 to 2004-05	23.94	139.83	231.25	138.06	33.75	8.65	9.23	6.50	47.34	1.86	0.58	0.27
25	**Narmada at Amgaon**	01-02 to 2004-05	Discharge started w.e.from 07.09.2001 and closed on 1.4.2006											
26	**Narmada at Manot**	77-78 to 2004-05	31.25	171.95	287.27	178.24	38.48	13.07	9.46	10.07	6.22	3.32	1.51	0.76
27	**Narmada at Dindori**	88-89 to 2004-05	32.97	138.89	212.50	139.98	39.16	16.78	13.26	12.79	7.91	5.61	3.42	2.60

Source : Narmada Basin Organisation, Central Water Commission, Bhopal.

Table 8 : Monthly average flow per unit drainage area by site and river basin

XII Basin : Mahi and Sabarmati Unit : Millimeter

Sl. No.	Site Name	Reference Period	Jun	July	August	September	October	November	December	January	February	March	April	May
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	**Pingalwada**	2004-2005	1.6205	8.565	201.82	4.07	3.66	1.55	2.24	2.01	1.82	1.48	1.29	1.34
2	**Motinaroli**	2004-2005	41.87	64.52	482.48	51.89	38.18	23.72	18.15	9.84	5.85	9.3	9.9	7
3	**Mahuwa**	2004-2005	65.77	255.05	423.49	243.97	66.09	12.85	6.04	3.73	2.85	2.52	1.87	3.62
4	**Gadat**	2004-2005	42.32	133.31	792.54	47.61	40	0	0	0	0	0	0	0
5	**Ozerkheda**	2004-2005	78.85	236.54	1,783.44	216.34	105.95	21.69	8.13	6.65	4.2	2.22	0	0
6	**Nanipalsan**	2004-2005	35.88	164.03	870.23	175.5	91.19	9.17	2.83	0	0	0	0	0
7	**Durvesh**	2004-2005	35.6	239.33	1,501.89	125	59.34	15.82	0.2	0	0	0.2	0.39	0
8	**Khanpur**	2004-2005	3.3	11.14	58.28	30.30	5.8	2.93	2.20	1.88	1.64	2.03	1.96	2.02
9	**Chackeliya**	2004-2005	22.52	109.6	232.1	144.3	22.8	4.44	3.70	0.63	0.03	0.13	0.02	0.27
10	**Paderdidai**	2004-2005	3.36	14.37	55.94	28.18	4.35	2.34	1.83	1.12	0.79	0.96	1.22	1.36
11	**Rangeli**	2004-2005	3.01	11.6	29.75	16.71	4.81	1.78	1.31	1.59	0.95	0.91	0.88	0.43
12	**Dhariawad**	2004-2005	0.85	11.53	37.22	35.11	4.31	1.20	1.84	1.96	1.58	1.21	0.49	0.29
13	**Mataji (Mahi)**	2004-2005	9.8	74.82	122.10	60.95	22.47	2.88	1.38	0.53	0.39	0.26	0.02	0.01
14	**Vautha(Sanbarmati)**	2004-2005	1.99	4.42	33.93	11.16	14.55	3.33	4.99	2.61	1.37	2.78	0.66	0.52
15	**Kheda**	2004-2005	3.21	8.71	19.99	15.62	2.59	0.17	0.02	0.00	0.00	0.04	0.00	0.00
16	**Rantanpur**	2004-2005	4.73	18.56	34.11	22.14	9.04	1.15	0.59	0.4	0.00	0.07	0.13	1.79
17	**Deori Bridge**	2004-2005	3.70	8.65	11.74	13.20	4.10	1.48	1.45	1.48	1.48	1.66	1.77	1.79
18	**Kharoj**	2004-2005	3.46	20.75	22.29	24.88	4.27	0.4	0.11	0.06	0.04	0.00	0.00	0.01
19	**Jotsan**	2004-2005	1.79	9.10	14.36	11.77	4.28	0.28	0.17	0.18	0.09	0.03	0.00	0.00
20	**Kamalpur(Banas)**	2004-2005	2.00	12.21	12.29	20.20	1.83	0.76	0.42	0.33	0.21	0.14	0.09	0.06
21	**Chitrasani**	2004-2005	20.53	22.58	23.14	34.07	5.4	1.07	0.45	0.28	0.13	0.03	0.00	0.00
22	**Sarotry**	2004-2005	1.62	23.9	31.6	44.65	12.09	7.13	4.88	4.97	3.97	4.02	3.63	3.59
23	**Aburoad**	2004-2005	1.30	20.83	22.45	23.47	2.48	0.45	0.23	0.19	0.06	0.04	0.02	0.00
24	**Gandhav(Luni)**	2004-2005	0.00	3.58	3.14	1.93	0.15	0.05	0.02	0.01	0.00	0.00	0.00	0.00
25	**Balotra**	2004-2005	0.00	3.32	3.48	3.10	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00
26	**Lowara(Shetrinji)**	2004-2005	8.68	13.73	11.16	7.89	1.41	1.57	0.11	0.04	0.01	0.00	0.00	0.00
27	**Ganod(Bhadar)**	2004-2005	7.21	21.91	15.71	10.15	2.75	1.42	0.71	0.53	0.04	0.22	0.08	0.05
28	**Gungan(Machu)**	2004-2005	7.16	28.48	15.37	10.66	1.65	0.79	0.13	0.13	0.10	0.070	0.03	0.02
29	**Sapawada(Rupen)**	2004-2005	1.91	8.92	8.84	3.58	0.15	0.04	0.00	0.00	0.00	0.00	0.00	0.00

Source: Water Year Book of Tapi, Narmada & Independent Basins for 2003-2004-2005.

Table 10 : Ten daily and monthly average Sediment Load by site and river basin

I Basin : Mahanadi *Unit : Tonnes per day*

Site / Period	June	July	August	September	October	November	December	January	Feburary	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Year : 2006-2007												
Mahanadi at Tikarpara												
01-10 days	1859.00	186032.00	160125.00	222621.00	38550.00	4088.00	1037.00	798.00	330.00	419.00	464.00	340.00
11-20 days	3677.00	13504.00	327129.00	43489.00	10217.00	3306.00	724.00	442.00	515.00	419.00	646.00	1149.00
R - days	2165.00	44523.00	453011.00	26398.00	5503.00	1787.00	726.00	389.00	357.00	376.00	453.00	2916.00
Monthly	2567.00	81353.00	313421.67	97502.67	18090.00	3060.33	829.00	543.00	400.67	404.67	521.00	1468.33
Tel at Kantamal												
01-10 days	1861.00	532018.00	208266.00	106726.00	22389.00	153.00	58.00	51.00	10.00	11.00	21.00	30.00
11-20 days	2024.00	17862.00	77522.00	24463.00	1555.00	193.00	39.00	11.00	30.00	19.00	11.00	25.00
R - days	1464.00	56269.00	355061.00	8279.00	1145.00	79.00	33.00	21.00	12.00	10.00	43.00	41.00
Monthly	1783.00	202049.67	213616.33	46489.33	8363.00	141.67	43.33	27.67	17.33	13.33	25.00	32.00
Ong at Salebhata												
01-10 days	0.00	145.00	11941.00	1671.00	22.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11-20 days	0.00	147.00	16339.00	137.00	16.00	3.00	0.00	0.00	0.00	0.00	0.00	0.00
R - days	0.00	21311.00	28417.00	71.00	9.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Monthly	0.00	7201.00	18899.00	626.33	15.67	1.00	0.00	0.00	0.00	0.00	0.00	0.00
Ib at Sundergarh												
01-10 days	0.00	1210.00	8832.00	1977.00	155.00	3.00	1.00	-	-	-	-	-
11-20 days	0.00	4588.00	7436.00	1096.00	23.00	5.00	1.00	-	-	-	-	-
R - days	522.00	48652.00	28513.00	411.00	10.00	2.00	0.00	-	-	-	-	-
Monthly	174.00	18150.00	14927.00	1161.33	62.67	3.33	0.67	-	-	-	-	-
Mand at Kurubhata												
01-10 days	35.00	393.00	16134.00	3154.00	405.00	7.00	4.00	-	-	-	-	-
11-20 days	74.00	3907.00	6323.00	2311.00	79.00	7.00	5.00	-	-	-	-	-
R - days	294.00	52488.00	28245.00	1524.00	5.00	3.00	0.00	-	-	-	-	-
Monthly	134.33	18929.33	16900.67	2329.67	163.00	5.67	3.00	-	-	-	-	-

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Table 10 : Ten daily and monthly average Sediment Load by site and river basin

I Basin : Mahanadi *Unit : Tonnes per day*

Site / Period	June	July	August	September	October	November	December	January	Feburary	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Year : 2006-2007												
Mahanadi at Basantpur												
01-10 days	8.00	6657.00	61770.00	96501.00	2023.00	58.00	149.00	148.00	288.00	211.00	242.00	187.00
11-20 days	77.00	6433.00	133589.00	14310.00	2265.00	83.00	149.00	118.00	266.00	215.00	154.00	151.00
R - days	157.00	36069.00	67858.00	5471.00	815.00	10.00	101.00	293.00	221.00	200.00	135.00	135.00
Monthly	80.67	16386.33	87739.00	38760.67	1701.00	50.33	133.00	186.33	258.33	208.67	177.00	157.67
Hasdeo at Bamnidhi												
01-10 days	12.00	276.00	2953.00	2497.00	330.00	26.00	11.00	21.00	12.00	20.00	69.00	14.00
11-20 days	198.00	545.00	685.00	1647.00	185.00	47.00	40.00	9.00	31.00	43.00	12.00	13.00
R - days	332.00	4067.00	5262.00	372.00	62.00	16.00	10.00	25.00	21.00	17.00	37.00	21.00
Monthly	180.67	1629.33	2966.67	1505.33	192.33	29.67	20.33	18.33	21.33	26.67	39.33	16.00
Hasdeo at Manendragarh												
01-10 days	-	20.00	339.00	132.00	16.00	1.00	-	-	-	-	-	-
11-20 days	-	174.00	252.00	69.00	7.00	0.00	-	-	-	-	-	-
R - days	43.00	565.00	478.00	21.00	2.00	0.00	-	-	-	-	-	-
Monthly	14.33	253.00	356.33	74.00	8.33	0.33	-	-	-	-	-	-
Jonk at Rampur												
01-10 days	0.00	1594.00	16963.00	4687.00	18.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11-20 days	0.00	523.00	22119.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
R - days	0.00	5684.00	20235.00	87.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Monthly	0.00	2600.33	19772.33	1758.00	6.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Seonath at Jondhra												
01-10 days	0.00	920.00	15994.00	106081.00	2309.00	720.00	79.00	29.00	11.00	6.00	-	-
11-20 days	0.00	1633.00	227506.00	17568.00	1100.00	386.00	40.00	18.00	15.00	-	-	-
R - days	0.00	8374.00	22666.00	5629.00	1222.00	108.00	44.00	13.00	15.00	-	-	-
Monthly	0.00	3642.33	88722.00	43092.67	1543.67	404.67	54.33	20.00	13.67	2.00	-	-

Contd/…

Table 10 : Ten daily and monthly average Sediment Load by site and river basin

I Basin : Mahanadi *Unit : Tonnes per day*

Site / Period	June	July	August	September	October	November	December	January	Feburary	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Year : 2006-2007												
Hamp at Andhiyarkore												
01-10 days	-	41.00	266.00	4331.00	7.00	2.00	1.00	0.00	-	-	-	-
11-20 days	-	173.00	1106.00	206.00	6.00	1.00	1.00	0.00	-	-	-	-
R - days	-	2002.00	285.00	103.00	11.00	1.00	0.00	0.00	-	-	-	-
Monthly	-	738.67	552.33	1546.67	8.00	1.33	0.67	0.00	-	-	-	-
Seonath at Simga												
01-10 days	11.00	938.00	3305.00	36889.00	194.00	38.00	0.00	0.00	0.00	0.00	0.00	0.00
11-20 days	2.00	2415.00	67255.00	2758.00	104.00	20.00	1.00	0.00	0.00	0.00	0.00	0.00
R - days	1.00	7468.00	9480.00	827.00	79.00	7.00	0.00	0.00	0.00	0.00	0.00	0.00
Monthly	4.67	3607.00	26680.00	13491.33	125.67	21.67	0.33	0.00	0.00	0.00	0.00	0.00
Mahanadi at Rajim												
01-10 days	0.00	25316.00	28523.00	11962.00	160.00	35.00	4.00	0.00	-	-	-	-
11-20 days	0.00	874.00	29903.00	459.00	32.00	30.00	4.00	0.00	-	-	-	-
R - days	6.00	2610.00	51167.00	384.00	29.00	8.00	3.00	0.00	-	-	-	-
Monthly	2.00	9600.00	36531.00	4268.33	73.67	24.33	3.67	0.00	-	-	-	-
Pairi at Baronda												
01-10 days	0.00	13648.00	4782.00	2716.00	24.00	12.00	0.00	0.00	0.00	-	-	-
11-20 days	0.00	287.00	8461.00	45.00	11.00	14.00	0.00	0.00	0.00	-	-	-
R - days	0.00	3876.00	7981.00	53.00	12.00	0.00	0.00	0.00	0.00	-	-	-
Monthly	0.00	5937.00	7074.67	938.00	15.67	8.67	0.00	0.00	0.00	-	-	-
Tel at Kesinga												
01-10 days	-	-	-	-	107859.00	274.00	131.00	132.00	89.00	42.00	188.00	172.00
11-20 days	-	-	-	-	1872.00	290.00	183.00	26.00	93.00	55.00	55.00	51.00
R - days	-	-	-	43925.00	209.00	236.00	79.00	83.00	64.00	50.00	8.00	341.00
Monthly	-	-	-	14641.67	36646.67	266.67	131.00	80.33	82.00	49.00	83.67	188.00

Source: Sediment Water Year Book, 2006-2007

Table 10 : Ten daily and monthly average Sediment Load by site and river basin

II	Basin : Subernarekha, Burhabalang & Baitarni											*Unit : Tonnes per day*
Site / Period	June	July	August	September	October	November	December	January	Feburary	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Year : 2006-2007												
a) Basin : Subernarekha												
Subarnarekha at Jamshedpur												
01-10 days	3870	881	40940	21708	6082	958	776	474	87	91	77	1
11-20 days	203	36494	155013	4208	1508	1068	704	293	63	72	65	1
R - days	79	84633	231045	29074	1134	858	634	182	46	93	59	1
Monthly	1384	40669	142333	18330	2908	961	705	316	65	85	67	1
Subarnarekha at Ghatsila												
01-10 days	14246	85	57748	82783	24286	2634	5028	19	23	21	0	0
11-20 days	788	23369	72546	32753	5506	316	3682	169	18	17	0	0
R - days	1	29152	120436	117597	3648	53	32	18	20	9	0	0
Monthly	5012	17535	83577	77711	11147	1001	2914	69	20	16	0	0
Kharkai at Adityapur												
01-10 days	2160	143	12784	11658	1568	45	10	7	29	7	6	9
11-20 days	123	4279	22619	769	128	43	9	6	27	10	6	6
R - days	30	94287	39220	11823	66	19	9	8	12	10	6	6
Monthly	771	32903	24874	8083	587	36	9	7	23	9	6	7
b) Basin: Burhabalang												
Burhabalang at Govindpur												
01-10 days	1059	1979	20611	33995	7956	293	32	20	24	26	16	53
11-20 days	250	2141	34362	9216	625	251	30	15	149	100	35	54
R - days	414	12940	46473	14748	319	64	16	20	28	37	37	33
Monthly	574	5687	33815	19320	2967	203	26	18	67	54	29	47
c) Basin: Baitarani												
Baitarani at Anandpur												
01-10 days	5459	1327	59874	27432	6351	53	18	16	33	49	20	6
11-20 days	556	1477	33167	8814	484	81	17	17	304	69	20	7
R - days	373	49871	59320	14485	113	44	17	19	53	36	18	5
Monthly	2129	17558	50787	16910	2316	59	17	17	130	51	19	6
Baitarani at Champua												
01-10 days	93	1102	7624	3880	136	22	14	6	7	10	5	9
11-20 days	36	919	10488	1795	35	21	10	6	27	11	6	16
R - days	131	10380	13438	3221	19	14	8	5	17	6	10	15
Monthly	87	4134	10517	2965	63	19	11	6	17	9	7	13

Source: Suspended Sediment Data Water Year Book Feb., 2008 for the period of 2006-2007.

Table 10 : Ten daily and monthly average Sediment Load by site and river basin

III Basin : Brahamani *Unit : Tonnes per day*

Site / Period	June	July	August	September	October	November	December	January	Feburary	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Year : 2006-2007												
Brahmani at Tilga												
01-10 days	4048	5036	8066	2705	1252	174	21	13	0	0	0	0
11-20 days	45	3554	17524	1629	142	72	6	0	11	0	0	0
R - days	4204	37797	26713	622	256	12	11	0	0	0	0	0
Monthly	2766	15462	17434	1652	550	86	13	4	4	0	0	0
Brahmani at Panposh												
01-10 days	15970	3991	95938	29304	13276	841	117	109	105	71	57	33
11-20 days	1973	79475	116306	15819	3841	289	109	39	84	46	92	145
R - days	65	188429	192064	51793	1759	88	68	92	62	67	48	51
Monthly	6003	90632	134769	32305	6292	406	98	80	84	61	48	76
Brahmani at Gomlai												
01-10 days	11020	3595	98018	15225	3486	246	50	29	17	22	12	147
11-20 days	1106	58481	91591	5686	480	197	22	15	32	22	24	142
R - days	53	209588	165674	26325	426	55	25	11	17	14	26	13
Monthly	4060	90555	118428	15745	1464	166	32	18	22	19	21	101
Brahmani at Jenapur												
01-10 days	409	377	92355	44092	10454	1597	441	188	156	226	440	210
11-20 days	247	271	35533	14163	5661	1224	277	322	199	205	696	176
R - days	69	16206	204480	20760	2029	589	295	227	195	280	442	216
Monthly	242	5618	110789	26338	6048	1137	338	246	183	237	526	201

Source: Suspended Sediment Data Water Year Book Feb., 2008 for the period of 2006-2007.

Table 10 : Ten daily and monthly average Sediment Load by site and river basin

IV Basin : Rushikulya, Vamsadhra, Saroda & Nagavali

Site / Period	June	July	August	September	October	November	December	January	Feburary	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Year : 2006-2007												
Vamsadhara at Kashinagar												
01-10 days	414	385914	253372	78481	36425	4319	426	30	53	5	1	161
11-20 days	213	5674	32862	25492	4045	2096	275	21	7	7	111	205
R - days	17955	11487	135928	119628	1531	810	135	13	6	3	48	88
Monthly	6194	134358	140721	74534	14000	2408	279	21	22	5	53	151
Vamsadhara at Purushottampur												
01-10 days	173	170787	12716	30320	107518	422	72	11	0	0	0	0
11-20 days	59	324	20741	34098	835	274	51	2	0	0	0	0
R - days	778	7699	89853	62042	365	183	10	0	0	0	0	0
Monthly	337	59603	41103	42153	36239	293	44	4	0	0	0	0
Nagavali at Srikakulam												
01-10 days	1169	113308	400542	36369	64750	11195	1760	219	122	0	0	989
11-20 days	213	3787	61737	51884	10925	6946	1073	160	67	2	1	3240
R - days	51256	5375	68011	64018	3269	5016	846	146	1	2	1	438
Monthly	17546	40823	176763	50757	26315	7719	1226	175	63	1	1	1556

Source: Suspended Sediment Data Water Year Book Feb., 2008 for the period of 2006-2007.

Table 10 : Ten daily and monthly average Sediment Load by site and river basin

V Basin : Godavari *Unit : Tonnes per day*

Site / Period	June	July	August	September	October	November	December	January	Feburary	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Year : 2006-2007												
Godavari at Plolavaram												
01-10 days	841	1269293	2044559	402237	160551	20220	1542	1298	980	568	478	649
11-20 days	1508	74625	1213787	239622	34692	10496	1987	1040	535	654	566	605
R - days	1652	127758	204442	318876	13119	3002	1748	928	483	600	641	387
Monthly	1334	490559	1154263	320245	69454	11239	1759	1089	666	607	562	547
Sabari at Konta												
01-10 days	1035	46600	1336362	18607	38444	10894	789	704	576	1217	1005	548
11-20 days	873	3792	397611	294545	13409	7507	876	633	564	794	847	577
R - days	1444	24266	123469	385455	6035	2524	770	624	543	1102	635	644
Monthly	1117	24886	619147	232869	19296	6975	812	654	561	1038	829	590
Godavari at Perur												
01-10 days	2	1274499	12141408	822470	253898	52301	165	121	48	14	11	10
11-20 days	2	32093	3554256	1150459	64194	17784	152	82	40	13	10	8
R - days	2	131918	255710	1374407	24824	7955	173	55	16	11	12	7
Monthly	2	479503	5317125	1115779	114305	26013	163	86	35	13	11	8
Indravati at Pathagudem												
01-10 days	0	373452	1112822	163559	106433	4746	363	102	45	0	0	0
11-20 days	0	14615	254347	128123	4891	1641	211	69	23	0	0	0
R - days	11	76240	103692	70147	1895	497	167	59	17	0	0	0
Monthly	4	154769	490287	120610	37740	2295	247	77	28	0	0	0
Indravati at Jagdalpur												
01-10 days	5	182432	99637	16991	78976	1154	0	0	0	0	0	0
11-20 days	4	613	53916	7591	2022	554	0	0	0	0	0	0
R - days	19	16220	25029	18435	858	62	0	0	0	0	0	0
Monthly	9	66422	59527	14339	27285	590	0	0	0	0	0	0
Pranahita at Tekra												
01-10 days	0	455980	2017356	576112	100753	3356	177	73	55	24	25	13
11-20 days	0	44059	1020102	291193	11667	879	137	66	36	30	19	7
R - days	0	224317	159243	216734	2303	290	93	72	26	32	13	2
Monthly	0	241452	1065567	361346	38241	1508	136	70	39	29	19	7
Peddavagu at Bhatpally												
01-10 days	0	1529	67443	610	1432	31	12	3	2	1	1	1
11-20 days	0	52	2376	7897	46	27	10	3	2	1	4	0
R - days	48	76	297	5493	16	17	6	2	2	1	10	0
Monthly	16	552	23372	4667	498	25	9	3	2	1	5	0

Contd/…

Table 10 : Ten daily and monthly average Sediment Load by site and river basin

V Basin : Godavari *Unit : Tonnes per day*

Site / Period	June	July	August	September	October	November	December	January	Feburary	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Year : 2006-2007												
Wardha at Bamni												
01-10 days	1	521732	990442	9035	15840	125	9	17	14	13	4	3
11-20 days	1	679	128555	30708	1867	31	12	13	17	6	4	2
R - days	8496	12164	3253	74611	675	11	10	14	9	8	7	1
Monthly	2833	178192	374083	38118	6127	56	10	15	13	9	5	2
Penganga at P.G.Bridge												
01-10 days	4	196959	812826	275	4887	166	27	11	8	3	5	9
11-20 days	1	282	23852	67751	435	60	14	14	4	8	13	9
R - days	13236	124	2269	25844	204	42	11	14	1	6	14	4
Monthly	4414	65788	279649	31290	1842	89	17	13	4	6	11	7
Wunna at Nandgaon												
01-10 days	0	655	299	385	68	2	15	35	38	15	0	0
11-20 days	0	7	255	148	23	2	16	28	37	1	0	0
R - days	13	42	154	181	5	22	14	24	16	0	0	0
Monthly	4	235	236	238	32	9	15	29	30	5	0	0
Wardha at Hivra												
01-10 days	0	31634	74261	7794	3587	3	1	0	0	0	0	0
11-20 days	0	19	4115	19091	42	2	1	0	1	0	0	0
R - days	6	4272	66	2176	4	1	1	0	1	1	0	0
Monthly	2	11975	26147	9687	1211	2	1	0	1	0	0	0
Wainganga at Asthi												
01-10 days	9	64513	179358	256103	9495	1714	483	78	45	30	17	25
11-20 days	10	5617	439311	75325	2083	1345	51	45	31	24	16	34
R- days	161	176777	91654	35318	2002	849	70	49	40	29	19	12
Monthly	60	82302	236774	122249	4527	1303	201	57	39	28	17	24
Kanhan at Satrapur												
01-10 days	15	1698	9970	111823	492	97	47	29	24	23	13	7
11-20 days	50	2724	66115	15513	230	75	40	26	25	19	11	6
R- days	888	4001	5218	1688	137	55	33	25	22	14	8	11
Monthly	318	2808	27101	43008	286	76	40	27	24	19	11	8
Godavari at Mancherial												
01-10 days	1	120	149069	910	4912	296	65	26	38	27	15	9
11-20 days	0	24	26324	48397	1657	137	69	38	42	25	21	7
R- days	13	19	1994	21501	327	91	52	44	35	22	16	4
Monthly	5	54	59129	23603	2299	175	62	36	38	25	17	7

Contd/…

Table 10 : Ten daily and monthly average Sediment Load by site and river basin

V Basin : Godavari *Unit : Tonnes per day*

Site / Period	June	July	August	September	October	November	December	January	Feburary	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Year : 2006-2007												
Manjira at Saigaon												
01-10 days	0	0	5158	0	6550	0	0	0	0	0	0	0
11-20 days	0	0	300	3823	649	0	0	0	0	0	0	0
R-days	8	0	20	5888	23	0	0	0	0	0	0	0
Monthly	3	0	1826	3237	2407	0	0	0	0	0	0	0
Godavari at Dhalegaon												
01-10 days	0	20	95141	1507	16439	6	7	0	0	0	0	0
11-20 days	0	4	201020	38635	867	12	2	0	0	0	0	0
R-days	121	1	3950	12265	88	6	2	0	0	0	0	0
Monthly	40	8	100037	17469	5798	8	4	0	0	0	0	0

Remarks : Water Year Book the period of 2006-2007.

Table 10 : Ten daily and monthly average Sediment Load by site and river basin

VI Basin : Krishna *Unit : Tonnes per day*

Site / Period	June	July	August	September	October	November	December	January	Feburary	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Year : 2006-2007												
Krishna at Wadenapalli												
01-10 days	4	84	46276	753	1669	194	26	67	75	72	48	14
11-20 days	18	265	7439	1030	1378	75	46	35	102	70	32	9
R - days	25	280	9115	9626	701	108	62	38	85	79	15	57
Monthly	16	210	20943	3803	1249	126	45	47	87	74	32	27
Tungabhadra at Bawapuram												
01-10 days	136	105	10961	37	463	2614	9	5	3	1	8	1
11-20 days	343	6	27921	632	15	91	10	5	3	1	19	1
R - days	145	16	7179	1325	51	13	7	3	2	1	8	23
Monthly	208	42	15354	665	176	906	9	4	3	1	12	8
Bhima at Yadgir												
01-10 days	0	317	196261	1486	32353	298	-	-	-	-	-	-
11-20 days	0	1393	363134	70730	5596	326	-	-	-	-	-	-
R- days	274	2068	32668	31571	561	0	-	-	-	-	-	-
Monthly	91	1259	197354	34596	12837	208	-	-	-	-	-	-
Kagna at Malkhed												
01-10 days	47	7	17	3	12	7	2	2	2	2	0	0
11-20 days	14	3	13	122	25	5	2	3	3	1	0	0
R- days	11	4	8	36	4	3	2	4	3	0	1	0
Monthly	24	5	13	54	14	5	2	3	3	1	0	0
Bhima at Takali												
01-10 days	0	530	6445	303	788	0	-	-	-	-	-	-
11-20 days	0	150	6397	1869	269	0	-	-	-	-	-	-
R-days	95	707	444	1271	24	0	-	-	-	-	-	-
Monthly	32	462	4429	1148	360	0	-	-	-	-	-	-
Malaprabha at Cholachagudda												
01-10 days	479	627	112	3509	37307	4942	-	-	-	-	-	-
11-20 days	10893	41	124811	24134	4117	3142	-	-	-	-	-	-
R-days	27335	983	9211	1599	1906	1502	-	-	-	-	-	-
Monthly	12902	550	44711	9747	14443	3195	-	-	-	-	-	-
Krishna at Kurundwad												
01-10 days	5295	92650	509366	1928	5026	0	-	-	-	-	-	-
11-20 days	863	25940	578309	7100	3028	0	-	-	-	-	-	-
R-days	14121	99490	23569	19031	450	0	-	-	-	-	-	-
Monthly	6760	72693	370415	9353	2835	0	-	-	-	-	-	-
Krishna at Karad												
01-10 days	433	11306	137202	559	660	146	38	56	60	57	6	91
11-20 days	31	2359	67612	1189	284	81	97	58	102	88	81	96
R-days	756	100600	1319	1977	63	88	76	24	11	58	84	107
Monthly	407	38088	68711	1242	336	105	70	46	58	68	57	98

Remarks : Water Year Book the period of 2006-2007 (Krishna Basin).

Table 10 : Ten daily and monthly average Sediment Load by site and river basin

VII Basin : Cauvery *Unit : Tonnes per day*

Site / Period	June	July	August	September	October	November	December	January	Feburary	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Year : 2005-2006												
Thirumalairajanar at Thengudi												
01-10 days	0.00	0.00	0.00	17.00	26.00	140.00	30.00	9.00	2.00	0.00	0.00	0.00
11-20 days	0.00	0.00	1.00	14.00	32.00	37.00	24.00	10.00	1.00	0.00	0.00	0.00
R - days	0.00	0.00	6.00	8.00	57.00	161.00	7.00	6.00	0.00	0.00	0.00	0.00
Monthly	0.00	0.00	2.33	13.00	38.33	112.67	20.33	8.33	1.00	0.00	0.00	0.00
Cauvery at Musiri												
01-10 days	17.00	0.00	1812.00	3737.00	1907.00	8857.00	3798.00	612.00	16.00	0.00	0.00	0.00
11-20 days	0.00	0.00	1619.00	2457.00	982.00	857.00	4767.00	459.00	0.00	0.00	57.00	18.00
R - days	0.00	496.00	1882.00	2044.00	12062.00	15712.00	817.00	293.00	0.00	0.00	24.00	88.00
Monthly	5.67	165.33	1771.00	2746.00	4983.67	8475.33	3127.33	454.67	5.33	0.00	27.00	35.33
Amaravathy at Nallamaranpatty												
01-10 days	0.00	0.00	869.00	0.00	8.00	20.00	661.00	16.00	1.00	0.00	0.00	0.00
11-20 days	0.00	0.00	0.00	0.00	7.00	0.00	1950.00	6.00	1.00	1.00	0.00	0.00
R - days	0.00	0.00	1.00	0.00	8.00	46980.00	26.00	1.00	0.00	0.00	0.00	0.00
Monthly	0.00	0.00	290.00	0.00	7.67	15666.67	879.00	7.67	0.67	0.33	0.00	0.00
Cauvery at Kodumudi												
01-10 days	29.00	15.00	1222.00	2743.00	766.00	7421.00	949.00	371.00	52.00	71.00	96.00	83.00
11-20 days	22.00	41.00	1199.00	1481.00	901.00	861.00	562.00	250.00	76.00	88.00	145.00	97.00
R - days	18.00	498.00	1447.00	1030.00	19978.00	2433.00	402.00	165.00	76.00	116.00	82.00	86.00
Monthly	23.00	184.67	1289.33	1751.33	7215.00	3571.67	637.67	262.00	68.00	91.67	107.67	88.67
Bhavani at Savandapur												
01-10 days	15.00	16.00	28.00	40.00	51.00	163.00	86.00	19.00	26.00	21.00	37.00	14.00
11-20 days	20.00	35.00	27.00	21.00	42.00	134.00	54.00	28.00	30.00	45.00	42.00	49.00
R - days	16.00	26.00	45.00	27.00	193.00	482.00	21.00	27.00	46.00	30.00	20.00	26.00
Monthly	17.00	25.67	33.33	29.33	95.33	259.67	53.67	24.67	34.00	32.00	33.00	29.67
Moyar at Thengumarahada												
01-10 days	16.00	79.00	1182.00	118.00	58.00	88.00	52.00	13.00	10.00	7.00	11.00	8.00
11-20 days	16.00	52.00	106.00	154.00	88.00	35.00	22.00	12.00	8.00	8.00	8.00	6.00
R - days	14.00	493.00	63.00	41.00	216.00	97.00	16.00	10.00	6.00	11.00	9.00	6.00
Monthly	15.33	208.00	450.33	104.33	120.67	73.33	30.00	11.67	8.00	8.67	9.33	6.67

Contd/….

Table 10 : Ten daily and monthly average Sediment Load by site and river basin

VII Basin : Cauvery *Unit : Tonnes per day*

Site / Period	June	July	August	September	October	November	December	January	Feburary	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Year : 2005-2006												
Bhavani at Nellithurai												
01-10 days	1.00	320.00	514.00	291.00	191.00	231.00	74.00	3.00	31.00	18.00	3.00	3.00
11-20 days	2.00	239.00	33.00	494.00	73.00	308.00	3.00	2.00	2.00	5.00	2.00	26.00
R - days	864.00	2197.00	51.00	164.00	109.00	182.00	3.00	45.00	2.00	3.00	4.00	361.00
Monthly	289.00	918.67	199.33	316.33	124.33	240.33	26.67	16.67	11.67	8.67	3.00	130.00
Cauvery at Urachikottai												
01-10 days	0.00	34.00	603.00	3105.00	471.00	7716.00	425.00	144.00	0.00	0.00	9.00	1.00
11-20 days	0.00	47.00	803.00	917.00	694.00	506.00	253.00	138.00	0.00	13.00	18.00	18.00
R - days	0.00	213.00	1136.00	892.00	13321.00	516.00	260.00	77.00	0.00	46.00	1.00	9.00
Monthly	0.00	98.00	847.33	1638.00	4828.67	2912.67	312.67	119.67	0.00	19.67	9.33	9.33
Cauvery at Biligundulu												
01-10 days	77.00	1485.00	27840.00	9956.00	1125.00	1739.00	545.00	221.00	75.00	129.00	75.00	46.00
11-20 days	59.00	1161.00	6917.00	6661.00	2794.00	894.00	447.00	166.00	88.00	123.00	93.00	132.00
R - days	20.00	8767.00	4042.00	751.00	12412.00	763.00	327.00	131.00	94.00	86.00	75.00	133.00
Monthly	52.00	3804.33	12933.00	5789.33	5443.67	1132.00	439.67	172.67	85.67	112.67	81.00	103.67
Shimsha at T.K.Halli												
01-10 days	0.00	0.00	24.00	139.00	47.00	131.00	104.00	56.00	1.00	9.00	3.00	5.00
11-20 days	0.00	8.00	30.00	86.00	202.00	105.00	89.00	9.00	1.00	8.00	1.00	11.00
R - days	0.00	28.00	149.00	39.00	316.00	94.00	67.00	11.00	0.00	7.00	5.00	23.00
Monthly	0.00	12.00	67.67	88.00	188.33	110.00	86.67	25.33	0.67	8.00	3.00	13.00
Cauvery at Kollegal												
01-10 days	40.00	589.00	7574.00	785.00	420.00	1266.00	368.00	101.00	58.00	58.00	27.00	20.00
11-20 days	29.00	566.00	1304.00	1100.00	862.00	550.00	228.00	86.00	52.00	51.00	34.00	54.00
R - days	21.00	1828.00	555.00	461.00	3573.00	638.00	139.00	82.00	43.00	33.00	27.00	34.00
Monthly	30.00	994.33	3144.33	782.00	1618.33	818.00	245.00	89.67	51.00	47.33	29.33	36.00
Kabini at T.Narasipur												
01-10 days	34.00	1278.00	13022.00	620.00	143.00	632.00	246.00	36.00	19.00	82.00	110.00	202.00
11-20 days	25.00	1098.00	560.00	900.00	523.00	65.00	148.00	33.00	11.00	105.00	304.00	590.00
R - days	18.00	4912.00	466.00	200.00	3375.00	104.00	68.00	33.00	31.00	167.00	187.00	311.00
Monthly	25.67	2429.33	4682.67	573.33	1347.00	267.00	154.00	34.00	20.33	118.00	200.33	367.67

Contd/….

Table 10 : Ten daily and monthly average Sediment Load by site and river basin

VII Basin : Cauvery *Unit : Tonnes per day*

Site / Period	June	July	August	September	October	November	December	January	Feburary	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Year : 2005-2006												
Kabini at Muthankera												
01-10 days	1.00	4461.00	2563.00	1174.00	782.00	469.00	82.00	21.00	16.00	30.00	14.00	12.00
11-20 days	221.00	1634.00	1134.00	323.00	841.00	228.00	30.00	7.00	14.00	25.00	29.00	58.00
R - days	1972.00	6408.00	580.00	739.00	878.00	55.00	29.00	5.00	12.00	11.00	20.00	2674.00
Monthly	731.33	4167.67	1425.67	745.33	833.67	250.67	47.00	11.00	14.00	22.00	21.00	914.67
Hemavathi at Mukundur Hosahalli												
01-10 days	3.00	3.00	825.00	112.00	12.00	52.00	20.00	12.00	9.00	9.00	14.00	12.00
11-20 days	3.00	3.00	49.00	122.00	15.00	11.00	19.00	12.00	7.00	7.00	14.00	13.00
R - days	3.00	5.00	34.00	20.00	67.00	8.00	20.00	9.00	8.00	8.00	13.00	12.00
Monthly	3.00	3.67	302.67	84.67	31.33	23.67	19.67	11.00	8.00	8.00	13.67	12.33
Cauvery at Kudige												
01-10 days	4.00	2297.00	5167.00	998.00	81.00	112.00	55.00	26.00	10.00	11.00	7.00	9.00
11-20 days	37.00	456.00	2116.00	1266.00	435.00	40.00	45.00	29.00	8.00	12.00	10.00	11.00
R - days	1043.00	5466.00	636.00	350.00	265.00	70.00	40.00	14.00	7.00	9.00	6.00	1066.00
Monthly	361.33	2739.67	2639.67	871.33	260.33	74.00	46.67	23.00	8.33	10.67	7.67	362.00

Source: Suspended Sediment and Bedmaterial Data Book for 2005-2006 (Cauvery Basin)

Table 10 : Ten daily and monthly average Sediment Load by site and river basin

VIII Basin : East Flowing Rivers from Mahanadi to Kanyakumari *Unit : Tonnes per day*

Site / Period	June	July	August	September	October	November	December	January	Feburary	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Year : 2005-2006												
Gundlakamma at Thammavaram												
01-10 days	0.00	0.00	1.00	23.00	32.00	969.00	228.00	31.00	100.00	281.00	16.00	9.00
11-20 days	0.00	0.00	0.00	8.00	2873.00	101.00	65.00	76.00	22.00	221.00	27.00	2.00
R - days	0.00	12.00	16.00	249.00	3269.00	118.00	24.00	84.00	6.00	13.00	11.00	6.00
Monthly	0.00	4.00	5.67	93.33	2058.00	396.00	105.67	63.67	42.67	171.67	18.00	5.67
Pennar at Chennur												
01-10 days	0.00	0.00	816.00	13830.00	4607.00	8036.00	831.00	226.00	81.00	9.00	0.00	0.00
11-20 days	0.00	0.00	4102.00	3633.00	25159.00	1079.00	579.00	217.00	21.00	103.00	0.00	0.00
R - days	0.00	188.00	4170.00	5849.00	36928.00	1185.00	253.00	142.00	0.00	4.00	0.00	7.00
Monthly	0.00	62.67	3029.33	7770.67	22231.33	3433.33	554.33	195.00	34.00	38.67	0.00	2.33
Kunderu at Alladupalli												
01-10 days	6.00	0.00	1666.00	7565.00	1979.00	3473.00	598.00	25.00	2.00	1.00	1.00	0.00
11-20 days	14.00	69.00	5552.00	3216.00	9989.00	1113.00	457.00	6.00	2.00	3.00	1.00	0.00
R - days	2.00	577.00	2400.00	3815.00	12075.00	725.00	168.00	4.00	3.00	0.00	1.00	0.00
Monthly	7.33	215.33	3206.00	4865.33	8014.33	1770.33	407.67	11.67	2.33	1.33	1.00	0.00
Ponnaiyar at Gummannur												
01-10 days	84.00	3.00	10.00	1012.00	304.00	2877.00	84.00	100.00	7.00	10.00	3.00	1.00
11-20 days	64.00	21.00	8.00	30.00	441.00	112.00	102.00	95.00	10.00	11.00	4.00	13.00
R - days	5.00	19.00	31.00	57.00	14121.00	126.00	75.00	19.00	5.00	4.00	4.00	7.00
Monthly	51.00	14.33	16.33	366.33	4955.33	1038.33	87.00	71.33	7.33	8.33	3.67	7.00
Ponnaiyar at Vazhavachanur												
01-10 days	0.00	0.00	0.00	0.00	5.00	1293.00	451.00	0.00	0.00	0.00	0.00	0.00
11-20 days	0.00	0.00	0.00	0.00	3.00	250.00	968.00	0.00	0.00	0.00	0.00	0.00
R - days	0.00	0.00	0.00	481.00	2507.00	4163.00	72.00	0.00	0.00	0.00	0.00	0.00
Monthly	0.00	0.00	0.00	160.33	838.33	1902.00	497.00	0.00	0.00	0.00	0.00	0.00
Suruliyar at Theni												
01-10 days	1.00	13.00	347.00	237.00	371.00	298.00	3781.00	61.00	47.00	76.00	76.00	15.00
11-20 days	1.00	45.00	421.00	268.00	352.00	1383.00	504.00	71.00	48.00	14.00	4.00	7.00
R - days	6.00	217.00	390.00	217.00	775.00	719.00	133.00	44.00	46.00	201.00	5.00	0.00
Monthly	2.67	91.67	386.00	240.67	499.33	800.00	1472.67	58.67	47.00	97.00	28.33	7.33
Vaigai at Ambasamudram												
01-10 days	60.00	0.00	93.00	9.00	776.00	132.00	2204.00	74.00	10.00	380.00	1.00	0.00
11-20 days	0.00	0.00	0.00	8.00	886.00	430.00	5235.00	148.00	2.00	68.00	1.00	0.00
R - days	0.00	251.00	0.00	0.00	1474.00	1522.00	98.00	30.00	0.00	3.00	1.00	0.00
Monthly	20.00	83.67	31.00	5.67	1045.33	694.67	2512.33	84.00	4.00	150.33	1.00	0.00
Thambraparani at Murappanadu												
01-10 days	23.00	15.00	11.00	16.00	10.00	15.00	44.00	17.00	21.00	37.00	6.00	15.00
11-20 days	16.00	21.00	14.00	6.00	6.00	124.00	1464.00	147.00	15.00	20.00	18.00	13.00
R - days	21.00	13.00	9.00	5.00	6.00	90.00	29.00	12.00	18.00	5.00	11.00	14.00
Monthly	20.00	16.33	11.33	9.00	7.33	76.33	512.33	58.67	18.00	20.67	11.67	14.00

Source: Suspended Sediment and Bedmaterial Data Book for 2005-2006 (East Flowing River)

Table 10 : Ten daily and monthly average Sediment Load by site and river basin

IX Basin : West Flowing Rivers fro Kanyakumari to Tapi *Unit : Tonnes per day*

Site / Period	June	July	August	September	October	November	December	January	Feburary	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Year : 2005-2006												
Nethravathi at Bantwal												
01-10 days	0.00	14360.00	46372.00	5281.00	430.00	1291.00	0.00	0.00	0.00	0.00	0.00	0.00
11-20 days	1631.00	15592.00	22564.00	5929.00	1594.00	506.00	0.00	0.00	0.00	0.00	0.00	0.00
R - days	9465.00	30141.00	3835.00	875.00	959.00	246.00	0.00	0.00	0.00	0.00	0.00	2317.00
Monthly	3698.67	20031.00	24257.00	4028.33	994.33	681.00	0.00	0.00	0.00	0.00	0.00	772.33
Payaswani at Erinjipuzha												
01-10 days	7.00	730.00	3163.00	4166.00	42.00	116.00	26.00	10.00	3.00	0.00	0.00	0.00
11-20 days	232.00	958.00	1135.00	434.00	618.00	51.00	13.00	7.00	1.00	0.00	0.00	0.00
R - days	913.00	3621.00	730.00	146.00	489.00	27.00	8.00	4.00	0.00	0.00	0.00	748.00
Monthly	384.00	1769.67	1676.00	1582.00	383.00	64.67	15.67	7.00	1.33	0.00	0.00	249.33
Valapatanam at Perumannu												
01-10 days	3.00	6554.00	7140.00	744.00	89.00	77.00	3.00	4.00	4.00	5.00	4.00	3.00
11-20 days	296.00	1454.00	1857.00	2992.00	327.00	63.00	3.00	6.00	5.00	5.00	4.00	3.00
R - days	2976.00	9267.00	528.00	252.00	197.00	25.00	11.00	5.00	5.00	4.00	3.00	2651.00
Monthly	1091.67	5758.33	3175.00	1329.33	204.33	55.00	5.67	5.00	4.67	4.67	3.67	885.67
Chaliyar at Kuniyil												
01-10 days	243.00	7288.00	7264.00	660.00	174.00	834.00	209.00	109.00	96.00	0.00	0.00	0.00
11-20 days	447.00	1366.00	482.00	832.00	1064.00	681.00	65.00	222.00	0.00	0.00	0.00	0.00
R - days	2281.00	5651.00	402.00	434.00	580.00	107.00	24.00	841.00	0.00	0.00	0.00	2348.00
Monthly	990.33	4768.33	2716.00	642.00	606.00	540.67	99.33	390.67	32.00	0.00	0.00	782.67
Kadalundi at Karathodu												
01-10 days	13.00	1481.00	784.00	178.00	116.00	366.00	47.00	4.00	0.00	0.00	0.00	0.00
11-20 days	89.00	390.00	150.00	335.00	377.00	487.00	24.00	1.00	0.00	0.00	0.00	0.00
R - days	391.00	442.00	45.00	159.00	178.00	56.00	12.00	0.00	0.00	0.00	0.00	304.00
Monthly	164.33	771.00	326.33	224.00	223.67	303.00	27.67	1.67	0.00	0.00	0.00	101.33
Bharathapuzha at Kumbidi												
01-10 days	44.00	4601.00	5261.00	1451.00	273.00	191.00	452.00	40.00	25.00	31.00	8.00	6.00
11-20 days	383.00	2363.00	869.00	3453.00	449.00	492.00	201.00	64.00	11.00	25.00	17.00	3.00
R - days	2332.00	4794.00	208.00	1301.00	420.00	728.00	104.00	29.00	6.00	6.00	23.00	2016.00
Monthly	919.67	3919.33	2112.67	2068.33	380.67	470.33	252.33	44.33	14.00	20.67	16.00	675.00

Contd/….

Table 10 : Ten daily and monthly average Sediment Load by site and river basin

IX Basin : West Flowing Rivers fro Kanyakumari to Tapi *Unit : Tonnes per day*

Site / Period	June	July	August	September	October	November	December	January	Feburary	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Year : 2005-2006												
Pulanthode at Pulamanthole												
01-10 days	32.00	2454.00	1102.00	571.00	148.00	106.00	60.00	5.00	1.00	3.00	2.00	1.00
11-20 days	192.00	1684.00	229.00	600.00	294.00	214.00	15.00	3.00	1.00	2.00	3.00	1.00
R - days	1354.00	1707.00	80.00	328.00	504.00	36.00	8.00	2.00	1.00	1.00	3.00	849.00
Monthly	526.00	1948.33	470.33	499.67	315.33	118.67	27.67	3.33	1.00	2.00	2.67	283.67
Aliyar at Ambrampalayam												
01-10 days	3.00	5.00	6.00	22.00	23.00	11.00	59.00	26.00	20.00	9.00	3.00	4.00
11-20 days	20.00	5.00	10.00	68.00	12.00	14.00	73.00	23.00	12.00	7.00	5.00	7.00
R - days	5.00	4.00	15.00	19.00	5.00	252.00	25.00	21.00	15.00	10.00	8.00	7.00
Monthly	9.33	4.67	10.33	36.33	13.33	92.33	52.33	23.33	15.67	8.67	5.33	6.00
Chalakudy at Arangaly												
01-10 days	71.00	497.00	1581.00	733.00	49.00	83.00	13.00	12.00	0.00	0.00	0.00	0.00
11-20 days	188.00	1174.00	82.00	209.00	257.00	182.00	910.00	90.00	62.00	17.00	11.00	0.00
R - days	4683.00	20450.00	18531.00	188.00	1174.00	82.00	184.00	73.00	55.00	16.00	4.00	0.00
Monthly	1647.33	7373.67	6731.33	376.67	493.33	115.67	369.00	58.33	39.00	11.00	5.00	0.00
Periyar at Neeleeswaram												
01-10 days	147.00	1200.00	2283.00	1355.00	106.00	132.00	198.00	28.00	6.00	27.00	17.00	21.00
11-20 days	322.00	644.00	379.00	1088.00	130.00	189.00	68.00	14.00	9.00	14.00	40.00	34.00
R - days	684.00	3033.00	177.00	213.00	137.00	145.00	42.00	3.00	20.00	15.00	36.00	1028.00
Monthly	384.33	1625.67	946.33	885.33	124.33	155.33	102.67	15.00	11.67	18.67	31.00	361.00
Muvattupuzha at Ramamangalam												
01-10 days	186.00	889.00	975.00	2036.00	160.00	247.00	36.00	43.00	42.00	96.00	147.00	110.00
11-20 days	403.00	702.00	213.00	542.00	222.00	476.00	23.00	74.00	87.00	76.00	127.00	155.00
R - days	759.00	1221.00	200.00	207.00	653.00	96.00	34.00	72.00	139.00	140.00	125.00	804.00
Monthly	449.33	937.33	462.67	928.33	345.00	273.00	31.00	63.00	89.33	104.00	133.00	356.33
Kaliyar at Kalampur												
01-10 days	23.00	439.00	601.00	1093.00	40.00	65.00	23.00	1.00	0.00	0.00	0.00	0.00
11-20 days	122.00	269.00	119.00	365.00	66.00	79.00	10.00	0.00	0.00	0.00	0.00	0.00
R - days	225.00	823.00	80.00	57.00	114.00	34.00	2.00	0.00	0.00	0.00	0.00	268.00
Monthly	123.33	510.33	266.67	505.00	73.33	59.33	11.67	0.33	0.00	0.00	0.00	89.33

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Table 10 : Ten daily and monthly average Sediment Load by site and river basin

IX Basin : West Flowing Rivers fro Kanyakumari to Tapi *Unit : Tonnes per day*

Site / Period	June	July	August	September	October	November	December	January	Feburary	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Year : 2005-2006												
Meenachil at Kidangoor												
01-10 days	52.00	142.00	218.00	485.00	13.00	54.00	47.00	1.00	0.00	0.00	0.00	37.00
11-20 days	103.00	191.00	14.00	88.00	39.00	139.00	7.00	2.00	0.00	0.00	18.00	30.00
R - days	178.00	621.00	27.00	6.00	44.00	12.00	2.00	1.00	0.00	0.00	16.00	210.00
Monthly	111.00	318.00	86.33	193.00	32.00	68.33	18.67	1.33	0.00	0.00	11.33	92.33
Manimala at Kallooppara												
01-10 days	141.00	255.00	695.00	1108.00	10.00	100.00	15.00	1.00	0.00	0.00	1.00	4.00
11-20 days	244.00	330.00	14.00	157.00	37.00	742.00	5.00	1.00	0.00	0.00	11.00	27.00
R - days	140.00	658.00	8.00	12.00	61.00	15.00	2.00	0.00	0.00	0.00	2.00	1591.00
Monthly	175.00	414.33	239.00	425.67	36.00	285.67	7.33	0.67	0.00	0.00	4.67	540.67
Pamba at Malakkara												
01-10 days	395.00	626.00	1927.00	3124.00	30.00	135.00	27.00	13.00	8.00	3.00	5.00	4.00
11-20 days	643.00	787.00	50.00	881.00	54.00	1380.00	28.00	12.00	5.00	4.00	6.00	7.00
R - days	248.00	1566.00	37.00	43.00	261.00	50.00	15.00	10.00	4.00	4.00	5.00	501.00
Monthly	428.67	993.00	671.33	1349.33	115.00	521.67	23.33	11.67	5.67	3.67	5.33	170.67
Achankovil at Thumpamon												
01-10 days	53.00	103.00	478.00	244.00	2.00	333.00	47.00	7.00	0.00	0.00	0.00	0.00
11-20 days	87.00	145.00	37.00	126.00	9.00	323.00	288.00	8.00	0.00	0.00	0.00	0.00
R - days	62.00	377.00	9.00	6.00	187.00	175.00	16.00	3.00	0.00	0.00	0.00	396.00
Monthly	67.33	208.33	174.67	125.33	66.00	277.00	117.00	6.00	0.00	0.00	0.00	132.00
Kallada at Pattazhy												
01-10 days	43.00	135.00	153.00	254.00	51.00	85.00	49.00	26.00	6.00	15.00	25.00	30.00
11-20 days	111.00	211.00	32.00	478.00	55.00	117.00	396.00	52.00	7.00	30.00	37.00	11.00
R-days	72.00	85.00	24.00	60.00	103.00	145.00	61.00	33.00	7.00	39.00	34.00	57.00
Monthly	75.33	143.67	69.67	264.00	69.67	115.67	168.67	37.00	6.67	28.00	32.00	32.67
Vamanapuram at Ayilam												
01-10 days	76.00	55.00	53.00	564.00	8.00	46.00	82.00	7.00	0.00	0.00	0.00	0.00
11-20 days	59.00	207.00	13.00	33.00	22.00	85.00	729.00	5.00	0.00	0.00	0.00	0.00
R- days	50.00	70.00	14.00	10.00	31.00	46.00	9.00	4.00	0.00	0.00	0.00	76.00
Monthly	61.67	110.67	26.67	202.33	20.33	59.00	273.33	5.33	0.00	0.00	0.00	25.33

Source: Suspended Sediment and Bedmaterial Data Book for 2005-2006 (West Flowing River)

Table 10 : Ten daily and monthly average Sediment Load by site and river basin

X Basin : Tapi *Unit : Tonnes per day*

Site / Period	June	July	August	September	October	November	December	January	Feburary	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Year :2003-2004												
Tapi at Dedtalai												
01-10 days	P.Water	37638	36541	2114	512.5	13.15	Traces	Traces	Traces	Traces	Traces	Traces
11-20 days	264.5	8081	6158	4071	90.75	Traces	- do -	- do -	- do -	- do -	- do -	- do -
R - days	2699	24952	6445	35294	31.67	- do -	- do -	- do -	- do -	- do -	- do -	- do -
Monthly	987.8	23602	16061	13825	205.8	4.382	- do -	- do -	- do -	- do -	- do -	- do -
Tapi at Burhanpur												
01-10 days	P.Water	10891	5455	2112	1797	82.50	11.81	9.925	8.425	D.B.0.3m	0.632	D.B.0.3m
11-20 days	1300	2609	4363	1374	192.6	121.4	13.8	1.848	3.379	- do -	0.628	D.B.0.3m/ P.Water
R - days	2170	116777	28684	42411	86.78	19.65	3.336	5.544	D.B.0.3m	- do -	0.976	P. Water
Monthly	1157	45791	13345	15299	672.6	74.51	9.444	5.765	4.216	- do -	0.745	D.B.0.3m/ P.Water
Purna at Gopalkheda												
01-10 days	Silt Obs.suspended due to cons. of temp. Bund.	563.0	47.29	2.547	50.65	1.219	D.B.0.3m/ P.Water	Silt Obs. suspended due to cons. of temp. Bund.	Silt Obs. suspended due to cons. of temp. Bund.	Silt Obs. suspended due to cons. of temp. Bund.	Silt Obs. suspended due to cons. of temp. Bund.	Silt Obs. suspended due to cons. of temp. Bund.
11-20 days	- do -	207.2	14.85	1.000	7.138	D.B.0.3m	Silt Obs.suspended due to cons. of temp. Bund.	- do -	- do -	- do -	- do -	- do -
R - days	1.560	1359	15.72	552.8	1.461	- do -	- do -	- do -	- do -	- do -	- do -	- do -
Monthly	0.520	730.7	25.62	185.5	19.16	0.406	- do -	- do -	- do -	- do -	- do -	- do -
Purna at Yerli												
01-10 days	0.000	2627	995.1	292.5	2485	4.283	P. Water	P. Water	P. Water	P. Water	P. Water	River Dry
11-20 days	0.399	2880	246.5	58.56	121.2	1.534	- do -	- do -	- do -	- do -	- do -	- do -
R - days	2.194	4619	1151	5883	17.18	P. Water	- do -	- do -	- do -	- do -	- do -	- do -
Monthly	0.864	3416	809.0	1911	846.7	1.939	- do -	- do -	- do -	- do -	- do -	- do -
Girna at Dapuri												
01-10 days	River Dry	52.87	17.83	1666	81.31	River Dry	River Dry	River Dry	River Dry	River Dry	River Dry	River Dry
11-20 days	- do -	56.44	35.76	3.086	0.397	- do -	- do -	- do -	- do -	- do -	- do -	- do -
R - days	59.82	53.13	4775	507.6	P. Water	- do -	- do -	- do -	- do -	- do -	- do -	- do -
Monthly	19.94	54.11	1712	725.6	26.36	- do -	- do -	- do -	- do -	- do -	- do -	- do -

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Table 10 : Ten daily and monthly average Sediment Load by site and and river basin

X Basin : Tapi *Unit : Tonnes per day*

Site / Period	June	July	August	September	October	November	December	January	Feburary	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Year :2003-2004												
Tapi at Savkheda												
01-10 days	River Dry	8546	14218	2892	1379	9.613	D.B.0.3m/ P.Water	River Dry	River Dry	River Dry	River Dry	River Dry
11-20 days	- do -	8137	1988	252	85.46	D.B.0.3m	- do -	- do -	- do -	- do -	- do -	- do -
R - days	15920	236412	74257	30301	20.39	D.B.0.3m/ P.Water	P. Water	- do -	- do -	- do -	- do -	- do -
Monthly	5307	89270	31577	11149	479.70	3.204	D.B.0.3m/ P.Water	- do -	- do -	- do -	- do -	- do -
Panijhra at Morane												
01-10 days	River Dry	River Dry	525.1	479.9	976.8	River Dry	River Dry	River Dry	River Dry	River Dry	River Dry	River Dry
11-20 days	- do -	30.30	39.96	38.28	2.414	- do -	- do -	- do -	- do -	- do -	- do -	- do -
R - days	62.82	9099	134.6	1456	River Dry	- do -	- do -	- do -	- do -	- do -	- do -	- do -
Monthly	20.94	3238	230.0	658.2	315.9	- do -	- do -	- do -	- do -	- do -	- do -	- do -
Tapi at Sarankheda												
01-10 days	River Dry	57662	11976	19611	10540	7.718	Traces	River Dry	River Dry	River Dry	River Dry	River Dry
11-20 days	- do -	7622	11086	404.3	368.3	0.810	River Dry	- do -	- do -	- do -	- do -	- do -
R - days	53675	190861	252101	106562	95.04	0.528	- do -	- do -	- do -	- do -	- do -	- do -
Monthly	17892	88784	96894	42192	3552	3.019	Traces/River Dry	- do -	- do -	- do -	- do -	- do -

Source: Suspended Sediment Data Book for 2003-04 (Tapi Basin)

P.Water : Pooling Water

D.B.0.3m : Depth Below 0.3m

Table 10 : Ten daily and monthly average Sediment Load by site and river basin

XI Basin : Narmada *Unit : Tonnes per day*

Site / Period	June	July	August	September	October	November	December	January	Feburary	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Year : 2004-2005												
Orsang at Chandwada												
01-10 days	155.70	3707.19	123321.00	2140.45	205.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11-20 days	2515.42	347.00	199233.00	657.38	63.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00
R - days	1.79	16616.00	20947.00	240.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Monthly	890.97	7204.00	111483.00	1012.92	86.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Narmada at Garudeswar												
01-10 days	65.00	430.00	23028.00	27551.00	610.50	207.50	108.36	53.49	251.05	12.60	8.15	94.80
11-20 days	90.70	27.00	85097.00	5155.00	222.60	410.30	41.13	143.63	270.09	20.15	5.41	17.31
R - days	365.90	356.00	104314.00	1918.50	116.40	277.20	28.15	215.24	146.97	88.99	135.87	8.19
Monthly	173.90	274.00	71894.00	11541.00	310.00	319.60	58.21	139.97	288.11	41.17	49.81	39.07
Narmada at Rajghat												
01-10 days	157.09	847.40	117375.00	20173.00	1927.80	288.30	201.78	114.40	340.10	92.15	53.03	101.56
11-20 days	87.45	162.00	88229.00	2763.00	523.40	364.40	157.30	147.80	588.97	118.96	24.80	94.24
R - days	2172.00	8630.00	560479.00	3571.90	255.10	238.20	125.40	83.20	216.10	209.40	239.13	106.04
Monthly	805.00	3388.00	265204.00	8836.00	881.20	297.00	160.30	114.10	393.50	142.41	105.65	100.79
Narmada at Mandleshar												
01-10 days	138.00	682.00	39803.00	8415.00	129739.00	208.20	69.10	88.50	78.08	33.50	19.48	16.13
11-20 days	493.00	544.00	39273.00	1098.00	345.00	220.00	66.00	82.45	67.08	34.25	6.04	22.44
R - days	1517.00	11451.00	307980.00	3879.00	154.80	145.60	80.30	74.42	44.40	29.29	34.68	23.88
Monthly	716.00	4459.00	134792.00	4464.00	42018.00	191.20	72.10	81.50	63.83	32.20	20.07	20.92
Narmada at Mortakka												
01-10 days	76.90	630.50	20130.00	9327.00	690.00	559.00	416.00	512.02	354.00	323.00	99.00	75.00
11-20 days	208.90	495.00	57922.00	2061.00	367.00	1060.00	414.15	434.40	549.00	356.00	173.00	203.00
R - days	2219.70	13908.00	316308.00	1465.00	330.00	501.00	437.43	368.70	433.70	214.00	1017.00	50.00
Monthly	835.20	5298.00	137416.00	4284.00	458.00	707.00	422.93	436.10	446.00	295.00	430.00	108.00
Narmada at Handia												
01-10 days	81.60	7543.30	131605.00	35204.00	7107.00	3229.00	2366.00	1345.00	1173.00	540.00	143.00	46.00
11-20 days	8729.20	9942.00	418276.00	18487.00	2699.00	2901.00	2080.00	1480.00	913.00	278.00	84.00	49.00
R - days	41630.80	28878.00	1176474.00	20746.00	4296.00	2747.00	2060.00	1307.00	591.00	243.00	56.00	41.00
Monthly	16813.90	15887.00	594840.00	24812.00	4688.00	2959.00	2165.00	1375.00	914.00	350.00	94.00	45.00

Contd/…

Table 10 : Ten daily and monthly average Sediment Load by site and river basin

XI Basin :Narmada *Unit : Tonnes per day*

Site / Period	June	July	August	September	October	November	December	January	Feburary	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Year : 2004-2005												
Narmada at Hoshangabad												
01-10 days	441.22	1576.00	78535.00	4380.00	3250.00	1388.30	1447.00	1527.30	1455.60	1222.50	649.90	438.40
11-20 days	15382.60	2187.00	356792.00	1945.00	2584.90	1448.90	1374.30	1543.50	1305.40	831.10	468.29	524.09
R - days	29003.30	28153.00	510316.00	4998.40	1342.20	1379.10	1636.70	1557.80	995.80	758.90	575.22	641.80
Monthly	14942.40	11204.00	321508.00	3774.00	2358.50	1405.40	1490.90	1543.40	1270.60	931.80	564.48	538.20
Narmada at Sandia												
01-10 days	330.09	7004.70	57750.00	3434.00	837.00	963.80	697.60	561.77	597.47	426.76	209.10	139.90
11-20 days	13696.50	10950.00	297152.00	1707.00	722.00	905.30	647.40	528.17	535.96	304.20	166.60	197.85
R - days	4704.13	24651.00	538275.00	8739.00	1629.00	843.90	542.60	494.40	285.32	261.60	164.94	137.47
Monthly	6243.55	14839.00	305485.00	4626.00	1081.00	904.30	626.40	527.03	486.32	328.60	180.20	157.75
Shakkar at Gadarwara												
01-10 days	0.35	130.00	2993.00	42.50	191.07	0.88	0.59	0.32	0.35	0.21	0.15	0.00
11-20 days	2849.36	185.00	1036.00	53.10	51.06	0.83	0.39	0.28	0.42	0.28	0.01	0.00
R - days	123.30	576.00	4371.00	89.78	1.92	0.61	0.38	0.29	0.38	0.20	0.00	0.00
Monthly	991.00	306.00	2851.00	61.80	78.79	0.77	0.45	0.30	0.39	0.23	0.05	0.00
Narmada at Barmanghat												
01-10 days	23.77	1294.60	51206.00	3949.00	621.80	989.70	810.40	437.15	521.97	458.47	138.58	120.79
11-20 days	9355.71	539.60	70488.00	6165.40	686.10	1288.60	430.90	515.82	411.37	287.51	128.84	154.74
R - days	4308.32	15202.00	73422.00	4529.90	1025.10	1186.40	470.92	394.44	129.07	246.84	81.56	206.27
Monthly	4562.60	5986.00	65309.00	4881.50	785.60	1154.90	567.52	447.37	370.21	328.23	116.32	162.08
Banjar at Bamini												
01-10 days	0.00	872.85	4614.00	118.00	371.70	37.87	0.00	0.00	0.00	0.00	0.00	0.00
11-20 days	1149.91	304.50	8667.00	517.00	92.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
R - days	129.91	7090.00	5811.00	806.40	37.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Monthly	426.61	2896.00	6346.00	481.00	162.80	12.62	0.00	0.00	0.00	0.00	0.00	0.00
Burhner at Mohgaon												
01-10 days	0.00	10884.00	85834.00	676.00	415.20	25.40	15.30	5.40	113.80	2.39	0.86	0.00
11-20 days	12181.60	1971.00	23686.00	3157.00	161.20	52.90	11.20	3.20	11.86	3.79	0.62	0.00
R- days	93.60	47308.00	41167.00	3503.00	49.00	20.90	8.50	7.20	6.55	1.68	0.30	0.00
Monthly	4091.70	20933.00	49937.00	2445.00	203.30	33.10	11.60	5.30	46.70	2.59	0.59	0.00
Narmada ar Manot												
01-10 days	7.81	3510.60	597470.00	1737.00	526.90	66.66	21.56	12.66	343.32	11.48	1.14	0.45
11-20 days	38882.00	2739.00	69290.00	6731.00	310.96	51.01	18.98	11.30	46.05	3.50	0.85	0.36
R- days	1821.00	45611.00	126832.00	9048.80	141.08	27.03	14.99	70.53	16.33	6.48	0.58	0.24
Monthly	13570.00	18201.00	260089.00	5839.00	320.34	48.23	18.39	32.76	143.73	7.13	0.86	0.35

Contd/…

Table 10 : Ten daily and monthly average Sediment Load by site and river basin

XII Basin : Mahi and Sabarmati *Unit : Tonnes per day*

Site / Period	June	July	August	September	October	November	December	January	Feburary	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Year : 2003-04												
Mahi at Khanpur												
01-10 days	2.209	80.45	4102	373	1281	630.9	212.0	105.5	62.55	176.1	197.1	75.26
11-20 days	1.489	275.3	1666	112.9	200.5	794.1	324.5	76.26	41.93	133.2	75.28	312.7
R - days	236.8	22682	7391	14039	295.5	455.2	135.9	42.77	127.7	720.9	55.34	334.9
Monthly	80.18	8163	4483	4842	582.9	626.8	221.3	73.81	75.67	355.6	109.2	244.0
Mahi at Paderdibadi												
01-10 days	0.000	12.01	27.44	12.35	67.04	1.745	1.109	1.636	0.748	0.913	P.Water	P.Water
11-20 days	0.000	10.02	18.33	33.01	4.564	1.528	1.035	0.984	0.595	1058.000	- do -	P.Water/ Traces
R - days	15.20	53.38	22.71	970.8	2.713	1.365	1.670	0.800	0.548	0.335	- do -	- do -
Monthly	5.066	26.05	22.82	338.7	24.06	1.546	1.284	1.129	0.633	0.755	- do -	- do -
Mahi at Mataji												
01-10 days	River Dry	593.2	1568	36.06	94.990	0.928	Traces	Traces	Traces	Traces	Traces/ P.Water	P.Water
11-20 days	- do -	480.2	124.2	169.1	11.290	0.453	- do -	- do -	- do -	-do-	P.Water	-do-
R - days	610.8	95132	229963	34488	3.230	0.105	- do -	- do -	- do -	-do-	-do-	-do-
Monthly	203.6	34103	82146	11564	35.43	0.495	- do -	- do -	- do -	-do-	Traces/ P.Water	-do-
Banas at Kamalpur												
01-10 days	River Dry	River Dry	River Dry	River Dry	River Dry	River Dry	River Dry	River Dry	River Dry	River Dry	River Dry	River Dry
11-20 days	- do -	1108	- do -	- do -	- do -	- do -	- do -	- do -	- do -	- do -	- do -	- do -
R - days	- do -	13359	D.B.0.3m/ River Dry	- do -	- do -	- do -	- do -	- do -	- do -	- do -	- do -	- do -
Monthly	- do -	5097	- do -	- do -	- do -	- do -	- do -	- do -	- do -	- do -	- do -	- do -

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Table 10 : Ten daily and monthly average Sediment Load by site and river basin

XII Basin : Mahi and Sabarmati *Unit : Tonnes per day*

Site / Period	June	July	August	September	October	November	December	January	Feburary	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Year : 2003-04												
Bhadar at Ganod												
01-10 days	River Dry	451.1	2577	3.301	P.Water/ D.B.0.3m/ River Dry	River Dry	River Dry	River Dry	River Dry	River Dry	River Dry	River Dry
11-20 days	3883	176.2	48.64	P.Water/ D.B.0.3m/ River Dry	River Dry	- do -	- do -	- do -	- do -	- do -	- do -	- do -
R - days	D.B.0.3m/ River Dry	D.B.0.3m	14.48	- do -	- do -	River Dry/ D.B.0.3m/ P.Water	- do -	- do -	- do -	- do -	- do -	- do -
Monthly	1294	202.4	852.1	1.100	P.Water/ D.B.0.3m/ River Dry	- do -	- do -	- do -	- do -	- do -	- do -	- do -
Shetrunji at Lowara												
01-10 days	River Dry	846.1	8377	Neg. Flow/ D.B.0.3m/	Traces/ N. Flow	River Dry	River Dry	River Dry	River Dry	River Dry	River Dry	River Dry
11-20 days	2540	2943	0.409	P.Water/	N. Flow/ P.Water	- do -	- do -	- do -	- do -	- do -	- do -	- do -
R - days	21.69	D.B.0.3m/ Neg. Flow	Neg. Flow	0.264	P. Water/ RiverDry	- do -	- do -	- do -	- do -	- do -	- do -	- do -
Monthly	853.8	1222	2702	0.088	Traces/ N. Flow/ P. Water/ RiverDry	- do -	- do -	- do -	- do -	- do -	- do -	- do -
Sabarmati at Derol Bridge												
01-10 days	River Dry	River Dry	River Dry	River Dry	River Dry	River Dry	River Dry	River Dry	River Dry	River Dry	River Dry	River Dry
11-20 days	- do -	- do -	- do -	- do -	- do -	- do -	- do -	- do -	- do -	- do -	- do -	- do -
R - days	- do -	3.986	7.852	0.558	- do -	- do -	- do -	- do -	- do -	- do -	- do -	- do -
Monthly	- do -	1.414	2.786	0.186	- do -	- do -	- do -	- do -	- do -	- do -	- do -	- do -

Table 10 : Ten daily and monthly average Sediment Load by site and and river basin

XII Basin : Mahi and Sabarmati *Unit : Tonnes per day*

Site / Period	June	July	August	September	October	November	December	January	Feburary	March	April	May
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Year : 2003-04												
Purna at Mahuwa												
01-10 days	D.B.0.3m	414.1	6845	766.3	1047	2.576	1.021	0.392	0.103	Traces/ River Dry	River Dry	River Dry
11-20 days	7548	1368	457.5	670.1	23.57	0.924	0.891	0.162	0.156	River Dry	- do -	- do -
R - days	10478	92817	7937	3663	9.212	0.838	0.404	0.112	0.188	- do -	- do -	- do -
Monthly	6008	33510	5172	1700	348.7	1.446	0.760	0.218	0.147	Traces/ River Dry	- do -	- do -
Ambika at Gadat												
01-10 days	P.Water	288.0	2090	231.2	365.2	P.Water	SiltObs. Suspended dueto cons. of weir at D/S of site	SiltObs. suspended dueto cons. of weir at D/S of site	SiltObs. suspended dueto cons. of weir at D/S of site	SiltObs. suspended dueto cons. of weir at D/S of site	SiltObs. suspended dueto cons. of weir at D/S of site	SiltObs. suspended dueto cons. of weir at D/S of site
11-20 days	- do -	537.1	171.4	70.96	5.748	- do -	- do -	- do -	- do -	- do -	- do -	- do -
R - days	3634	56047	4219	1928	0.000	- do -	- do -	- do -	- do -	- do -	- do -	- do -
Monthly	1211	20154	2227	743.4	119.7	- do -	- do -	- do -	- do -	- do -	- do -	- do -
Vaitarna at Durvesh												
01-10 days	River Dry	3164	26571	2309	849.0	35.76	2.243	River Dry	River Dry	River Dry	River Dry	River Dry
11-20 days	- do -	7434	2952	2604	176.4	15.74	0.919	- do -	- do -	- do -	- do -	- do -
R - days	8411	78103	5041	4788	58.62	4.721	0.157	- do -	- do -	- do -	- do -	- do -
Monthly	2804	31132	11313	3234	351.6	18.74	1.076	- do -	- do -	- do -	- do -	- do -

Source: Suspended Sediment Data Book for 2003-04 (Mahi, Sabarmati and Other West Flowing Rivers of Saurashtra and Kutch

P.Water : Pooling Water

D.B.0.3m : Depth Below 0.3m

Table 11 : Tolerance limits of selected water quality paremeters for inland surface water by its use

Basin : Mahanadi, Subarnarekha, Burhabalang & Baitarni, Barhamani & Baitarni, Rushikuluya and Vamsadhara

Sl. No.	Constituent	Unit	Designated use classes of Inland Surface Water				
			A	B	C	D	E
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	pH Value		6.5 to 8.5	6.5 to 8.5	6.5 to 8.5	6.5 to 8.5	6.5 to 8.5
2	Dissolved Oxygen (DO)	mg/l(min.)	6	5	4	4	
3	Biochemical Oxygen Demand (BOD)	mg/l(max.)	2	3	3	-	-
4	Total Coliform organisms	MPN/100 ml.max.	50	500	5000	-	-
5	Total Dissolved Solides	mg/l(max.)	50	-	1500	-	2100
6	Chloride (Cl)	mg/l(max.)	250	-	600	-	600
7	Sodium Absorption Ratio,max. (SAR)	-	-	-	-	-	26
8	Sulphate (SO_4)	mg/l(max.)	400	-	400	-	1000
9	Electric Conductivity at 25°C	micromho/cm/max.	-	-	-	1000×10^{-4}	2250×10^{-4}
10	Percentage sodium, max	-	-	-	-	-	60
11	Boron (as B), mg/l, max.	-	-	-	-	-	2

Source : Water Quality Year Book

Note : Class A refers drinking water without conventional treatement but after disinfection,
Class B refers outdoor bathing,
Class C refers drinking water with conventional treatment followed by disinfection; and
Class D refers culture and wild life propagation.
Class E refers irrigation, Industrial cooling, controlled waste disposal.

Table 11 : Tolerance limits of selected water quality paremeters for inland surface water by its use

Basin : Godavari

Sl. No.	Constituent	Unit	Designated use classes of Inland Surface Water				
			A	B	C	D	E
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	pH Value		6.5-8.5	6.5-8.5	6.5-8.5	6.5-8.5	6.0-8.5
2	Electric Conductivity at 25°C	micromho/cm/max.	-	-	-	1000	2250
3	Calcium (Ca^{++})	mg/l(max.)	80	-	-	-	-
4	Magnesium (Mg^{++})	mg/l(max.)	24	-	-	-	-
5	Iron (Fe^{+++})	mg/l(max.)	0.3	-	50	-	-
6	Free Ammonia (NH_4^+)	mg/l(max.)	-	-	-	1.2	-
7	Chloride (Cl^-)	mg/l(max.)	250	-	600	-	600
8	Fluoride (F^-)	mg/l(max.)	1.5	1.5	1.5	-	-
9	Sulphate (SO_4)	mg/l(max.)	400	-	400	-	1000
10	Nitrate (NO_3)	mg/l(max.)	20	-	50	-	-
11	Dissolved Oxygen (DO)	mg/l(min.)	6	5	4	4	-
12	Biochemical Oxygen Demand (BOD)	mg/l(max.)	2	3	3	-	-
13	Total Coliform	most probable number/100 ml	50*	500*	5000*	-	-
14	Arsenic (As)	mg/l(max.)	0.05	0.2	0.2	-	-
15	Boron (B)	mg/l(max.)	-	-	-	-	2
16	Cadmium (Cd)	mg/l(max.)	0.01	-	-	-	-
17	Chrmium (Cr^{++++++})	mg/l(max.)	0.05	0.05	0.05	-	-
18	Coper (Cu^{++})	mg/l(max.)	1.50	-	1.50	-	-
19	Cyanide (Cn)	mg/l(max.)	0.05	0.05	0.05	-	-
20	Lead (Pb)	mg/l(max.)	0.10	-	0.10	-	-
21	Maganese(Mn)	mg/l(max.)	0.50	-	-	-	-
22	Mercury (Hg)	mg/l(max.)	0.001	-	-	-	-
23	Zinc (Zn)	mg/l(max.)	15	-	15	-	-
24	Phenolic Compounds (C_6H_5OH)	mg/l(max.)	0.002	0.005	0.005	-	-
25	Total Hardness ($CaCO_3$)	mg/l(max.)	300	-	-	-	-
26	Sodium percentage	(max)	-	-	-	-	60
27	Sodium Absorption Ratio (SAR)	(max)	-	-	-	-	26

Source : Water Quality Year Book Godavari Basin during the period of 2003-2004.

Note :

A - Drinking Water source without conventional treatiment but after disinfection.

B - Out door bathing organised.

C - Drinking Water source with conventional treatment followed by disinfection.

D - Propagation of wildlife, fisheries.

E - Irrigation, Industrial cooling, Controlled waste disposal.

* If the coliform count is more than the prescribed tolerance limit, the criteria for coliforms shall be satisfied if not more than 20% of samples show more than the tolerance limit specified and not more than 5% samples show more than 4 times the tolerance limit. Further, the faecal coliform should not be more than 40% of the total coliform.

Table 11 : Tolerance limits of selected water quality paremeters for inland surface water by its use

Basin : Krishna, Cauvery, East Flowing Rivers from Mahanadi to Kanyakumari & West Flowing Rivers from Kanyakumari to Tapi

Sl. No.	Constituent	Unit	Designated use classes of Inland Surface Water				
			A	B	C	D	E
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	pH Value		6.5 to 8.5	6.5 to 8.5	6.5 to 8.5	6.5 to 8.5	6.5 to 8.5
2	Dissolved Oxygen (DO)	mg/l(min.)	6	5	4	4	
3	Biochemical Oxygen Demand (BOD)	mg/l(max.)	2	3	3	-	-
4	Total Coliform organisms	MPN/100 ml.max.	50	500	5000	-	-
5	Total Dissolved Solides	mg/l(max.)	50	-	1500	-	2100
6	Chloride (Cl^-)	mg/l(max.)	250	-	600	-	600
7	Sodium Absorption Ratio,max. (SAR)	-	-	-	-	-	26
8	Sulphate (SO_4)	mg/l(max.)	400	-	400	-	1000
9	Electric Conductivity at 2^oC	micromho/cm/max	-	-	-	1000×10^{-6}	2250×10^{-6}
10	Percentage sodium, max	-	-	-	-	-	60
11	Boron (as B), mg/l, max.	-	-	-	-	-	2

Source : Water Quality Year Book.

Note : Class A refers drinking water without conventional treatement but after disinfection,
Class B refers outdoor bathing,
Class C refers drinking water with conventional treatment followed by disinfection; and
Class D refers culture and wild life propagation.
Class E refers irrigation, Industrial cooling, controlled waste disposal.

Table 11 : Tolerance limits of selected water quality paremeters for inland surface water by its use

Basin : Narmada

Sl. No.	Constituent	Unit	Designated use classes of Inland Surface Water				
			A*	B*	C*	D*	E*
(1)	(2)	(3)	(4)	(5)	(6)	(7)	
1	pH Value		6.5-8.5	6.5-8.5	6.5-8.5	6.5-8.5	6.0-8.5
2	Conductivity at 25°C	micromho/cm/max	-	-	-	1000	2250
3	Colour, Hazen units	mg/l(max.)	10	300	300	-	-
4	Dissolved Oxygen (DO)	mg/l(min.)	6	5	4	4	-
5	Biochemical Oxygen Demand (BOD)	mg/l(max.)	2	3	3	-	-
6	Total Dissolved Solides	mg/l(max.)	500	-	1500	-	2100
7	Total Hardness ($CaCO_3$)	mg/l(max.)	300	-	-	-	-
8	Calcium Hardness CaCO3)	mg/l	200	-	-	-	-
9	Magnesium (Mg^{++})	mg/l(max.)	100	-	-	-	-
10	Iron (Fe^{+++})	mg/l(max.)	0.3	-	5	-	-
11	Coper (Cu^{++})	mg/l(max.)	1.5	-	1.5	-	-
12	Chloride (Cl^-)	mg/l(max.)	250	-	600	-	600
13	Fluoride (F^-)	mg/l(max.)	1.5	1.5	1.5	-	-
14	Sulphate (SO_4)	mg/l(max.)	400	-	400	-	1000
15	Nitrate (NO_3)	mg/l(max.)	20	-	50	-	-
16	Free Ammonia (NH_4^+)	mg/l(max.)	-	-	-	1.2	-
17	Chrmium (Cr^{++++++})	mg/l(max.)	0.05	0.05	0.05	-	-
18	Boron (B)	mg/l(max.)	-	-	-	-	2
19	Sodium percentage	(max)	-	-	-	-	60
20	Sodium Absorption Ratio (SAR)	(max)	-	-	-	-	26

Source : Water Quality Year Book 2004-2005, Narmada Basin.

Note : * For use Classes A to E refer table below.

CLASSIFICATION ON INLAND SURFACE WATERS STREAMS :

1 Class A refers drinking water without conventional treatement but after disinfection,

2 Class B refers outdoor bathing,

3 Class C refers drinking water with conventional treatment followed by disinfection; and

4 Class D refers culture and wild life propagation.

5 Class E refers irrigation, Industrial cooling, controlled waste disposal.

Table 11 : Tolerance limits of selected water quality paremeters for inland surface water by its use

Basin : Tapi, Mahi and Sabarmati

Sl. No.	Substance or Characteristics	For drinking water (IS 10500 : 1991)			For fish culture (IS 13891 :1994)	For swimming pools (IS 3328 :1993)	For Irrigation water (IS 11624 : 1986)
		Desirable limit	Undesirable effects outside the desirable limit	Permissible limit in the absence of alternate source			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
1	Colour, Hazen units	5	Above 5, consumer acceptance decreases	25	-	10	-
2	Odour	Unobjec-tionable	-	-	-	Odourless	-
3	Taste	Agreeable	-	-	-	Palatable	-
4	Temperature ^{o} C, range	-	-	-	2 to 35		-
5	Turbidity, NTU (max.)	5	Above 5, consumer acceptance decreases	10	10	10	-
6	pH Value	6.5 to 8.5	Beyond this range the water will affect the mucous membrane and/or water supply system	No relaxation	6.5 to 8.5	7.5 to 8.5	-
7	Total Hardness ($CaCO_3$) mg/l(max.)	300	Encrustation in water supply structure and adverse effects on domestic use	600	-	-	-
8	Iron (Fe^{+++}) mg/l(max.)	0.3	Beyond this limit taste/appearance are affect has adverse effect on domestic uses and water supply structure, and promotes iron bacteria	1.0	2.0 Total Iron (as Fe)	0.1	-
9	Chloride (Cl) mg/l(max.)	250	Beyond this limit taste, corrosion and palatabiliy are affect	1000		500	-
10	Fluoride (F) mg/l (max.)	1.0	Fluoride may be kept as low as possible. High fluoride may cause Fluorosis	1.5	-	-	-

(Contd.)

Table 11 : Tolerance limits of selected water quality paremeters for inland surface water by its use

Basin : Mahi, Sabarmati, Tapi & Other West Flowing River

Sl. No.	Substance or Characteristics	For drinking water (IS 10500 : 1991)			For fish culture (IS 13891 :1994)	For swimming pools (IS 3328 :1993)	For Irrigation water (IS 11624 : 1986)
		Desirable limit	Undesirable effects outside the desirable limit	Permissible limit in the absence of alternate			
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
11	Dissolved Oxygen (DO) mg/l(max.)	500	Beyond this palatabiliy decreases and may cause gastro intestinal limitation are affect	2000	-	1500	-
12	Specific conductivity at 25°C, umhos (max)	-	-	-	$\frac{1500 \times 10^6}{}$	-	6000 umhos/cm
13	Calcium (Ca^{++}) mg/l(max.)	75	Encrustation in water supply structure and adverse effects on domestic use	200	-	-	-
14	Magnesium (Mg^{++}) mg/l(max.)	30	Encrustation in water supply structure and adverse effects on domestic use	100	-	-	-
15	Sulphate (SO_4) mg/l(max.)	200	Beyond this causes gastro intentinal limitation when magnesium or sodium are present	400	-	-	-
16	Nitrate (NO_3) mg/l(max.)	45	Beyond this methaemoglobin ema takes place	100	2.0 (as N)	-	-
17	Free Ammonia (NH_4^+) mg/l(max.)	-	-	-	1.5	-	-
18	Alkalinity, mg/l(max.)	200	Beyond this limit taste, becames unpleasant	600	100 to 300 as Ca CO_3 mg/l	50 to 500 Total alkalinity as Ca CO_3 mg/l, max	-
19	Aluminium (as Al) mg/l(max.)	0.03	Cumulative effect is reported to cause dementia	0.2	-	0.1	-
20	Boron mg/l(max.)	1.0	-	5.0	-	-	4.0
21	Dissolved Oxygen (DO) mg/l(max.)	-	-	-	4.0	-	-
22	Sodium Absorption Ratio (SAR)						26.0
23	Residual Sodium Carbonate (RSC)						6.0
24	Pesticides, mg/l max	Absent	Toxic	0.0001	Absent	-	-

Source : Water Quality Year Book Tapi, Mahi, Sabarmati & Other West Flowing River Basin during the period of 2004-2005.

Table 12 : Critical absolute values of water quality parameters crossing tolerance limits by season

Basin : Tapi

Sl. No.	Site Name	Summer March to June		Monsoon July to Oct.		Winter Nov. to Feb.	
		Value	Date	Value	Date	Value	Date
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Year : 2004-05						
1	**Dedtalai**	pH=9.12	01.04.2005	pH=8.98	01.07.2004	pH=8.72	01.02.2005
		Al=0.007	15.06.2004	Al=0.004	01.07.2004	Al=0.007	01.12.2004
		Al=0.004	01.04.2005	Al=0.009	15.07.2004		
				Al=0.007	02.08.2004		
				Al=0.004	01.10.2004		
2	**Burhanpur**	pH=8.78	01.03.2005	pH=8.80	01.07.2004	pH=8.73	01.11.2004
		pH=8.65	01.04.2005	Al=0.009	15.06.2004	Al=0.004	01.11.2004
		pH=8.72	02.05.2005	Al=0.013	15.07.2004	pH=8.84	01.01.2005
		Al=0.004	01.03.2005	Al=0.004	02.08.2004	pH=8.69	01.02.2005
		Al=0.018	01.04.2005	Al=0.007	01.09.2004	pH=0.007	01.12.2004
		Al=0.011	02.05.2005	Al=0.004	01.10.2004	pH=0.004	01.01.2005
3	**Lakhpuri**	Al=0.007	15.06.2004			Al=0.011	01.12.2004
4	**Gopalkheda**	pH=8.74	01.04.2005	Al=0.004	02.08.2004	pH=9.01	01.02.2005
		Al=0.009	01.04.2005	Al=0.004	01.10.2004	Al=0.007	01.12.2004
						Al=0.004	01.02.2005
5	**Yerli**	Al=0.009	15.06.2004			pH=8.57	01.12.2004
						pH=9.30	01.02.2005
						Al=0.009	01.12.2004
6	**Dapuri**	Al=0.011	01.04.2005	Al=0.004	02.08.2004	Al=0.011	01.12.2004
		pH=8.59	01.04.2005	Al=0.004	01.10.2004	pH=9.08	01.02.2005
7	**Savkheda**	Al=0.009	15.06.2004	Al=0.004	02.08.2004	Al=0.009	01.10.2004
		pH=8.83	01.04.2005			Al=0.018	01.12.2004
8	**Malkheda**					Al=0.007	01.12.2004
9	**Morane**	pH=8.89	01.04.2005			pH=9.48	01.02.2005
10	**Gidhade**			pH=8.98	01.07.2004		
				pH=8.55	01.10.2004		
				Al=0.009	01.07.2004		
				Al=0.004	15.07.2004		
				Al=0.009	02.08.2004		
11	**Ghala**	pH=8.78	01.06.2004	pH=8.65	01.07.2004	Al=0.009	01.12.2004
		Al=0.004	15.06.2004	Al=0.007	15.07.2004		
		PH=8.57	01.04.2005				
		Al=0.007	01.04.2005				

Source: Water Quality Data Book Mahi,Sabarmati,Tapi and Other West Flowing Rivers (2004-05)

Table 12 : Critical absolute values of water quality parameters crossing tolerance limits by season

Basin : Narmada

Sl.No.	Site Name	Summer		Monsoon		Winter	
		March to June		July to Oct.		Nov. to Feb.	
		Value	Date	Value	Date	Value	Date
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Year : 2004-05						
1	**Chandwada**			pH=8.52	15.10.2004		
2	**Garudeshwar**	pH=8.70	01.06.2004			pH=8.66	02.02.2005
		pH=8.68	01.03.2005				
		pH=8.78	15.03.2005				
		pH=8.61	01.04.2005				
		pH=8.76	15.04.2005				
		pH=8.76	02.05.2005				
3	**Rajghat**	pH=8.66	01.06.2004				
		pH=8.56	16.05.2005				
		BOD=2.3	15.06.2004				
		BOD=2.3	15.04.2005				
4	**Mandleshwar**	pH=8.75	01.06.2004	pH=8.63	15.07.2004	pH=8.53	03.01.2005
5	**Kogaon**	BOD=4.0	01.03.2005	pH=8.64	15.07.2004	BOD=2.5	01.12.2004
				BOD=2.7	01.07.2004	BOD=2.1	03.01.2005
				BOD=2.8	15.07.2004	BOD=2.3	17.01.2005
				BOD=2.4	16.08.2004		
6	**Mortakka**	BOD=3.0	16.05.2005	pH=8.54	15.07.2004		
7	**Handia**	pH=8.64	15.04.2005	pH=8.55	15.07.2004		
				BOD=2.2	2.08.2004		
8	**Chhidgaon**	pH=8.85	1.06.2004	pH=8.61	1.07.2004		
9	**Hoshangabad**	pH=8.62	1.04.2005	pH=8.54	15.07.2004		
				BOD=2.1	2.08.2004		
				BOD=2.0	4.10.2004		
10	**Gadarwara**	pH=8.60	1.06.2004	pH=8.51	15.07.2004		
				pH=8.56	1.09.2004		
		BOD=2.8	15.06.2004	BOD=2.3	4.10.2004		
11	**Patan**	pH=8.55	16.05.2005	BOD=3.1	2.08.2004		
		BOD=2.8	1.03.2005	BOD=3.0	16.08.2004		
12	**Manot**	pH=8.60	1.06.2004				

Source: Water Quality Year Book for 2004-2005.

Table 12 : Critical absolute values of water quality parameters crossing tolerance limits by season

Basin : Mahi and Sabarmati

Sl. No.	Site Name	Summer March to June		Monsoon July to Oct.		Winter Nov. to Feb.	
		Value	Date	Value	Date	Value	Date
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Year : 2004-05						
1	**Khanpur**	pH=8.52	01.03.2005			TDS=660	01.11.2004
		pH=8.60	01.04.2005			TDS=640	01.01.2005
2	**Vautha**	Al=0.007	01.06.2004	Al=0.007	01.07.2004	Al=0.006	01.11.2004
		Al=0.006	15.06.2004	Al=0.009	15.07.2004	Al=0.006	01.12.2004
		Al=0.004	01.03.2005	Al=0.007	01.08.2004	Al=0.007	01.01.2005
		Al=0.007	01.04.2005	Al=0.006	01.09.2004	Al=0.004	01.02.2005
		Al=0.007	02.05.2005	Al=0.006	15.09.2004		
				Al=0.007	01.10.2004		
		TDS=2172	01.06.2004	TDS=1326	15.06.2004		01.11.2004
		TDS=910	15.06.2004	TDS=1568	15.07.2004		01.12.2004
		TDS=1602	01.03.2005	TDS=1238	01.09.2004		01.01.2005
		TDS=1824	01.04.2005	TDS=1098	01.10.2004		01.02.2005
		TDS=2312	02.05.2005				
3	**Kamalpur**			pH=8.52	15.09.2004		
4	**Luwara**			TDS=1548	01.09.2004		
				TDS=824	01.10.2004		
5	**Ganod**			pH=8.52	01.09.2004		
				TDS=580	01.10.2004		
6	**Mahuwa**	pH=8.55	01.04.2005	pH=8.56	01.07.2004		
				Al=0.007	01.07.2004		
				Al=0.004	15.07.2004		
				Al=0.007	02.08.2004		
7	**Gadat**	pH=8.73	01.06.2004	pH=8.51	01.07.2004	pH=8.68	01.02.2005
		pH=8.70	01.04.2005	Al=0.004	15.07.2004		
				Al=0.004	02.08.2004		
8	**Durvesh**			Al=0.013	15.07.2004	Al=0.004	01.12.2004
				Al=0.013	02.08.2004		
9	**Pingalwada**	Al=0.007	01.06.2004	Al=0.013	01.07.2004	Al=0.009	01.11.2004
		Al=0.013	15.06.2004	Al=0.016	15.07.2004	Al=0.007	01.12.2004
		Al=0.004	01.03.2005	Al=0.007	02.08.2004	Al=0.016	01.01.2005
		Al=0.009	01.04.2005	Al=0.009	01.09.2004	TDS=837	01.11.2004
		Al=0.009	02.05.2005	TDS=797	01.07.2004	TDS=713	01.12.2004
		TDS=1028	01.06.2004	TDS=813	15.07.2004	TDS=839	01.01.2001
		TDS=513	01.03.2005			TDS=728	01.02.2005
		TDS=791	01.04.2005				
		TDS=832	02.05.2005				
10	**Motinaroli**	pH=8.64	01.03.2005	Al=0.011	01.07.2004	Al=0.004	01.11.2004
		pH=8.52	01.04.2005	Al=0.011	15.07.2004	Al=0.004	01.12.2004
		Al=0.011	15.06.2004	Al=0.008	02.08.2004	Al=0.004	01.01.2005
		Al=0.007	01.03.2005	Al=0.009	01.09.2004		
		Al=0.004	01.04.2005				

Source: Water Quality Year Book Mahi,Sabarmati,Tapi and Other West Flowing Rivers (2004-05)

Table 13 : Maximum and minimum values of water quality parameters by site and river basin

I Basin : Mahanadi

Sl. No.	Site Name	Name of the River/ Stream	Q (Cumecs)		Temperature °C		pH_GEN		Sp.Conductance		Potassium (K)		Sodium (Na)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
	Year : 2006-07													
1	**Tikarapara**	Mahanadi	-	-	19.5	31.5	7.6	8.2	-	-	1.3	3.8	6.2	10.8
2	**Kesinga**	Tel	-	-	-	-	-	-	-	-	-	-	-	-
3	**Kantamal**	Tel	-	-	22.0	32.0	7.0	8.5	-	-	0.6	1.4	1.0	11.2
4	**Salebhata**	Ong	-	-	25.0	29.0	7.3	8.3	-	-	1.6	3.1	5.1	26.2
5	**Sundergarh**	Ib	-	-	16.5	28.5	7.0	8.6	-	-	0.8	2.2	1.1	14.4
6	**Kurubhanta**	Mand	-	-	23.0	29.0	6.9	8.1	-	-	-	1.7	1.3	4.8
7	**Basantpur**	Mahanadi	-	-	15.5	30.0	7.0	8.2	-	-	1.3	2.3	2.8	9.4
8	**Bamnidhi**	Hasdeo	-	-	19.0	30.0	7.0	8.2	-	-	1.4	2.5	2.9	9.2
9	**Manendragarh**	Hasdeo	-	-	-	-	-	-	-	-	-	-	-	-
10	**Rampur**	Jonk	-	-	16.5	29.0	7.5	8.0	-	-	1.0	1.8	3.9	13.8
11	**Jondhra**	Jonk	-	-	18.5	30.0	7.3	8.5	-	-	1.2	5.3	4.8	54.6
12	**Ghatora**	Arpa	-	-	10.5	28.5	6.9	8.0	-	-	1.2	2.6	1.8	27.1
13	**Andhiyarkore**	Hamp	-	-	18.5	31.0	7.6	8.2	-	-	0.1	5.2	2.7	50.0
14	**Simga**	Seonath	-	-	19.5	30.5	7.5	8.4	-	-	1.8	7.2	3.5	54.3
15	**Pathardhi**	Kharun	-	-	16.0	29.4	7.4	8.1	-	-	1.3	6.6	3.1	31.6
16	**Rajim**	Mahanadi	-	-	17.0	28.0	7.2	7.8	-	-	0.1	4.3	2.3	18.5
17	**Baronda**	Pairi	-	-	17.0	127.5	7.4	8.2	-	-	0.7	1.1	2.2	4.7

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

I Basin : Mahanadi

Sl. No.	Site Name	Name of the River/ Stream	Calcium (Ca)		Magnesium (Mg)		Aluminium		Iron (Fe)		Ammonia (NH3-N)		Carbonate (CO3)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)
	Year : 2006-07													
1	**Tikarapara**	Mahanadi	16	37	2.2	11.4	-	-	0.1	0.4	-	-	0.0	0.0
2	**Kesinga**	Tel	-	-	-	-	-	-	-	-	-	-	-	-
3	**Kantamal**	Tel	5	21	1.9	10.2	-	-	0.0	0.0	-	-	0.0	12.4
4	**Salebhata**	Ong	9	31	3.4	10.7	-	-	0.0	0.0	-	-	0.0	0.0
5	**Sundergarh**	Ib	2	19	1.5	7.8	-	-	0.0	0.0	-	-	0.0	12.4
6	**Kurubhanta**	Mand	2	14	2.4	5.4	-	-	0.0	0.0	-	-	0.0	0.0
7	**Basantpur**	Mahanadi	5	15	2.9	9.2	-	-	0.0	0.0	-	-	0.0	0.0
8	**Bamnidhi**	Hasdeo	6	14	2.4	7.3	-	-	0.0	0.0	-	-	0.0	0.0
9	**Manendragarh**	Hasdeo	-	-	-	-	-	-	-	-	-	-	-	-
10	**Rampur**	Jonk	18	24	3.9	14.0	-	-	0.0	0.0	-	-	0.0	0.0
11	**Jondhra**	Jonk	11	52	4.4	25.8	-	-	0.0	0.0	-	-	0.0	18.5
12	**Ghatora**	Arpa	9	39	3.9	20.9	-	-	0.0	0.0	-	-	0.0	0.0
13	**Andhiyarkore**	Hamp	15	58	7.8	26.7	-	-	0.0	0.0	-	-	0.0	0.0
14	**Simga**	Seonath	13	47	7.3	21.9	-	-	0.0	0.1	-	-	0.0	10.4
15	**Pathardhi**	Kharun	14	47	7.3	9.2	-	-	0.0	0.0	-	-	0.0	0.0
16	**Rajim**	Mahanadi	7	26	3.4	13.6	-	-	0.0	0.1	-	-	0.0	0.0
17	**Baronda**	Pairi	5	9	1.9	4.4	-	-	0.0	0.1	-	-	0.0	0.0

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

I Basin : Mahanadi

Sl. No.	Site Name	Name of the River/ Stream	Bicarbonate (HCO3)		Chloride (CL)		Fluoride (F)		Sulphate (SO4)		Sulphite		Nitrate (NO3-N)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)
	Year : 2006-07													
1	**Tikarapara**	Mahanadi	54	155	8.8	15.2	0.00	0.46	0.6	8.6	-	-	0.04	1.37
2	**Kesinga**	Tel	-	-	-	-	-	-	-	-	-	-	-	-
3	**Kantamal**	Tel	19	105	6.1	23.6	0.05	0.12	1.0	17.4	-	-	0.01	0.14
4	**Salebhata**	Ong	42	145	5.2	27.9	0.05	0.18	4.0	20.0	-	-	0.03	0.06
5	**Sundergarh**	Ib	11	67	1.6	183.4	0.0	0.0	2.0	18.4	-	-	0.01	146.00
6	**Kurubhanta**	Mand	8	65	1.8	15.0	0.05	0.40	1.6	12.0	-	-	0.01	0.09
7	**Basantpur**	Mahanadi	36	89	4.4	21.0	0.05	0.19	4.8	14.6	-	-	0.02	0.18
8	**Bamnidhi**	Hasdeo	28	80	4.9	20.8	0.05	0.16	4.4	15.0	-	-	0.01	0.17
9	**Manendragarh**	Hasdeo	-	-	-	-	-	-	-	-	-	-	-	-
10	**Rampur**	Jonk	44	130	5.0	23.0	0.05	0.05	4.0	16.6	-	-	0.02	0.16
11	**Jondhra**	Jonk	63	219	8.5	94.2	0.05	0.16	8.6	60.0	-	-	0.02	0.35
12	**Ghatora**	Arpa	34	236	3.1	55.2	0.05	0.06	4.8	18.4	-	-	0.01	0.21
13	**Andhiyarkore**	Hamp	74	291	5.3	106.0	0.05	0.19	6.2	40.0	-	-	0.02	0.35
14	**Simga**	Seonath	65	207	4.3	116.7	0.05	0.22	7.2	33.4	-	-	0.04	0.35
15	**Pathardhi**	Kharun	67	263	4.8	56.3	0.05	0.18	7.8	36.0	-	-	0.04	0.31
16	**Rajim**	Mahanadi	42	124	3.6	13.3	0.05	0.17	1.0	20.0	-	-	0.01	0.10
17	**Baronda**	Pairi	38	53	2.6	7.9	0.05	0.05	3.0	12.4	-	-	0.02	0.18

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

I Basin : Mahanadi

Sl. No.	Site Name	Name of the River/ Stream	Nitrite (NO2-N)		Phosphate		Silica (SiO2)		DO		BOD3-27		Total Coliform (no.per 10 ml)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(40)	(41)	(42)	(43)	(44)	(45)	(46)	(47)	(48)	(49)	(50)	(51)
	Year : 2006-07													
1	**Tikarapara**	Mahanadi	0.00	0.06	-	-	8	17	5.3	7.8	0.7	1.6	-	-
2	**Kesinga**	Tel	-	-	-	-	-	-	-	-	-	-	-	-
3	**Kantamal**	Tel	0.00	0.01	-	-	9	30	5.3	8.4	0.2	1.0	-	-
4	**Salebhata**	Ong	0.01	0.06	-	-	8	20	5.2	7.1	0.2	1.0	-	-
5	**Sundergarh**	Ib	0.00	0.01	-	-	1	26	6.2	9.5	0.2	0.7	-	-
6	**Kurubhanta**	Mand	0.00	0.00	-	-	1	8	6.0	8.1	0.4	0.6	-	-
7	**Basantpur**	Mahanadi	0.00	0.03	-	-	8	19	4.3	8.9	0.2	2.0	-	-
8	**Bamnidhi**	Hasdeo	0.00	0.03	-	-	10	24	4.5	9.1	0.1	0.9	-	-
9	**Manendragarh**	Hasdeo	-	-	-	-	-	-	-	-	-	-	-	-
10	**Rampur**	Jonk	0.00	0.01	-	-	10	23	6.4	7.3	0.2	0.6	-	-
11	**Jondhra**	Jonk	0.00	0.01	-	-	9	40	4.8	10.5	0.2	2.8	-	-
12	**Ghatora**	Arpa	0.00	0.01	-	-	2	32	3.7	6.1	0.3	1.5	-	-
13	**Andhiyarkore**	Hamp	0.00	0.03	-	-	11	32	2.7	6.8	0.4	1.5	-	-
14	**Simga**	Seonath	0.00	0.12	-	-	13	33	5.5	10.7	0.1	1.6	-	-
15	**Pathardhi**	Kharun	0.01	0.01	-	-	10	28	5.4	8.5	0.4	1.0	-	-
16	**Rajim**	Mahanadi	0.00	0.01	-	-	8	22	4.7	7.9	0.4	1.0	-	-
17	**Baronda**	Pairi	0.00	0.01	-	-	4	7	5.7	9.0	0.3	0.4	-	-

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

I Basin : Mahanadi

Sl. No.	Site Name	Name of the River/ Stream	Faecal Coliform (no.per 10 ml)		Total plate count (no.per 10 ml)		Phytoplankton (no.per ml)		Zooplankton (no.per litre)		Arsenic (ppm)		Boron (ppm)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(52)	(53)	(54)	(55)	(56)	(57)	(58)	(59)	(60)	(61)	(62)	(63)
	Year : 2006-07													
1	**Tikarapara**	Mahanadi	-	-	-	-	-	-	-	-	-	-	-	-
2	**Kesinga**	Tel	-	-	-	-	-	-	-	-	-	-	-	-
3	**Kantamal**	Tel	-	-	-	-	-	-	-	-	-	-	-	-
4	**Salebhata**	Ong	-	-	-	-	-	-	-	-	-	-	-	-
5	**Sundergarh**	Ib	-	-	-	-	-	-	-	-	-	-	-	-
6	**Kurubhanta**	Mand	-	-	-	-	-	-	-	-	-	-	-	-
7	**Basantpur**	Mahanadi	-	-	-	-	-	-	-	-	-	-	-	-
8	**Bamnidhi**	Hasdeo	-	-	-	-	-	-	-	-	-	-	-	-
9	**Manendragarh**	Hasdeo	-	-	-	-	-	-	-	-	-	-	-	-
10	**Rampur**	Jonk	-	-	-	-	-	-	-	-	-	-	-	-
11	**Jondhra**	Jonk	-	-	-	-	-	-	-	-	-	-	-	-
12	**Ghatora**	Arpa	-	-	-	-	-	-	-	-	-	-	-	-
13	**Andhiyarkore**	Hamp	-	-	-	-	-	-	-	-	-	-	-	-
14	**Simga**	Seonath	-	-	-	-	-	-	-	-	-	-	-	-
15	**Pathardhi**	Kharun	-	-	-	-	-	-	-	-	-	-	-	-
16	**Rajim**	Mahanadi	-	-	-	-	-	-	-	-	-	-	-	-

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

I Basin : Mahanadi

Sl. No.	Site Name	Name of the River/ Stream	Cadmium (ppm)		Chromium (ppm)		Copper (ppm)		Cyanide (ppm)		Lead (ppm)		Manganese (ppm)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(64)	(65)	(66)	(67)	(68)	(69)	(70)	(71)	(72)	(73)	(74)	(75)
	Year : 2006-07													
1	**Tikarapara**	Mahanadi	-	-	-	-	-	-	-	-	-	-	-	-
2	**Kesinga**	Tel	-	-	-	-	-	-	-	-	-	-	-	-
3	**Kantamal**	Tel	-	-	-	-	-	-	-	-	-	-	-	-
4	**Salebhata**	Ong	-	-	-	-	-	-	-	-	-	-	-	-
5	**Sundergarh**	Ib	-	-	-	-	-	-	-	-	-	-	-	-
6	**Kurubhanta**	Mand	-	-	-	-	-	-	-	-	-	-	-	-
7	**Basantpur**	Mahanadi	-	-	-	-	-	-	-	-	-	-	-	-
8	**Bamnidhi**	Hasdeo	-	-	-	-	-	-	-	-	-	-	-	-
9	**Manendragarh**	Hasdeo	-	-	-	-	-	-	-	-	-	-	-	-
10	**Rampur**	Jonk	-	-	-	-	-	-	-	-	-	-	-	-
11	**Jondhra**	Jonk	-	-	-	-	-	-	-	-	-	-	-	-
12	**Ghatora**	Arpa	-	-	-	-	-	-	-	-	-	-	-	-
13	**Andhiyarkore**	Hamp	-	-	-	-	-	-	-	-	-	-	-	-
14	**Simga**	Seonath	-	-	-	-	-	-	-	-	-	-	-	-
15	**Pathardhi**	Kharun	-	-	-	-	-	-	-	-	-	-	-	-
17	**Baronda**	Pairi	-	-	-	-	-	-	-	-	-	-	-	-

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

I Basin : Mahanadi

Sl. No.	Site Name	Name of the River/ Stream	Mercury (ppm)		Zinc (ppm)		Total Hardness		Sodium % (Na%)		SAR		RSC	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(76)	(77)	(78)	(79)	(80)	(81)	(82)	(83)	(84)	(85)	(86)	(87)
	Year : 2006-07													
1	**Tikarapara**	Mahanadi	-	-	-	-	53	140	11	23	0.3	0.5	0.0	0.1
2	**Kesinga**	Tel	-	-	-	-	-	-	-	-	-	-	-	-
3	**Kantamal**	Tel	-	-	-	-	20	91	9	31	0.1	0.6	0.0	0.6
4	**Salebhata**	Ong	-	-	-	-	36	97	18	38	0.4	1.2	0.0	0.6
5	**Sundergarh**	Ib	-	-	-	-	12	69	14	33	0.1	0.8	0.0	0.1
6	**Kurubhanta**	Mand	-	-	-	-	18	58	12	16	0.1	0.3	0.0	0.1
7	**Basantpur**	Mahanadi	-	-	-	-	24	70	11	27	0.2	0.5	0.0	0.6
8	**Bamnidhi**	Hasdeo	-	-	-	-	28	62	15	39	0.2	0.7	0.0	0.6
9	**Manendragarh**	Hasdeo	-	-	-	-	-	-	-	-	-	-	-	-
10	**Rampur**	Jonk	-	-	-	-	64	116	11	23	0.2	0.6	0.0	0.2
11	**Jondhra**	Jonk	-	-	-	-	46	238	9	45	0.2	2.0	0.0	0.5
12	**Ghatora**	Arpa	-	-	-	-	40	179	4	25	0.1	0.9	0.0	0.3
13	**Andhiyarkore**	Hamp	-	-	-	-	71	254	8	38	0.1	1.6	0.0	0.9
14	**Simga**	Seonath	-	-	-	-	64	191	10	51	0.2	2.1	0.0	1.3
15	**Pathardhi**	Kharun	-	-	-	-	68	236	9	29	0.2	1.0	0.0	0.0
16	**Rajim**	Mahanadi	-	-	-	-	38	121	7	33	0.1	0.7	0.0	0.2
17	**Baronda**	Pairi	-	-	-	-	20	40	12	33	0.2	0.5	0.0	0.3

Source: Water Quality Year Book 2006-2007

Note : All the ionic concentrations are expressed in mg./lit., unless mentioned otherwise.

Table 13 : Maximum and minimum values of water quality parameters by site and river basin

II Basin : Subarnarekha, Burhabalang & Baitarni

Sl. No.	Site Name	Name of the River/ Stream	Q (Cumecs)		Temperature ^{o}C		pH		Sp.Conductance		Potassium (K+)		Sodium (Na)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
	Year : 2006-2007													
a)	**Basin : Subarnarekha**													
1	**Muri**	Subarnarekha	-	-	19.5	33.0	7.9	8.3	-	-	2.0	3.8	10.0	29.3
2	**Jamshedpur**	Subarnarekha	-	-	18.0	32.0	7.7	8.2	-	-	1.3	3.8	7.5	25.9
3	**Adityapur**	Subarnarekha	-	-	13.0	30.0	7.8	8.3	-	-	1.1	3.8	5.0	20.3
4	**Ghatsila**	Subarnarekha	-	-	18.0	32.0	7.7	8.2	-	-	1.3	9.4	5.7	32.4
5	**Ghatsila Road Bridge**	Subarnarekha	-	-	19.0	31./5	7.4	8.2	-	-	2.0	9.4	8.0	38.5
6	**Baridhi Nala**	Subarnarekha	-	-	22.0	34.0	7.3	8.2	-	-	5.7	23.5	23.2	52.2
7	**Kulpatanga**	Subarnarekha	-	-	14.0	32.0	7.5	8.5	-	-	1.5	5.4	8.0	20.3
b)	**Basin : Baitarni**													
1	**Anandpur**	Baitarani	-	-	18.5	29.5	7.1	8.2	-	-	1.1	2.7	4.6	26.4

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

II Basin : Subarnarekha, Burhabalang & Baitarni

Sl. No.	Site Name	Name of the River/ Stream	Calcium (Ca++)		Magnesium (Mg)		Aluminium (AL+++)		Ferric ion (Fe+++)		Ammonia(NH4)		Carbonate (CO3--)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)
	Year : 2006-2007													
a)	**Basin : Subarnarekha**													
1	**Muri**	Subarnarekha	16	40	2.2	15.1	-	-	0.1	0.3	-	-	0.0	0.0
2	**Jamshedpur**	Subarnarekha	10	38	3.4	9.5	-	-	0.0	0.4	-	-	0.0	0.0
3	**Adityapur**	Subarnarekha	11	50	3.9	12.0	-	-	0.1	0.5	-	-	0.0	0.0
4	**Ghatsila**	Subarnarekha	11	42	3.4	20.4	-	-	0.1	0.9	-	-	0.0	0.0
5	**Ghatsila Road Bridge**	Subarnarekha	11	40	3.0	15.6	-	-	0.1	0.5	-	-	0.0	0.0
6	**Baridhi Nala**	Subarnarekha	61	128	20.2	48.6	-	-	0.1	0.3	-	-	0.0	0.0
7	**Kulpatanga**	Subarnarekha	8	50	2.7	22.8	-	-	0.1	0.6	-	-	0.0	0.0
b)	**Basin : Baitarni**													
1	**Anandpur**	Baitarani	8	50	2.9	17.0	-	-	0.1	0.2	-	-	0.0	0.0

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

II Basin : Subarnarekha, Burhabalang & Baitarni

Sl. No.	Site Name	Name of the River/ Stream	Bicarbonate (HCO3--)		Chloride (CL-)		Fluoride (F-)		Sulphate (SO4-)		Sulphite (SO3)		Nitrate (NO3)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)
	Year : 2006-2007													
a)	**Basin : Subarnarekha**													
1	**Muri**	Subarnarekha	57	173	13.8	39.9	0.00	0.44	3.0	14.3	-	-	0.15	3.24
2	**Jamshedpur**	Subarnarekha	48	145	11.7	36.7	0.00	0.15	0.9	15.2	-	-	0.29	2.35
3	**Adityapur**	Subarnarekha	57	172	7.6	30.1	0.00	0.49	1.5	13.3	-	-	0.25	10.76
4	**Ghatsila**	Subarnarekha	46	184	7.8	50.1	0.00	1.41	4.8	47.0	-	-	0.17	5.89
5	**Ghatsila Road Bridge**	Subarnarekha	42	138	11.7	57.0	0.00	1.20	1.6	72.7	-	-	1.40	2.65
6	**Baridhi Nala**	Subarnarekha	163	478	35.6	78.6	0.00	24.43	5.2	87.8	-	-	2.98	18.94
7	**Kulpatanga**	Subarnarekha	29	184	11.6	30.9	0.00	0.84	1.3	47.2	-	-	0.48	15.61
b)	**Basin : Baitarni**													
1	**Anandpur**	Baitarani	38	211	6.5	46.7	0.00	0.47	0.5	16.4	-	-	0.21	1.47

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

II Basin : Subarnarekha, Burhabalang & Baitarni

Sl. No.	Site Name	Name of the River/ Stream	Nitrite (NO2)		Phosphate (PO4)		Silica (SiO2)		DO (ppm)		BOD (ppm)		Total Coliform (no.per 10 ml)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(40)	(41)	(42)	(43)	(44)	(45)	(46)	(47)	(48)	(49)	(50)	(51)
	Year : 2006-2007													
a)	**Basin : Subarnarekha**													
1	**Muri**	Subarnarekha	0.00	0.00	0.000	0.000	7	22	5.4	8.4	0.8	2.2	-	-
2	**Jamshedpur**	Subarnarekha	0.00	0.00	0.000	0.041	8	18	0.0	7.4	1.3	19.0	-	-
3	**Adityapur**	Subarnarekha	0.00	0.00	0.000	0.000	7	20	6.0	8.6	0.7	2.3	-	-
4	**Ghatsila**	Subarnarekha	0.00	0.00	0.000	0.000	5	19	5.3	9.2	0.7	1.6	-	-
5	**Ghatsila Road Bridge**	Subarnarekha	0.00	0.01	0.000	0.010	8	27	5.2	8.2	0.9	2.3	-	-
6	**Baridhi Nala**	Subarnarekha	0.00	0.00	0.103	0.393	14	35	0.0	5.4	2.5	133.0	-	-
7	**Kulpatanga**	Subarnarekha	0.00	0.17	0.000	0.196	6	23	5.1	10.0	0.9	54.0	-	-
b)	**Basin : Baitarni**													
1	**Anandpur**	Baitarani	0.00	0.04	0.000	0.093	8	25	6.3	9.6	0.6	1.8	-	-

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

II Basin : Subarnarekha, Burhabalang & Baitarni

Sl. No.	Site Name	Name of the River/ Stream	Faecal Coliform (no.per 10 ml)		Total plate count (no.per 10 ml)		Phytoplankton (no.per ml)		Zooplankton (no.per litre)		Arsenic (ppm)		Boron (ppm)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(52)	(53)	(54)	(55)	(56)	(57)	(58)	(59)	(60)	(61)	(62)	(63)
	Year : 2006-2007													
a)	**Basin : Subarnarekha**													
1	**Muri**	Subarnarekha	-	-	-	-	-	-	-	-	-	-	-	-
2	**Jamshedpur**	Subarnarekha	-	-	-	-	-	-	-	-	-	-	-	-
3	**Adityapur**	Subarnarekha	-	-	-	-	-	-	-	-	-	-	-	-
4	**Ghatsila**	Subarnarekha	-	-	-	-	-	-	-	-	-	-	-	-
5	**Ghatsila Road Bridge**	Subarnarekha	-	-	-	-	-	-	-	-	-	-	-	-
6	**Baridhi Nala**	Subarnarekha	-	-	-	-	-	-	-	-	-	-	-	-
7	**Kulpatanga**	Subarnarekha	-	-	-	-	-	-	-	-	-	-	-	-
b)	**Basin : Baitarni**													
1	**Anandpur**	Baitarani	-	-	-	-	-	-	-	-	-	-	-	-

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

II Basin : Subarnarekha, Burhabalang & Baitarni

Sl. No.	Site Name	Name of the River/ Stream	Cadmium (ppm)		Chromium (ppm)		Copper (ppm)		Cyanide (ppm)		Lead (ppm)		Manganese (ppm)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(64)	(65)	(66)	(67)	(68)	(69)	(70)	(71)	(72)	(73)	(74)	(75)
	Year : 2006-2007													
a)	**Basin : Subarnarekha**													
1	**Muri**	Subarnarekha	-	-	-	-	-	-	-	-	-	-	-	-
2	**Jamshedpur**	Subarnarekha	-	-	-	-	-	-	-	-	-	-	-	-
3	**Adityapur**	Subarnarekha	-	-	-	-	-	-	-	-	-	-	-	-
4	**Ghatsila**	Subarnarekha	-	-	-	-	-	-	-	-	-	-	-	-
5	**Ghatsila Road Bridge**	Subarnarekha	-	-	-	-	-	-	-	-	-	-	-	-
6	**Baridhi Nala**	Subarnarekha	-	-	-	-	-	-	-	-	-	-	-	-
7	**Kulpatanga**	Subarnarekha	-	-	-	-	-	-	-	-	-	-	-	-
b)	**Basin : Baitarni**													
1	**Anandpur**	Baitarani	-	-	-	-	-	-	-	-	-	-	-	-

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

II Basin : Subarnarekha, Burhabalang & Baitarni

Sl. No.	Site Name	Name of the River/ Stream	Mercury (ppm)		Zinc (ppm)		Hardness		Sodium % Na%		SAR		RSC	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(76)	(77)	(78)	(79)	(80)	(81)	(82)	(83)	(84)	(85)	(86)	(87)
	Year : 2006-2007													
a)	**Basin : Subarnarekha**													
1	**Muri**	Subarnarekha	-	-	-	-	56	162	17	49	0.5	1.6	0.0	0.1
2	**Jamshedpur**	Subarnarekha	-	-	-	-	38	133	22	39	0.5	1.2	0.0	0.2
3	**Adityapur**	Subarnarekha	-	-	-	-	52	163	17	28	0.3	0.8	0.0	0.0
4	**Ghatsila**	Subarnarekha	-	-	-	-	45	191	19	29	0.4	1.1	0.0	0.0
5	**Ghatsila Road Bridge**	Subarnarekha	-	-	-	-	48	165	14	33	0.4	1.3	0.0	0.0
6	**Baridhi Nala**	Subarnarekha	-	-	-	-	261	523	13	25	0.6	1.3	0.0	0.8
7	**Kulpatanga**	Subarnarekha	-	-	-	-	33	219	12	46	0.3	1.1	0.0	0.3
b)	**Basin : Baitarni**													
1	**Anandpur**	Baitarani	-	-	-	-	33	195	17	33	0.3	0.9	0.0	0.1

Source: Water Quality Year Book for 2006-07

Note : 1. All the ionic concentrations are expressed in mg./lit. unless mentioned otherwise.

2. (-) indicate that analyis of a particular parameter has not been carried out.

Table 13 : Maximum and minimum values of water quality parameters by site and river basin

III Basin : Brahmani

Sl. No.	Site Name	Name of the River/ Stream	Q (Cumecs)		Temperature °C		pH		Sp.Conductance		Potassium (K+)		Sodium (Na)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
	Year : 2006-2007													
1	**Panposh**	Brahmani	-	-	19.0	31.0	7.2	8.2	-	-	1.5	5.4	5.3	17.4
2	**Gomlai**	Brahmani	-	-	19.5	30.5	7.4	8.4	-	-	1.4	3.9	4.9	38.6
3	**Jenapur**	Brahmani	-	-	19.0	31.5	7.7	8.2	-	-	1.3	2.5	5.7	9.6
4	**Talcher**	Brahmani	-	-	20.5	31.5	7.3	8.1	-	-	1.4	20.3	5.3	8.5
5	**Nandira**	Brahmani	-	-	22.0	30.2	7.6	8.4	-	-	1.6	4.9	6.9	22.5
6	**Kamalang**	Brahmani	-	-	20.0	30.0	7.7	8.3	-	-	1.5	2.3	5.7	18.3
7	**RSP Nala**	Brahmani	-	-	18.0	31.0	6.5	8.3	-	-	1.1	43.8	7.3	26.4

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

III Basin : Brahmani

Sl. No.	Site Name	Name of the River/ Stream	Calcium (Ca++)		Magnesium (Mg)		Aluminium (AL+++)		Ferric ion (Fe+++)		Ammonia(NH4)		Carbonate (CO3--)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)
	Year : 2006-2007													
1	**Panposh**	Brahmani	6	36	2.5	8.3	-	-	0.0	0.1	-	-	0.0	0.0
2	**Gomlai**	Brahmani	14	48	3.9	11.9	-	-	0.1	0.2	-	-	0.0	0.0
3	**Jenapur**	Brahmani	6	22	1.0	5.8	-	-	0.1	0.1	-	-	0.0	0.0
4	**Talcher**	Brahmani	10	17	1.0	4.6	-	-	0.0	0.3	-	-	0.0	0.0
5	**Nandira**	Brahmani	10	56	3.9	16.8	-	-	0.0	0.6	-	-	0.0	0.0
6	**Kamalang**	Brahmani	12	36	1.9	9.7	-	-	0.0	0.4	-	-	0.0	0.0
7	**RSP Nala**	Brahmani	10	65	2.9	25.3	-	-	0.0	0.3	-	-	0.0	0.0

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

III Basin : Brahmani

Sl. No.	Site Name	Name of the River/ Stream	Bicarbonate (HCO3--)		Chloride (CL-)		Fluoride (F-)		Sulphate (SO4-)		Sulphite (SO3)		Nitrate (NO3)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)
	Year : 2006-2007													
1	**Panposh**	Brahmani	30	148	7.7	31.9	0.00	0.46	1.2	38.4	-	-	0.14	2.58
2	**Gomlai**	Brahmani	30	207	7.8	57.9	0.00	0.15	1.5	40.8	-	-	0.21	5.77
3	**Jenapur**	Brahmani	21	102	7.7	14.9	0.00	0.42	1.0	5.5	-	-	1.08	3.07
4	**Talcher**	Brahmani	35	102	7.7	13.6	0.00	0.08	1.0	8.6	-	-	0.31	4.25
5	**Nandira**	Brahmani	27	137	7.7	29.9	0.00	1.58	1.7	45.5	-	-	0.59	30.69
6	**Kamalang**	Brahmani	24	87	7.7	25.1	0.00	0.72	0.8	26.3	-	-	2.03	12.27
7	**RSP Nala**	Brahmani	32	204	11.7	38.6	0.00	1.58	1.2	39.3	-	-	0.18	17.15

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

III Basin : Brahmani

Sl. No.	Site Name	Name of the River/ Stream	Nitrite (NO2)		Phosphate (PO4)		Silica (SiO2)		DO (ppm)		BOD (ppm)		Total Coliform (no.per 10 ml)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(40)	(41)	(42)	(43)	(44)	(45)	(46)	(47)	(48)	(49)	(50)	(51)
	Year : 2006-2007													
1	**Panposh**	Brahmani	0.00	0.22	0.000	0.103	7	22	5.6	8.0	0.7	1.6	-	-
2	**Gomlai**	Brahmani	0.00	0.08	0.000	0.041	12	28	6.3	8.2	0.7	1.0	-	-
3	**Jenapur**	Brahmani	0.00	0.03	0.000	0.052	8	22	6.3	9.0	0.7	1.5	-	-
4	**Talcher**	Brahmani	0.00	0.07	0.000	0.000	6	23	6.5	8.5	0.4	0.8	-	-
5	**Nandira**	Brahmani	0.00	5.16	0.000	0.145	8	22	5.4	8.2	1.2	2.9	-	-
6	**Kamalang**	Brahmani	0.00	0.18	0.000	1.137	11	29	5.6	8.4	1.0	2.0	-	-
7	**RSP Nala**	Brahmani	0.00	2.68	0.000	0.021	8	22	2.6	9.4	0.8	22.0	-	-

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

III Basin : Brahmani

Sl. No.	Site Name	Name of the River/ Stream	Faecal Coliform (no.per 10 ml)		Total plate count (no.per 10 ml)		Phytoplankton (no.per ml)		Zooplankton (no.per litre)		Arsenic (ppm)		Boron (ppm)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(52)	(53)	(54)	(55)	(56)	(57)	(58)	(59)	(60)	(61)	(62)	(63)
	Year : 2006-2007													
1	**Panposh**	Brahmani	-	-	-	-	-	-	-	-	-	-	-	-
2	**Gomlai**	Brahmani	-	-	-	-	-	-	-	-	-	-	-	-
3	**Jenapur**	Brahmani	-	-	-	-	-	-	-	-	-	-	-	-
4	**Talcher**	Brahmani	-	-	-	-	-	-	-	-	-	-	-	-
5	**Nandira**	Brahmani	-	-	-	-	-	-	-	-	-	-	-	-
6	**Kamalang**	Brahmani	-	-	-	-	-	-	-	-	-	-	-	-
7	**RSP Nala**	Brahmani	-	-	-	-	-	-	-	-	-	-	-	-

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

III Basin : Brahmani

Sl. No.	Site Name	Name of the River/ Stream	Cadmium (ppm)		Chromium (ppm)		Copper (ppm)		Cyanide (ppm)		Lead (ppm)		Manganese (ppm)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(64)	(65)	(66)	(67)	(68)	(69)	(70)	(71)	(72)	(73)	(74)	(75)
	Year : 2006-2007													
1	**Panposh**	Brahmani	-	-	-	-	-	-	-	-	-	-	-	-
2	**Gomlai**	Brahmani	-	-	-	-	-	-	-	-	-	-	-	-
3	**Jenapur**	Brahmani	-	-	-	-	-	-	-	-	-	-	-	-
4	**Talcher**	Brahmani	-	-	-	-	-	-	-	-	-	-	-	-
5	**Nandira**	Brahmani	-	-	-	-	-	-	-	-	-	-	-	-
6	**Kamalang**	Brahmani	-	-	-	-	-	-	-	-	-	-	-	-
7	**RSP Nala**	Brahmani	-	-	-	-	-	-	-	-	-	-	-	-

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

III Basin : Brahmani

Sl. No.	Site Name	Name of the River/ Stream	Mercury (ppm)		Zinc (ppm)		Hardness		Sodium % / Na%		SAR		RSC	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(76)	(77)	(78)	(79)	(80)	(81)	(82)	(83)	(84)	(85)	(86)	(87)
	Year : 2006-2007													
1	**Panposh**	Brahmani	-	-	-	-	26	119	14	38	0.4	1.1	0.0	0.3
2	**Gomlai**	Brahmani	-	-	-	-	53	169	16	33	0.3	1.3	0.0	0.3
3	**Jenapur**	Brahmani	-	-	-	-	28	78	21	29	0.4	0.5	0.0	0.1
4	**Talcher**	Brahmani	-	-	-	-	32	1248	16	28	0.3	0.5	0.0	0.4
5	**Nandira**	Brahmani	-	-	-	-	42	172	14	31	0.3	0.9	0.0	0.0
6	**Kamalang**	Brahmani	-	-	-	-	41	130	13	28	0.3	0.7	0.0	0.0
7	**RSP Nala**	Brahmani	-	-	-	-	24	267	7	39	0.2	1.1	0.0	1.1

Source: Water Quality Year Book for 2006-07.

Note : 1. All the ionic concentrations are expressed in mg./lit. unless mentioned otherwise.

2. (-) indicate that analyis of a particular parameter has not been carried out.

Table 13 : Maximum and minimum values of water quality parameters by site and river basin

IV Basin : Rushikulya, Vamsadhara, Sarada & Nagavali

Sl. No.	Site Name	Name of the River/ Stream	Q (Cumecs)		Temperature ^{o}C		pH		Sp.Conductance		Potassium		Sodium	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
	Year : 2006-2007													
	Basin : Rushikulya													
			< ---------- Data is not available ---------->											
	Basin : Vamsdhara													
			< ---------- Data is not available ---------->											
	Basin : Nagavali													
			< ---------- Data is not available ---------->											

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

IV Basin : Rushikulya, Vamsadhara, Sarada & Nagavali

Sl. No.	Site Name	Name of the River/ Stream	Calcium		Magnesium		Aluminium		Iron		Ammonia(NH_3)		Carbonate	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)
	Year : 2006-2007													
	Basin : Rushikulya													
			< ---------- Data is not available ---------->											
	Basin : Vamsdhara													
			< ---------- Data is not available ---------->											
	Basin : Nagavali													
			< ---------- Data is not available ---------->											

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

IV Basin : Rushikulya, Vamsadhara, Sarada & Nagavali

Sl. No.	Site Name	Name of the River/ Stream	Bicarbonate		Chloride		Fluoride		Sulphate		Sulphite		Nitrate	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)
	Year : 2006-2007													
	Basin : Rushikulya													
			< ---------- Data is not available ---------->											
	Basin : Vamsdhara													
			< ---------- Data is not available ---------->											
	Basin : Nagavali													
			< ---------- Data is not available ---------->											

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

IV Basin : Rushikulya, Vamsadhara, Sarada & Nagavali

Sl. No.	Site Name	Name of the River/ Stream	Nitrite		Phosphate		Silica (SiO_3)		DO (ppm)		BOD (ppm)		Total Coliform (no.per 10 ml)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(40)	(41)	(42)	(43)	(44)	(45)	(46)	(47)	(48)	(49)	(50)	(51)
	Year : 2006-2007													
	Basin : Rushikulya													
			< ---------- Data is not available ---------- >											
	Basin : Vamsdhara													
			< ---------- Data is not available ---------- >											
	Basin : Nagavali													
			< ---------- Data is not available ---------- >											

Table 13 : Maximum and minimum values of water quality parameters by site and river basin

IV Basin : Rushikulya, Vamsadhara, Sarada & Nagavali

Sl. No.	Site Name	Name of the River/ Stream	Faecal Coliform (no.per 10 ml)		Total plate count (no.per 10 ml)		Phytoplankton (no.per ml)		Zooplankton (no.per litre)		Arsenic (ppm)		Boron (ppm)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(52)	(53)	(54)	(55)	(56)	(57)	(58)	(59)	(60)	(61)	(62)	(63)
	Year : 2006-2007													
	Basin : Rushikulya													
	< ---------- Data is not available ---------->													
	Basin : Vamsdhara													
	< ---------- Data is not available ---------->													
	Basin : Nagavali													
	< ---------- Data is not available ---------->													

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

IV Basin : Rushikulya, Vamsadhara, Sarada & Nagavali

Sl. No.	Site Name	Name of the River/ Stream	Cadmium (ppm)		Chromium (ppm)		Copper (ppm)		Cyanide (ppm)		Lead (ppm)		Manganese (ppm)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(64)	(65)	(66)	(67)	(68)	(69)	(70)	(71)	(72)	(73)	(74)	(75)
	Year : 2006-2007													
	Basin : Rushikulya													
			< ---------- Data is not available ---------- >											
	Basin : Vamsdhara													
			< ---------- Data is not available ---------- >											
	Basin : Nagavali													
			< ---------- Data is not available ---------- >											

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

IV Basin : Rushikulya, Vamsadhara, Sarada & Nagavali

Sl. No.	Site Name	Name of the River/ Stream	Mercury (ppm)		Zinc (ppm)		Hardness		Sodium %		SAR		RSC	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(76)	(77)	(78)	(79)	(80)	(81)	(82)	(83)	(84)	(85)	(86)	(87)
	Year : 2006-2007													
	Basin : Rushikulya													
			< ---------- Data is not available ---------- >											
	Basin : Vamsdhara													
			< ---------- Data is not available ---------- >											
	Basin : Nagavali													
			< ---------- Data is not available ---------- >											

Source: Water Quality Year Book for 2006-07

Table 13 : Maximum and minimum values of water quality parameters by site and river basin

V Basin : Godavari

Sl. No.	Site Name	Name of the River/ Stream	Q (Cumecs)		Temperature ^{o}C		pH		Sp.Conductance		Potassium		Sodium	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
	Year : 2006-07													
1	**Polavaram**	Godavari	296.8	9795	25.0	32.0	8.0	8.6	N.A	N.A	0.9	3.1	4.1	17.0
2	**Konta**	Sabari	173.2	1616	24.0	31.5	7.6	8.6	N.A	N.A	0.5	3.8	1.6	60.0
3	**Bhadrachelam**	Godavari	N.A	N.A	24.0	30.0	7.9	8.9	N.A	N.A	1.4	4.5	18.0	53.9
4	**Perur**	Godavari	51.30	13718	24.0	32.0	7.9	8.8	N.A	N.A	1.0	4.7	2.6	48.7
5	**Pathagudem**	Indravati	7.307	10194	22.0	31.0	7.4	8.8	N.A	N.A	0.5	2.6	2.0	9.4
6	**Jagdalpur**	Indravati	2.214	784.9	18.5	31.0	7.5	8.7	N.A	N.A	0.8	2.9	3.0	7.0
7	**Tekra**	Pranhita	22.80	5046	22.0	25.6	8.0	8.7	N.A	N.A	1.6	3.5	5.3	39.1
8	**Bhatpalli**	Indravati	0.777	111.4	19.0	29.0	8.1	8.5	N.A	N.A	1.6	2.3	14.7	58.0
9	**Bamnidi**	Wardha	6.443	1563	23.0	32.0	8.1	8.6	N.A	N.A	2.0	6.6	7.6	65.1
10	**P.G. Bridge**	Penganga	1.550	489.9	23.0	33.0	3.5	8.8	N.A	N.A	1.6	2.7	3.2	28.8
11	**Nandgaon**	Wunna	0.767	311.4	18.2	28.0	8.1	9.0	N.A	N.A	0.2	3.9	7.6	52.2
12	**Hivra**	Wardha	6.645	167.2	20.0	29.5	8.0	8.6	N.A	N.A	2.0	3.5	13.3	44.2
13	**Ashti**	Wainganga	13.63	4477	22.5	29.5	7.8	8.8	N.A	N.A	1.6	3.5	2.3	24.8
14	**Pauni**	Wainganga	-	-	19.0	31.0	7.8	8.7	N.A	N.A	1.6	4.7	7.4	39.1
15	**Satrapur**	Kanhan	2.372	3173	24.0	31.5	8.1	8.5	N.A	N.A	1.6	2.7	4.8	48.3
16	**Mancherial**	Godavari	3..232	1383	23.5	32.0	8.4	8.9	N.A	N.A	1.5	4.3	24.0	71.0
17	**Gandlapet**	Peddavagu	10.40	10.40	28.6	28.6	8.3	8.3	N.A	N.A	0.3	0.3	10.0	10.0
18	**Saigaon**	Manjira	0.675	166.3	22.0	28.5	8.1	8.4	N.A	N.A	3.8	7.7	14.0	30.0
19	**Dhalegaon**	Godavari	0.267	881.5	20.0	28.0	8.4	8.8	N.A	N.A	2.3	4.0	26.0	132.0

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

V Basin : Godavari

Sl. No.	Site Name	Name of the River/ Stream	Calcium		Magnesium		Aluminium		Iron		Ammonia(NH_3)		Carbonate	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)
	Year : 2006-07													
1	**Polavaram**	Godavari	14	38	2.2	22.4	N.A	N.A	0.0	0.3	0.5	0.64	0.0	18.7
2	**Konta**	Sabari	8	90	1.8	14.6	N.A	N.A	0.0	0.5	0.05	0.05	0.0	10.7
3	**Bhadrachelam**	Godavari	16	42	5.1	23.4	N.A	N.A	0.0	0.3	0.05	0.08	0.00	27.0
4	**Perur**	Godavari	8	38	2.4	30.6	N.A	N.A	0.0	0.3	0.05	0.05	0.0	10.7
5	**Pathagudem**	Indravati	4	38	2.4	11.7	N.A	N.A	0.0	0.2	0.05	0.05	0.0	3.8
6	**Jagdalpur**	Indravati	4	43	1.8	27.2	N.A	N.A	0.0	1.1	0.05	0.05	0.0	10.7
7	**Tekra**	Pranhita	21	35	4.0	18.7	N.A	N.A	0.0	0.4	0.07	0.65	0.0	10.8
8	**Bhatpalli**	Indravati	21	37	13.4	28.1	N.A	N.A	0.0	0.1	0.07	0.63	0.0	10.8
9	**Bamnidi**	Wardha	21	45	9.4	23.2	N.A	N.A	0.0	0.1	0.03	0.49	0.0	15.3
10	**P.G. Bridge**	Penganga	21	39	7.5	21.9	N.A	N.A	0.0	0.1	0.06	0.77	0.0	13.2
11	**Nandgaon**	Wunna	18	45	5.3	21.9	N.A	N.A	0.0	0.1	0.06	0.70	0.0	16.5
12	**Hivra**	Wardha	21	40	9.8	20.5	N.A	N.A	0.0	0.1	0.06	0.65	0.0	19.5
13	**Ashti**	Wainganga	9	35	1.8	12.0	N.A	N.A	0.0	0.7	0.06	0.63	0.0	12.3
14	**Pauni**	Wainganga	23	45	0.5	14.7	N.A	N.A	0.0	0.1	0.07	0.63	0.0	10.8
15	**Satrapur**	Kanhan	19	44	4.9	21.9	N.A	N.A	0.0	0.1	0.11	0.70	0.0	8.7
16	**Mancherial**	Godavari	17	64	6.1	37.0	N.A	N.A	0.0	0.2	0.05	0.05	2.4	28.8
17	**Gandlapet**	Peddavagu	32	32	10.2	10.2	N.A	N.A	0.0	0.1	0.05	0.05	0.0	0.0
18	**Saigaon**	Manjira	35	38	2.6	18.7	N.A	N.A	0.0	0.2	0.05	0.05	0.0	12.0
19	**Dhalegaon**	Godavari	28	62	9.4	42.8	N.A	N.A	0.0	0.3	0.05	0.05	4.7	21.6

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

V Basin : Godavari

Sl. No.	Site Name	Name of the River/ Stream	Bicarbonate		Chloride		Fluoride		Sulphate		Sulphite		Nitrate	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)
	Year : 2006-07													
1	**Polavaram**	Godavari	63	183	8.0	30.0	0.05	0.31	1.0	10.0	N.A	N.A	0.25	1.53
2	**Konta**	Sabari	37	312	6.0	35.0	0.07	0.34	1.0	27.0	N.A	N.A	0.25	6.46
3	**Bhadrachelam**	Godavari	92	210	7.0	45.0	0.09	0.36	1.0	27.0	N.A	N.A	0.08	1.95
4	**Perur**	Godavari	49	212	7.0	38.0	0.11	16.0	1.0	28.0	N.A	N.A	0.10	0.80
5	**Pathagudem**	Indravati	27	155	5.0	16.0	0.06	0.25	1.0	1.0	N.A	N.A	0.01	0.58
6	**Jagdalpur**	Indravati	38	190	3.0	22.0	0.08	0.30	1.0	10.0	N.A	N.A	0.01	0.99
7	**Tekra**	Pranhita	85	212	4.3	34.1	0.08	1.41	4.8	17.8	N.A	N.A	0.28	1.26
8	**Bhatpalli**	Indravati	163	293	5.0	19.2	0.23	1.69	5.8	16.8	N.A	N.A	0.56	3.36
9	**Bamnidi**	Wardha	81	232	9.2	96.6	0.15	1.12	5.8	42.7	N.A	N.A	0.70	3.50
10	**P.G. Bridge**	Penganga	85	217	4.3	19.9	0.06	1.16	2.9	15.8	N.A	N.A	0.28	4.20
11	**Nandgaon**	Wunna	74	215	5.0	49.7	0.09	1.10	6.7	24.0	N.A	N.A	0.28	2.80
12	**Hivra**	Wardha	139	228	7.8	30.05	0.09	0.74	5.8	18.2	N.A	N.A	0.56	3.36
13	**Ashti**	Wainganga	46	159	1.4	22.0	0.08	0.49	3.4	12.0	N.A	N.A	0.00	1.12
14	**Pauni**	Wainganga	83	210	6.4	39.8	0.09	0.74	4.3	26.9	N.A	N.A	0.28	322.28
15	**Satrapur**	Kanhan	102	218	5.7	67.4	0.13	1.25	3.8	29.8	N.A	N.A	0.42	0.98
16	**Mancherial**	Godavari	145	263	21.0	73.0	0.12	1.26	8.0	29.0	N.A	N.A	0.07	9.42
17	**Gandlapet**	Peddavagu	160	160	14.0	14.0	0.21	0.21	5.0	5.0	N.A	N.A	1.45	1.45
18	**Saigaon**	Manjira	100	233	19.0	21.0	0.11	0.29	1.0	4.0	N.A	N.A	0.58	1.51
19	**Dhalegaon**	Godavari	119	255	28.0	82.0	0.09	0.42	2.0	130.0	N.A	N.A	0.42	1.81

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

V Basin : Godavari

Sl. No.	Site Name	Name of the River/ Stream	Nitrite		Phosphate		Silica (SiO_3)		DO (ppm)		BOD (ppm)		Total Coliform (no.per 10 ml)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(40)	(41)	(42)	(43)	(44)	(45)	(46)	(47)	(48)	(49)	(50)	(51)
	Year : 2006-07													
1	**Polavaram**	Godavari	0.00	0.07	N.A	N.A	1.0	25.6	5.4	7.1	0.1	2.4	-	-
2	**Konta**	Sabari	0.00	0.05	N.A	N.A	7.0	29.4	5.2	7.1	0.1	0.8	-	-
3	**Bhadrachelam**	Godavari	0.00	0.11	N.A	N.A	14.1	22.7	5.8	7.1	0.2	1.7	-	-
4	**Perur**	Godavari	0.00	0.06	N.A	N.A	1.6	20.5	4.9	7.5	0.2	0.8	-	-
5	**Pathagudem**	Indravati	0.00	0.10	N.A	N.A	6.0	23.0	4.6	7.3	0.3	1.7	-	-
6	**Jagdalpur**	Indravati	0.00	0.09	N.A	N.A	7.0	17.8	5.3	7.5	0.4	2.0	-	-
7	**Tekra**	Pranhita	0.01	0.15	N.A	N.A	25.0	50.0	6.5	7.9	0.7	1.9	-	-
8	**Bhatpalli**	Indravati	0.00	0.15	N.A	N.A	35.4	81.0	6.6	8.5	0.8	3.8	-	-
9	**Bamnidi**	Wardha	0.00	0.50	N.A	N.A	26.4	71.0	3.9	8.0	0.9	15.0	-	-
10	**P.G. Bridge**	Penganga	0.00	0.28	N.A	N.A	28.0	77.0	6.5	8.2	0.7	3.7	-	-
11	**Nandgaon**	Wunna	0.00	0.14	N.A	N.A	27.9	80.0	1.5	9.4	0.4	25.0	-	-
12	**Hivra**	Wardha	0.00	0.41	N.A	N.A	26.4	54.0	4.3	8.4	0.5	2.6	-	-
13	**Ashti**	Wainganga	0.01	0.12	N.A	N.A	21.0	65.0	6.1	7.7	0.4	1.7	-	-
14	**Pauni**	Wainganga	0.01	0.29	N.A	N.A	21.9	80.0	6.0	8.1	0.9	3.3	-	-
15	**Satrapur**	Kanhan	0.00	0.11	N.A	N.A	26.4	85.0	6.0	11.7	0.6	6.5	-	-
16	**Mancherial**	Godavari	0.00	0.06	N.A	N.A	11.0	27.7	5.4	7.9	0.2	1.7	-	-
17	**Gandlapet**	Peddavagu	0.00	0.00	N.A	N.A	15.4	15.4	6.4	6.4	1.4	1.4	-	-
18	**Saigaon**	Manjira	0.00	0.00	N.A	N.A	11.0	18.6	5.6	5.9	1.0	1.6	-	-
19	**Dhalegaon**	Godavari	0.00	0.02	N.A	N.A	9.0	25.4	5.9	7.3	0.2	2.3	-	-

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

V Basin : Godavari

Sl. No.	Site Name	Name of the River/ Stream	Faecal Coliform (no.per 10 ml)		Total plate count (no.per 10 ml)		Phytoplankton (no.per ml)		Zooplankton (no.per litre)		Arsenic (ppm)		Boron (ppm)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(52)	(53)	(54)	(55)	(56)	(57)	(58)	(59)	(60)	(61)	(62)	(63)
	Year : 2006-07													
1	**Polavaram**	Godavari	-	-	-	-	-	-	-	-	-	-	-	-
2	**Konta**	Sabari	-	-	-	-	-	-	-	-	-	-	-	-
3	**Bhadrachelam**	Godavari	-	-	-	-	-	-	-	-	-	-	-	-
4	**Perur**	Godavari	-	-	-	-	-	-	-	-	-	-	-	-
5	**Pathagudem**	Indravati	-	-	-	-	-	-	-	-	-	-	-	-
6	**Jagdalpur**	Indravati	-	-	-	-	-	-	-	-	-	-	-	-
7	**Tekra**	Pranhita	-	-	-	-	-	-	-	-	-	-	-	-
8	**Bhatpalli**	Indravati	-	-	-	-	-	-	-	-	-	-	-	-
9	**Bamnidi**	Wardha	-	-	-	-	-	-	-	-	-	-	-	-
10	**P.G. Bridge**	Penganga	-	-	-	-	-	-	-	-	-	-	-	-
11	**Nandgaon**	Wunna	-	-	-	-	-	-	-	-	-	-	-	-
12	**Hivra**	Wardha	-	-	-	-	-	-	-	-	-	-	-	-
13	**Ashti**	Wainganga	-	-	-	-	-	-	-	-	-	-	-	-
14	**Pauni**	Wainganga	-	-	-	-	-	-	-	-	-	-	-	-
15	**Satrapur**	Kanhan	-	-	-	-	-	-	-	-	-	-	-	-
16	**Mancherial**	Godavari	-	-	-	-	-	-	-	-	-	-	-	-
17	**Gandlapet**	Peddavagu	-	-	-	-	-	-	-	-	-	-	-	-
18	**Saigaon**	Manjira	-	-	-	-	-	-	-	-	-	-	-	-
19	**Dhalegaon**	Godavari	-	-	-	-	-	-	-	-	-	-	-	-

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

V Basin : Godavari

Sl. No.	Site Name	Name of the River/ Stream	Cadmium (ppm)		Chromium (ppm)		Copper (ppm)		Cyanide (ppm)		Lead (ppm)		Manganese (ppm)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(64)	(65)	(66)	(67)	(68)	(69)	(70)	(71)	(72)	(73)	(74)	(75)
	Year : 2006-07													
1	**Polavaram**	Godavari	-	-	-	-	-	-	-	-	-	-	-	-
2	**Konta**	Sabari	-	-	-	-	-	-	-	-	-	-	-	-
3	**Bhadrachelam**	Godavari	-	-	-	-	-	-	-	-	-	-	-	-
4	**Perur**	Godavari	-	-	-	-	-	-	-	-	-	-	-	-
5	**Pathagudem**	Indravati	-	-	-	-	-	-	-	-	-	-	-	-
6	**Jagdalpur**	Indravati	-	-	-	-	-	-	-	-	-	-	-	-
7	**Tekra**	Pranhita	-	-	-	-	-	-	-	-	-	-	-	-
8	**Bhatpalli**	Indravati	-	-	-	-	-	-	-	-	-	-	-	-
9	**Bamnidi**	Wardha	-	-	-	-	-	-	-	-	-	-	-	-
10	**P.G. Bridge**	Penganga	-	-	-	-	-	-	-	-	-	-	-	-
11	**Nandgaon**	Wunna	-	-	-	-	-	-	-	-	-	-	-	-
12	**Hivra**	Wardha	-	-	-	-	-	-	-	-	-	-	-	-
13	**Ashti**	Wainganga	-	-	-	-	-	-	-	-	-	-	-	-
14	**Pauni**	Wainganga	-	-	-	-	-	-	-	-	-	-	-	-
15	**Satrapur**	Kanhan	-	-	-	-	-	-	-	-	-	-	-	-
16	**Mancherial**	Godavari	-	-	-	-	-	-	-	-	-	-	-	-
17	**Gandlapet**	Peddavagu	-	-	-	-	-	-	-	-	-	-	-	-
18	**Saigaon**	Manjira	-	-	-	-	-	-	-	-	-	-	-	-
19	**Dhalegaon**	Godavari	-	-	-	-	-	-	-	-	-	-	-	-

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

V Basin : Godavari

Sl. No.	Site Name	Name of the River/ Stream	Mercury (ppm)		Zinc (ppm)		Hardness		Sodium %		SAR		RSC	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(76)	(77)	(78)	(79)	(80)	(81)	(82)	(83)	(84)	(85)	(86)	(87)
	Year : 2006-07													
1	**Polavaram**	Godavari	-	-	-	-	55	133	-	-	0.2	0.8	0.0	0.4
2	**Konta**	Sabari	-	-	-	-	30	234	-	-	0.1	1.7	0.0	0.8
3	**Bhadrachelam**	Godavari	-	-	-	-	63	181	-	-	0.8	1.7	0.1	0.6
4	**Perur**	Godavari	-	-	-	-	45	184	-	-	0.2	1.7	0.0	0.9
5	**Pathagudem**	Indravati	-	-	-	-	38	113	-	-	0.1	0.4	0.0	0.4
6	**Jagdalpur**	Indravati	-	-	-	-	35	181	-	-	0.1	0.3	0.0	0.3
7	**Tekra**	Pranhita	-	-	-	-	68	138	-	-	0.3	1.5	0.0	1.0
8	**Bhatpalli**	Indravati	-	-	-	-	126	194	-	-	0.5	2.2	0.1	1.7
9	**Bamnidi**	Wardha	-	-	-	-	92	201	-	-	0.3	2.0	0.0	0.7
10	**P.G. Bridge**	Penganga	-	-	-	-	84	179	-	-	0.2	1.1	0.0	1.0
11	**Nandgaon**	Wunna	-	-	-	-	66	188	-	-	0.4	2.0	0.0	0.4
12	**Hivra**	Wardha	-	-	-	-	94	174	-	-	0.5	1.5	0.1	0.9
13	**Ashti**	Wainganga	-	-	-	-	33	116	-	-	0.2	1.1	0.0	0.6
14	**Pauni**	Wainganga	-	-	-	-	79	153	-	-	0.4	1.4	0.0	0.7
15	**Satrapur**	Kanhan	-	-	-	-	102	175	-	-	0.2	1.6	0.0	0.7
16	**Mancherial**	Godavari	-	-	-	-	126	235	-	-	0.8	2.4	0.0	1.5
17	**Gandlapet**	Peddavagu	-	-	-	-	123	123	-	-	0.4	0.4	0.2	0.2
18	**Saigaon**	Manjira	-	-	-	-	98	173	-	-	0.6	1.0	0.1	0.4
19	**Dhalegaon**	Godavari	-	-	-	-	126	258	-	-	1.0	4.4	0.0	1.1

Source: Water Quality Year Book for 2006-07 (Godavari Basin).

Note : 1. All the ionic concentrations are expressed in mg./lit. unless mentioned otherwise.

2. (-) indicate that analyis of a particular parameter has not been carried out.

Table 13 : Maximum and minimum values of water quality parameters by site and river basin

VI Basin : Krishna

Sl. No.	Site Name	Name of the River/ Stream	Q (Cumecs)		Temperature °C		pH		Sp.Conductance		Potassium (K+)		Sodium (Na)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
	Year : 2006-2007													
1	**Vijayawada**	Krishna	0.000	752.4	26.0	29.0	8.0	8.7	-	-	0.8	4.4	31.0	105.0
2	**Keesara**	Munneru	2.246	66.95	21.0	29.0	8.2	8.6	-	-	1.5	6.8	86.0	130.0
3	**Paleru Bridge**	Paleru	0.352	31.65	22.0	29.0	7.8	8.4	-	-	1.0	8.8	43.0	110.0
4	**Wadenapally**	Krishna	28.67	983.7	26.0	33.0	7.5	8.5	-	-	0.8	3.0	30.0	100.0
5	**Dameracherla**	Musi	5.369	236.8	20.0	29.0	7.8	8.4	-	-	0.5	7.1	66.0	130.0
6	**Halia**	Halia	0.548	49.94	25.0	32.0	8.2	8.9	-	-	2.3	5.1	78.0	200.0
7	**Bawapuram**	Tungabhadra	1.603	184.9	23.0	30.0	7.9	8.8	-	-	2.0	6.4	28.0	260.0
8	**T.Rampuram**	Hagari	0.396	73.56	25.0	27.0	7.8	8.5	-	-	3.2	10.0	155.0	420.0
9	**Marol**	Varada	93.32	334.9	25.0	27.0	7.0	8.2	-	-	15.6	42.2	13.2	32.0
10	**Harlahalli**	Tungabhadra	7.670	726.6	23.0	29.0	7.0	8.2	-	-	28.5	65.6	18.9	43.8
11	**Shimoga**	Tunga	3.407	1219	21.5	28.5	6.9	8.1	-	-	7.8	51.5	11.5	32.8
12	**Holehonnur**	Bhadra	5.686	150.0	25.0	30.3	6.8	8.2	-	-	19.5	46.1	12.2	45.1
13	**Yadgir**	Bhima	0.000	672.4	23.0	28.0	7.9	8.7	-	-	2.4	5.0	46.0	125.0
14	**Malkhed**	Kagna	0.000	9.202	22.0	26.0	7.8	8.1	-	-	2.9	4.6	38.0	64.0
15	**Takali**	Bhima	74.59	4678	-	-	8.2	8.5	-	-	16.4	41.3	23.2	110.0
16	**Phulgaon**	Bhima	99.61	544.6	23.0	26.5	7.2	7.9	-	-	10.9	15.4	9.1	16.5
17	**Cholachagudda**	Malaprabha	5.540	70.53	22.0	24.0	7.7	8.3	-	-	20.1	43.2	23.4	67.0
18	**Kurundwad**	Krishna	0.000	2793	26.0	26.0	7.2	8.3	-	-	12.9	18.9	7.5	25.6
19	**Karad**	Krishna	0.000	3594	19.5	25.0	7.3	8.5	-	-	4.8	17.5	4.5	25.7

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

VI Basin : Krishna

Sl. No.	Site Name	Name of the River/ Stream	Calcium (Ca++)		Magnesium (Mg)		Aluminium (AL+++)		Ferric ion (Fe+++)		Ammonia(NH4)		Carbonate(CO3--)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)
	Year : 2006-2007													
1	**Vijayawada**	Krishna	30	51	4.0	19.0	-	-	0.0	0.0	-	-	0.0	29.0
2	**Keesara**	Munneru	32	42	16.0	23.0	-	-	0.0	0.0	-	-	0.0	29.0
3	**Paleru Bridge**	Paleru	40	59	14.0	34.0	-	-	0.0	0.0	-	-	0.0	24.0
4	**Wadenapally**	Krishna	27	43	6.0	23.0	-	-	0.0	0.0	-	-	0.0	19.0
5	**Dameracherla**	Musi	46	75	16.0	34.0	-	-	0.0	0.0	-	-	0.0	19.0
6	**Halia**	Halia	27	40	14.0	22.0	-	-	0.0	0.0	-	-	0.0	38.0
7	**Bawapuram**	Tungabhadra	22	58	4.0	38.0	-	-	0.0	0.0	-	-	0.0	34.0
8	**T.Rampuram**	Hagari	42	93	13.0	53.0	-	-	0.0	0.0	-	-	0.0	19.0
9	**Marol**	Varada	6	19	1.0	9.4	-	-	0.0	0.0	-	-	0.0	0.0
10	**Harlahalli**	Tungabhadra	3	28	1.0	16.3	-	-	0.0	0.0	-	-	0.0	0.0
11	**Shimoga**	Tunga	5	29	1.6	15.3	-	-	0.0	0.0	-	-	0.0	0.0
12	**Holehonnur**	Bhadra	1	26	3.8	10.4	-	-	0.0	0.0	-	-	0.0	0.0
13	**Yadgir**	Bhima	29	48	9.0	25.0	-	-	0.0	0.0	-	-	0.0	24.0
14	**Malkhed**	Kagna	27	46	15.0	23.0	-	-	0.0	0.0	-	-	0.0	0.0
15	**Takali**	Bhima	11	157	11.7	37.7	-	-	0.0	0.2	-	-	0.0	0.0
16	**Phulgaon**	Bhima	14	29	1.2	6.3	-	-	0.1	0.5	-	-	0.0	0.0
17	**Cholachagudda**	Malaprabha	12	98	1.7	41.3	-	-	0.0	0.9	-	-	0.0	0.0
18	**Kurundwad**	Krishna	9	113	2.7	19.7	-	-	0.0	0.1	-	-	0.0	0.0
19	**Karad**	Krishna	5	52	0.5	21.9	-	-	0.0	0.5	-	-	0.0	2.4

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

VI Basin : Krishna

Sl. No.	Site Name	Name of the River/ Stream	Bicarbonate(HCO3--)		Chloride (CL-)		Fluoride (F-)		Sulphate (SO4-)		Sulphite (SO3)		Nitrate (NO3)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)
	Year : 2006-2007													
1	**Vijayawada**	Krishna	127	215	19.6	62.0	0.13	0.97	15.0	59.0	-	-	0.00	0.00
2	**Keesara**	Munneru	222	342	46.2	77.6	0.89	1.17	28.0	71.0	-	-	0.00	0.00
3	**Paleru Bridge**	Paleru	220	517	33.3	84.7	0.25	1.78	32.0	90.0	-	-	0.00	0.00
4	**Wadenapally**	Krishna	142	259	20.1	60.8	0.29	1.32	22.0	60.0	-	-	0.00	0.00
5	**Dameracherla**	Musi	244	346	42.7	101.0	0.17	2.00	35.0	115.0	-	-	0.00	0.00
6	**Halia**	Halia	268	425	23.8	94.0	0.17	2.56	19.0	50.0	-	-	0.00	0.00
7	**Bawapuram**	Tungabhadra	93	405	19.0	232.5	0.21	1.86	35.0	340.0	-	-	0.00	0.00
8	**T.Rampuram**	Hagari	249	326	92.0	364.6	0.78	1.32	148.0	680.0	-	-	0.00	0.00
9	**Marol**	Varada	26	143	16.0	44.8	0.00	0.00	1.1	81.6	-	-	0.00	0.00
10	**Harlahalli**	Tungabhadra	81	202	26.4	59.5	0.00	0.00	1.7	23.0	-	-	0.01	4.48
11	**Shimoga**	Tunga	46	205	19.9	44.4	0.00	0.00	0.6	20.2	-	-	0.00	0.50
12	**Holehonnur**	Bhadra	52	145	19.1	66.1	0.00	55.00	0.0	41.3	-	-	0.00	3.64
13	**Yadgir**	Bhima	137	256	31.9	77.6	0.38	1.08	49.0	76.0	-	-	0.01	0.01
14	**Malkhed**	Kagna	212	342	14.5	23.5	0.68	1.27	14.0	28.0	-	-	0.01	0.01
15	**Takali**	Bhima	39	500	29.6	126.3	0.13	0.44	53.5	215.9	-	-	0.50	0.65
16	**Phulgaon**	Bhima	40	151	10.7	30.1	0.09	0.14	1.1	50.4	-	-	0.50	0.87
17	**Cholachagudda**	Malaprabha	62	305	34.8	151.5	0.05	0.29	8.1	151.7	-	-	0.42	1.39
18	**Kurundwad**	Krishna	34	403	9.7	55.4	0.06	0.12	10.4	52.3	-	-	1.03	3.17
19	**Karad**	Krishna	24	245	5.8	26.5	0.07	0.43	1.5	61.5	-	-	0.23	0.68

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

VI Basin : Krishna

Sl. No.	Site Name	Name of the River/ Stream	Nitrite (NO2)		Phosphate (PO4)		Silica (SiO_3)		DO (ppm)		BOD (ppm)		Total Coliform (no.per 10 ml)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(40)	(41)	(42)	(43)	(44)	(45)	(46)	(47)	(48)	(49)	(50)	(51)
	Year : 2006-2007													
1	**Vijayawada**	Krishna	0.00	0.00	0.000	0.000	11.8	21.1	6.1	8.0	0.7	1.8	-	-
2	**Keesara**	Munneru	0.00	0.00	0.001	0.001	11.3	21.0	5.9	7.7	0.4	2.2	-	-
3	**Paleru Bridge**	Paleru	0.00	0.00	0.001	0.001	13.3	28.7	2.1	8.3	0.1	2.5	-	-
4	**Wadenapally**	Krishna	0.00	0.00	0.001	0.001	13.1	27.8	5.0	8.6	0.1	1.5	-	-
5	**Dameracherla**	Musi	0.00	0.00	0.001	0.001	18.8	30.0	5.2	8.0	0.5	3.9	-	-
6	**Halia**	Halia	0.00	0.00	0.001	0.001	17.1	31.2	6.3	8.7	0.2	5.4	-	-
7	**Bawapuram**	Tungabhadra	0.00	0.00	0.001	0.001	8.1	24.8	5.3	7.6	0.1	3.2	-	-
8	**T.Rampuram**	Hagari	0.00	0.00	0.001	0.001	10.5	23.5	6.0	7.3	0.7	1.7	-	-
9	**Marol**	Varada	0.00	0.00	0.000	0.000	0.0	2.7	-	-	-	-	-	-
10	**Harlahalli**	Tungabhadra	0.00	0.00	0.000	0.000	0.3	3.0	-	-	-	-	-	-
11	**Shimoga**	Tunga	0.00	0.00	0.000	0.000	1.0	24.0	4.8	8.6	0.7	2.6	-	-
12	**Holehonnur**	Bhadra	0.00	0.00	0.000	0.000	2.1	36.0	4.8	7.3	0.5	2.0	-	-
13	**Yadgir**	Bhima	0.00	0.00	0.001	0.001	16.7	21.0	5.6	6.8	0.4	1.6	-	-
14	**Malkhed**	Kagna	0.00	0.00	0.001	0.001	17.5	26.3	3.9	6.8	0.1	1.2	-	-
15	**Takali**	Bhima	0.00	0.00	0.314	0.449	4.7	7.5	-	-	0.3	2.0	-	-
16	**Phulgaon**	Bhima	0.00	0.00	0.019	0.446	2.4	5.9	-	-	0.2	0.9	-	-
17	**Cholachagudda**	Malaprabha	0.00	0.16	0.012	0.445	1.5	12.1	6.8	7.0	0.1	2.5	-	-
18	**Kurundwad**	Krishna	0.00	0.03	0.016	0.344	3.9	6.9	6.9	6.9	0.1	1.0	-	-
19	**Karad**	Krishna	0.00	0.06	0.025	0.495	3.0	12.1	6.0	6.2	0.4	1.9	-	-

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

VI Basin : Krishna

Sl. No.	Site Name	Name of the River/ Stream	Faecal Coliform (no.per 10 ml)		Total plate count (no.per 10 ml)		Phytoplankton (no.per ml)		Zooplankton (no.per litre)		Arsenic (ppm)		Boron (ppm)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(52)	(53)	(54)	(55)	(56)	(57)	(58)	(59)	(60)	(61)	(62)	(63)
	Year : 2006-2007													
1	**Vijayawada**	Krishna	-	-	-	-	-	-	-	-	-	-	-	-
2	**Keesara**	Munneru	-	-	-	-	-	-	-	-	-	-	-	-
3	**Paleru Bridge**	Paleru	-	-	-	-	-	-	-	-	-	-	-	-
4	**Wadenapally**	Krishna	-	-	-	-	-	-	-	-	-	-	-	-
5	**Dameracherla**	Musi	-	-	-	-	-	-	-	-	-	-	-	-
6	**Halia**	Halia	-	-	-	-	-	-	-	-	-	-	-	-
7	**Bawapuram**	Tungabhadra	-	-	-	-	-	-	-	-	-	-	-	-
8	**T.Rampuram**	Hagari	-	-	-	-	-	-	-	-	-	-	-	-
9	**Marol**	Varada	-	-	-	-	-	-	-	-	-	-	-	-
10	**Harlahalli**	Tungabhadra	-	-	-	-	-	-	-	-	-	-	-	-
11	**Shimoga**	Tunga	-	-	-	-	-	-	-	-	-	-	-	-
12	**Holehonnur**	Bhadra	-	-	-	-	-	-	-	-	-	-	-	-
13	**Yadgir**	Bhima	-	-	-	-	-	-	-	-	-	-	-	-
14	**Malkhed**	Kagna	-	-	-	-	-	-	-	-	-	-	-	-
15	**Takali**	Bhima	-	-	-	-	-	-	-	-	-	-	-	-
16	**Phulgaon**	Bhima	-	-	-	-	-	-	-	-	-	-	-	-
17	**Cholachagudda**	Malaprabha	-	-	-	-	-	-	-	-	-	-	-	-
18	**Kurundwad**	Krishna	-	-	-	-	-	-	-	-	-	-	-	-
19	**Karad**	Krishna	-	-	-	-	-	-	-	-	-	-	-	-

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

VI Basin : Krishna

Sl. No.	Site Name	Name of the River/ Stream	Cadmium (ppm)		Chromium (ppm)		Copper (ppm)		Cyanide (ppm)		Lead (ppm)		Manganese (ppm)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(64)	(65)	(66)	(67)	(68)	(69)	(70)	(71)	(72)	(73)	(74)	(75)
	Year : 2006-2007													
1	**Vijayawada**	Krishna	-	-	-	-	-	-	-	-	-	-	-	-
2	**Keesara**	Munneru	-	-	-	-	-	-	-	-	-	-	-	-
3	**Paleru Bridge**	Paleru	-	-	-	-	-	-	-	-	-	-	-	-
4	**Wadenapally**	Krishna	-	-	-	-	-	-	-	-	-	-	-	-
5	**Dameracherla**	Musi	-	-	-	-	-	-	-	-	-	-	-	-
6	**Halia**	Halia	-	-	-	-	-	-	-	-	-	-	-	-
7	**Bawapuram**	Tungabhadra	-	-	-	-	-	-	-	-	-	-	-	-
8	**T.Rampuram**	Hagari	-	-	-	-	-	-	-	-	-	-	-	-
9	**Marol**	Varada	-	-	-	-	-	-	-	-	-	-	-	-
10	**Harlahalli**	Tungabhadra	-	-	-	-	-	-	-	-	-	-	-	-
11	**Shimoga**	Tunga	-	-	-	-	-	-	-	-	-	-	-	-
12	**Holehonnur**	Bhadra	-	-	-	-	-	-	-	-	-	-	-	-
13	**Yadgir**	Bhima	-	-	-	-	-	-	-	-	-	-	-	-
14	**Malkhed**	Kagna	-	-	-	-	-	-	-	-	-	-	-	-
15	**Takali**	Bhima	-	-	-	-	-	-	-	-	-	-	-	-
16	**Phulgaon**	Bhima	-	-	-	-	-	-	-	-	-	-	-	-
17	**Cholachagudda**	Malaprabha	-	-	-	-	-	-	-	-	-	-	-	-
18	**Kurundwad**	Krishna	-	-	-	-	-	-	-	-	-	-	-	-
19	**Karad**	Krishna	-	-	-	-	-	-	-	-	-	-	-	-

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

VI Basin : Krishna

Sl. No.	Site Name	Name of the River/ Stream	Mercury (ppm)		Zinc (ppm)		Hardness		Sodium %		SAR		RSC	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(76)	(77)	(78)	(79)	(80)	(81)	(82)	(83)	(84)	(85)	(86)	(87)
	Year : 2006-2007													
1	**Vijayawada**	Krishna	-	-	-	-	104	173	35	61	1.3	3.9	0.0	0.7
2	**Keesara**	Munneru	-	-	-	-	151	201	48	62	2.7	4.3	0.6	2.9
3	**Paleru Bridge**	Paleru	-	-	-	-	176	289	32	50	1.4	3.1	0.0	3.9
4	**Wadenapally**	Krishna	-	-	-	-	118	183	35	57	1.2	3.5	0.0	1.0
5	**Dameracherla**	Musi	-	-	-	-	195	273	39	52	2.1	3.5	0.0	0.8
6	**Halia**	Halia	-	-	-	-	134	192	51	76	2.7	7.5	1.8	4.8
7	**Bawapuram**	Tungabhadra	-	-	-	-	72	263	45	71	1.4	7.6	0.0	3.4
8	**T.Rampuram**	Hagari	-	-	-	-	196	453	63	69	4.8	8.7	0.0	0.0
9	**Marol**	Varada	-	-	-	-	20	86	23	55	0.6	2.7	0.0	0.9
10	**Harlahalli**	Tungabhadra	-	-	-	-	12	138	24	53	1.0	5.5	0.2	1.3
11	**Shimoga**	Tunga	-	-	-	-	20	134	15	47	0.6	2.1	0.2	1.0
12	**Holehonnur**	Bhadra	-	-	-	-	26	108	25	48	1.1	2.7	0.0	1.0
13	**Yadgir**	Bhima	-	-	-	-	110	216	36	62	1.5	4.3	0.0	1.5
14	**Malkhed**	Kagna	-	-	-	-	130	198	32	41	1.3	2.0	0.7	1.7
15	**Takali**	Bhima	-	-	-	-	87	441	10	46	0.5	3.2	0.0	0.0
16	**Phulgaon**	Bhima	-	-	-	-	51	78	22	28	0.6	0.8	0.0	0.9
17	**Cholachagudda**	Malaprabha	-	-	-	-	94	252	16	42	0.7	2.4	0.0	0.2
18	**Kurundwad**	Krishna	-	-	-	-	35	301	15	29	0.6	1.0	0.0	0.6
19	**Karad**	Krishna	-	-	-	-	16	183	8	36	0.2	1.0	0.0	0.5

Source: Water Quality Year Book for 2006-07

Note : 1. All the ionic concentrations are expressed in mg./lit. unless mentioned otherwise.

2. (-) indicate that analyis of a particular parameter has not been carried out.

Table 13 : Maximum and minimum values of water quality parameters by site and river basin

VII Basin : Cauvery

Sl. No.	Site Name	Name of the River/ Stream	Q (Cumecs)		Temperature ^{o}C		pH		Sp.Conductance		Potassium		Sodium	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
	Year : 2005-2006													
1	**Gopurajapuram**	Puravidaiyanar	1.597	15.52	27.0	28.0	7.2	7.6	-	-	-	-	26.9	28.8
2	**Annavasal**	Natter	0.286	4.255	26.0	31.0	7.4	7.7	-	-	-	-	20.9	69.5
3	**Menangudi**	Noolar	1.389	6.585	25.0	29.0	7.3	7.9	-	-	-	-	34.5	72.9
4	**Porakudi**	Arasalar	0.151	15.48	21.5	26.0	7.4	7.9	-	-	0.0	0.0	33.8	71.8
5	**Peralam**	Vanijiar	0.080	3.132	25.5	27.0	7.2	7.9	-	-	-	-	27.4	70.6
6	**Thengudi**	Thirumalairajanar	0.091	23.97	25.0	32.0	7.4	7.9	-	-	-	-	34.0	90.8
7	**Musiri**	Cauvery	0.899	1063	24.5	30.0	7.8	8.4	-	-	-	-	16.4	130.2
8	**Nallamaranpatty**	Amaravathy	0.470	106.5	24.0	29.0	7.8	8.5	-	-	3.4	5.3	20.8	75.6
9	**Elunuthimangalam**	Noyyal	0.526	8.204	25.0	30.0	7.9	8.4	-	-	40.0	64.0	1290.0	1974.0
10	**Kodumudi**	Cauvery	31.16	1621	28.0	31.5	7.7	8.4	-	-	2.0	6.7	13.4	73.8
11	**Savandapur**	Bhavani	4.458	53.96	24.0	30.5	7.2	8.0	-	-	1.6	4.3	12.8	30.1
12	**Thengumarahada**	Moyar	4.114	144.0	18.3	25.5	6.6	7.8	-	-	0.7	3.2	3.6	19.1
13	**Nellithurai**	Bhavani	0.248	487.5	19.6	23.6	6.7	8.6	-	-	0.7	2.3	2.2	25.2
14	**Urachikottai**	Cauvery	10.23	2654	24.5	29.8	7.2	8.4	-	-	1.9	3.6	11.2	45.9
15	**Thevur**	Sarabenga	0.527	62.93	28.0	29.0	7.7	8.1	-	-	5.0	5.8	34.2	89.9

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

VII Basin : Cauvery

Sl. No.	Site Name	Name of the River/ Stream	Q (Cumecs)		Temperature °C		pH		Sp.Conductance		Potassium		Sodium	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
	Year : 2005-2006													
16	**Sevanur**	Chittar	0.185	0.674	28.0	28.0	7.6	8.0	-	-	5.5	7.3	30.0	55.4
17	**Thoppur**	Thoppaiyae	3.197	6.748	25.0	25.0	8.1	8.2	-	-	3.8	4.0	40.5	70.9
18	**Kudlur**	Palar	0.000	77.64	18.0	24.0	8.2	8.6	-	-	4.3	6.4	38.5	109.2
19	**Hogenekkal**	Chinar	0.232	219.2	25.0	32.0	7.8	8.2	-	-	1.9	6.6	33.4	64.4
20	**Billgundulu**	Cauvery	15.63	1203	25.5	27.5	7.4	8.3	-	-	1.8	33.6	23.0	46.9
21	**T.Bekuppe**	Arkavathi	-	-	-	-	-	-	-	-	-	-	-	-
22	**T.K.Halli**	Shimsha	2.928	152.4	24.0	26.5	7.2	8.2	-	-	1.4	13.4	33.6	45.6
23	**Kollegal**	Cauvery	37.34	835.5	22.0	29.5	7.1	8.2	-	-	2.0	26.3	22.5	42.0
24	**T.Narasipur**	Kabini	13.39	580.0	21.0	28.6	6.8	8.2	-	-	1.1	33.6	16.9	41.0
25	**Muthankera**	Kabini	2.181	853.3	23.5	30.5	6.6	7.4	-	-	1.0	3.2	3.5	11.0
26	**K.M.Vadi**	Lakshmanathirtha	1.979	150.0	22.0	27.0	6.9	8.2	-	-	3.2	7.2	38.5	58.9
27	**Akkihebbal**	Hemavathi	2.631	1063	21.0	28.0	7.3	8.2	-	-	1.4	31.3	21.8	81.0
28	**M.H.Halli**	Hemavathi	1.639	89.43	22.0	24.0	1.5	8.2	-	-	1.5	8.2	32.1	50.0
29	**Thimmanahalli**	Yagachi	0.524	19.20	21.0	27.5	6.8	8.0	-	-	1.7	4.9	16.3	72.5
30	**Sakleshpur**	Hemavathi	0.618	457.9	19.0	25.5	6.8	7.7	-	-	1.0	8.7	23.5	75.0
31	**Kudige**	Cauvery	4.087	328.0	22.0	29.0	7.1	8.1	-	-	1.2	8.0	18.2	37.0

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

VII Basin : Cauvery

Sl. No.	Site Name	Name of the River/ Stream	Calcium		Magnesium		Aluminium		Iron		Ammonia(NH_3)		Carbonate	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)
	Year : 2005-2006													
1	**Gopurajapuram**	Puravidaiyanar	19	21	8.7	11.7	96	119	-	-	-	-	0.0	0.0
2	**Annavasal**	Natter	18	36	0.5	26.7	45	213	-	-	-	-	0.0	0.0
3	**Menangudi**	Noolar	22	36	9.2	26.7	115	209	-	-	-	-	0.0	0.0
4	**Porakudi**	Arasalar	22	34	9.2	29.2	121	223	-	-	-	-	0.0	0.0
5	**Peralam**	Vanijiar	23	34	8.3	27.2	60	215	-	-	-	-	0.0	0.0
6	**Thengudi**	Thirumalairajanar	22	37	9.2	28.1	55	219	-	-	-	-	0.0	0.0
7	**Musiri**	Cauvery	19	40	7.8	33.0	71	209	-	-	-	-	0.0	33.3
8	**Nallamaranpatty**	Amaravathy	20	34	10.6	34.0	80	198	-	-	0.07	0.21	0.0	28.5
9	**Elunuthimangalam**	Noyyal	92	152	114.2	141.0	171	328	-	-	0.05	0.63	0.0	58.0
10	**Kodumudi**	Cauvery	16	40	7.8	25.3	64	206	-	-	0.06	0.16	0.0	23.8
11	**Savandapur**	Bhavani	21	48	7.8	22.4	79	174	-	-	0.09	0.16	0.0	0.0
12	**Thengumarahada**	Moyar	8	26	3.5	12.6	19	63	-	-	0.08	0.14	0.0	0.0
13	**Nellithurai**	Bhavani	4	20	2.7	11.7	11	77	-	-	0.05	0.12	0.0	4.7
14	**Urachikottai**	Cauvery	16	35	5.8	22.4	61	181	-	-	0.06	0.06	0.0	23.8
15	**Thevur**	Sarabenga	22	46	10.7	39.9	113	317	-	-	-	-	0.0	0.0

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

VII Basin : Cauvery

Sl. No.	Site Name	Name of the River/ Stream	Calcium		Magnesium		Aluminium		Iron		Ammonia(NH_3)		Carbonate	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)
	Year : 2005-2006													
16	**Sevanur**	Chittar	29	50	19.4	50.5	147	293	-	-	0.08	0.08	0.0	0.0
17	**Thoppur**	Thoppaiyae	34	42	29.2	45.7	167	317	-	-	0.06	0.06	0.0	0.0
18	**Kudlur**	Palar	16	56	25.3	71.9	173	465	-	-	-	-	0.0	57.0
19	**Hogenekkal**	Chinar	17	31	10.5	18.1	80	90	0.1	10.0	-	-	0.0	0.0
20	**Billgundulu**	Cauvery	13	24	7.6	16.1	68	129	0.0	0.1	-	-	0.0	0.0
21	**T.Bekuppe**	Arkavathi	-	-	-	-	-	-	-	-	-	-	-	-
22	**T.K.Halli**	Shimsha	9	24	3.8	16.2	16	112	0.0	0.7	-	-	0.0	0.0
23	**Kollegal**	Cauvery	6	37	2.9	18.1	56	158	0.0	0.0	-	-	0.0	0.0
24	**T.Narasipur**	Kabini	6	38	2.9	18.1	48	146	0.0	0.3	-	-	0.0	0.0
25	**Muthankera**	Kabini	3	10	1.5	5.1	11	51			-	-	0.0	0.0
26	**K.M.Vadi**	Lakshmanathirtha	9	22	9.1	16.7	64	108	0.0	0.1	-	-	0.0	0.0
27	**Akkihebbal**	Hemavathi	18	36	5.6	19.6	75	116	0.0	0.3	-	-	0.0	0.0
28	**M.H.Halli**	Hemavathi	5	19	2.9	13.8	30	91	0.2	0.5	-	-	0.0	0.0
29	**Thimmanahalli**	Yagachi	13	27	9.3	16.7	79	111	0.1	0.1	-	-	0.0	0.0
30	**Sakleshpur**	Hemavathi	15	38	12.1	18.9	64	116	6.3	8.3	-	-	0.0	0.0
31	**Kudige**	Cauvery	10	20	2.9	10.5	0.00	0.10	0.0	1.0	-	-	0.0	0.0

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

VII Basin : Cauvery

Sl. No.	Site Name	Name of the River/ Stream	Bicarbonate		Chloride		Fluoride		Sulphate		Sulphite		Nitrate	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)
	Year : 2005-2006													
1	**Gopurajapuram**	Puravidaiyanar	117	145	34.4	63.9	0.00	0.32	8.4	8.4	-	-	-	-
2	**Annavasal**	Natter	55	259	28.8	87.7	0.23	0.23	1.4	27.5	-	-	-	-
3	**Menangudi**	Noolar	140	254	29.5	104.7	0.25	0.25	7.8	25.7	-	-	-	-
4	**Porakudi**	Arasalar	148	272	33.0	83.8	0.25	0.25	7.4	30.3	-	-	-	-
5	**Peralam**	Vanijiar	73	262	34.1	68.5	0.27	0.27	1.7	25.0	-	-	-	-
6	**Thengudi**	Thirumalairajanar	66	267	39.0	99.0	0.27	0.27	3.5	26.8	-	-	-	-
7	**Musiri**	Cauvery	86	255	22.6	197.0	0.31	0.66	5.1	56.5	-	-	-	-
8	**Nallamaranpatty**	Amaravathy	98	195	23.3	71.8	0.41	1.09	14.5	39.3	-	-	0.37	2.65
9	**Elunuthimangalam**	Noyyal	209	400	1980.6	3398.3	0.76	1.41	187.4	367.3	-	-	6.72	16.90
10	**Kodumudi**	Cauvery	78	246	17.5	159.6	0.31	0.67	6.0	24.8	-	-	0.70	3.66
11	**Savandapur**	Bhavani	96	213	17.1	36.9	0.23	0.48	7.6	34.6	-	-	1.09	3.28
12	**Thengumarahada**	Moyar	23	94	11.9	59.1	0.18	0.43	1.8	16.9	-	-	1.12	3.14
13	**Nellithurai**	Bhavani	14	94	5.7	46.4	0.22	0.45	1.8	21.1	-	-	0.30	3.08
14	**Urachikottai**	Cauvery	74	221	13.2	41.8	0.31	0.91	5.2	25.9	-	-	0.48	3.31
15	**Thevur**	Sarabenga	138	387	21.7	58.2	0.67	1.07	15.0	36.6	-	-	1.59	3.12

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

VII Basin : Cauvery

Sl. No.	Site Name	Name of the River/ Stream	Bicarbonate		Chloride		Fluoride		Sulphate		Sulphite		Nitrate	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)
	Year : 2005-2006													
16	**Sevanur**	Chittar	179	358	33.0	58.2	0.58	0.79	12.0	61.3	-	-	1.69	6.77
17	**Thoppur**	Thoppaiyae	203	387	39.3	58.2	0.61	0.86	21.8	34.5	-	-	5.16	5.65
18	**Kudlur**	Palar	211	567	19.9	61.9	0.82	1.32	25.0	40.2	-	-	2.12	7.82
19	**Hogenekkal**	Chinar	97	130	39.4	76.2	0.23	0.28	5.4	15.7	-	-	0.22	8.20
20	**Billgundulu**	Cauvery	85	159	28.5	56.5	0.13	0.99	2.0	17.3	-	-	0.05	0.36
21	**T.Bekuppe**	Arkavathi	-	-	-	-	-	-	-	-	-	-	-	-
22	**T.K.Halli**	Shimsha	53	136	40.8	52.2	0.19	0.66	10.3	19.5	-	-	0.07	1.26
23	**Kollegal**	Cauvery	68	196	28.1	52.5	0.05	2.39	1.2	11.6	-	-	0.08	2.31
24	**T.Narasipur**	Kabini	70	211	20.8	50.9	0.05	3.10	1.1	3.9	-	-	0.01	0.12
25	**Muthankera**	Kabini	13	62	6.4	20.6	0.05	0.30	4.4	1.0	-	-	0.06	2.92
26	**K.M.Vadi**	Lakshmanathirtha	103	154	45.1	64.8	0.01	0.38	2.4	7.3	-	-	0.28	2.80
27	**Akkihebbal**	Hemavathi	97	162	27.1	96.7	0.11	0.51	12.4	48.3	-	-	1.09	3.08
28	**M.H.Halli**	Hemavathi	37	135	39.2	62.4	0.67	0.92	5.0	9.7	-	-	0.11	0.17
29	**Thimmanahalli**	Yagachi	96	181	19.4	83.6	0.16	0.33	11.0	19.3	-	-	1.04	1.80
30	**Sakleshpur**	Hemavathi	92	170	28.9	91.0	1.05	1.87	10.6	22.9	-	-	2.96	4.27
31	**Kudige**	Cauvery	66	118	22.5	43.0	0.11	3.19	2.4	5.3	-	-	0.06	0.36

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

VII Basin : Cauvery

Sl. No.	Site Name	Name of the River/ Stream	Nitrite		Phosphate		Silica (SiO_3)		DO (ppm)		BOD (ppm)		Total Coliform (no.per 10 ml)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(40)	(41)	(42)	(43)	(44)	(45)	(46)	(47)	(48)	(49)	(50)	(51)
	Year : 2005-2006													
1	**Gopurajapuram**	Puravidaiyanar	-	-	0.010	0.010	-	-	-	-	-	-	-	-
2	**Annavasal**	Natter	-	-	0.000	0.000	-	-	-	-	-	-	-	-
3	**Menangudi**	Noolar	-	-	0.010	0.010	-	-	-	-	-	-	-	-
4	**Porakudi**	Arasalar	-	-	0.010	0.010	-	-	-	-	-	-	-	-
5	**Peralam**	Vanijiar	-	-	0.010	0.010	-	-	-	-	-	-	-	-
6	**Thengudi**	Thirumalairajanar	-	-	0.010	0.010	-	-	-	-	-	-	-	-
7	**Musiri**	Cauvery	-	-	0.019	0.051	-	-	-	-	-	-	-	-
8	**Nallamaranpatty**	Amaravathy	0.02	0.20	0.012	0.042	13.1	28.4	7.0	8.6	1.5	2.6	-	-
9	**Elunuthimangalam**	Noyyal	0.17	0.54	0.033	0.312	21.3	59.2	5.9	6.5	1.1	1.8	-	-
10	**Kodumudi**	Cauvery	0.01	0.03	0.016	0.043	10.1	29.7	6.0	7.2	1.3	3.7	-	-
11	**Savandapur**	Bhavani	0.00	0.03	0.002	0.065	16.6	24.6	4.9	7.9	0.2	5.4	-	-
12	**Thengumarahada**	Moyar	0.01	0.04	0.007	0.028	4.1	21.0	7.3	9.2	0.3	4.0	-	-
13	**Nellithurai**	Bhavani	0.00	0.01	0.008	0.028	5.2	19.8	6.4	8.3	0.3	2.7	-	-
14	**Urachikottai**	Cauvery	0.01	0.03	0.014	0.053	9.0	26.9	6.1	7.3	0.4	3.5	-	-
15	**Thevur**	Sarabenga	0.01	0.03	0.012	0.106	18.0	29.4	-	-	-	-	-	-

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

VII Basin : Cauvery

Sl. No.	Site Name	Name of the River/ Stream	Nitrite		Phosphate		Silica (SiO_3)		DO (ppm)		BOD (ppm)		Total Coliform (no.per 10 ml)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(40)	(41)	(42)	(43)	(44)	(45)	(46)	(47)	(48)	(49)	(50)	(51)
	Year : 2005-2006													
16	**Sevanur**	Chittar	0.01	0.05	0.010	0.108	25.4	33.3	-	-	-	-	-	-
17	**Thoppur**	Thoppaiyae	0.02	0.03	0.013	0.032	24.3	29.6	-	-	-	-	-	-
18	**Kudlur**	Palar	0.00	0.04	0.009	0.062	25.8	48.0	-	-	-	-	-	-
19	**Hogenekkal**	Chinar	0.00	8.20	0.124	5.000	3.6	15.6	-	-	-	-	-	-
20	**Billgundulu**	Cauvery	0.00	0.25	0.000	0.413	3.0	18.0	5.5	8.5	0.8	2.0	-	-
21	**T.Bekuppe**	Arkavathi	-	-	-	-	-	-	-	-	-	-	-	-
22	**T.K.Halli**	Shimsha	0.07	1.26	0.000	1.000	0.9	25.5	5.3	7.9	0.7	2.5	-	-
23	**Kollegal**	Cauvery	0.00	0.0	0.000	0.847	0.0	24.6	4.0	9.0	0.4	3.2	-	-
24	**T.Narasipur**	Kabini	0.00	0.0	0.000	0.331	0.0	30.6	3.1	7.8	0.6	2.2	-	-
25	**Muthankera**	Kabini	0.00	1.53	0.013	0.178	5.7	22.2	5.5	7.2	0.2	2.0	-	-
26	**K.M.Vadi**	Lakshmanathirtha	0.00	0.00	0.000	0.000	0.0	47.4	-	-	-	-	-	-
27	**Akkihebbal**	Hemavathi	0.00	0.00	0.010	0.041	0.0	18.0	-	-	-	-	-	-
28	**M.H.Halli**	Hemavathi	0.00	0.00	0.000	0.000	0.0	10.8	5.3	7.0	0.6	1.3	-	-
29	**Thimmanahalli**	Yagachi	0.00	0.00	0.000	0.000	4.5	17.4					-	-
30	**Sakleshpur**	Hemavathi	0.00	0.00	0.010	1.020	0.6	17.4					-	-
31	**Kudige**	Cauvery	0.00	0.00	0.062	0.227	6.9	16.8	6.1	7.2	0.2	2.8	-	-

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

VII Basin : Cauvery

Sl. No.	Site Name	Name of the River/ Stream	Faecal Coliform (no.per 10 ml)		Total plate count (no.per 10 ml)		Phytoplankton (no.per ml)		Zooplankton (no.per litre)		Arsenic (ppm)		Boron (ppm)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(52)	(53)	(54)	(55)	(56)	(57)	(58)	(59)	(60)	(61)	(62)	(63)
	Year : 2005-2006													
1	**Gopurajapuram**	Puravidaiyanar	-	-	-	-	-	-	-	-	-	-	-	-
2	**Annavasal**	Natter	-	-	-	-	-	-	-	-	-	-	-	-
3	**Menangudi**	Noolar	-	-	-	-	-	-	-	-	-	-	-	-
4	**Porakudi**	Arasalar	-	-	-	-	-	-	-	-	-	-	-	-
5	**Peralam**	Vanijiar	-	-	-	-	-	-	-	-	-	-	-	-
6	**Thengudi**	Thirumalairajanar	-	-	-	-	-	-	-	-	-	-	-	-
7	**Musiri**	Cauvery	-	-	-	-	-	-	-	-	-	-	-	-
8	**Nallamaranpatty**	Amaravathy	-	-	-	-	-	-	-	-	-	-	-	-
9	**Elunuthimangalam**	Noyyal	-	-	-	-	-	-	-	-	-	-	-	-
10	**Kodumudi**	Cauvery	-	-	-	-	-	-	-	-	-	-	-	-
11	**Savandapur**	Bhavani	-	-	-	-	-	-	-	-	-	-	-	-
12	**Thengumarahada**	Moyar	-	-	-	-	-	-	-	-	-	-	-	-
13	**Nellithurai**	Bhavani	-	-	-	-	-	-	-	-	-	-	-	-
14	**Urachikottai**	Cauvery	-	-	-	-	-	-	-	-	-	-	-	-
15	**Thevur**	Sarabenga	-	-	-	-	-	-	-	-	-	-	-	-

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

VII Basin : Cauvery

Sl. No.	Site Name	Name of the River/ Stream	Faecal Coliform (no.per 10 ml)		Total plate count (no.per 10 ml)		Phytoplankton (no.per ml)		Zooplankton (no.per litre)		Arsenic (ppm)		Boron (ppm)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(52)	(53)	(54)	(55)	(56)	(57)	(58)	(59)	(60)	(61)	(62)	(63)
	Year : 2005-2006													
16	**Sevanur**	Chittar	-	-	-	-	-	-	-	-	-	-	-	-
17	**Thoppur**	Thoppaiyae	-	-	-	-	-	-	-	-	-	-	-	-
18	**Kudlur**	Palar	-	-	-	-	-	-	-	-	-	-	-	-
19	**Hogenekkal**	Chinar	-	-	-	-	-	-	-	-	-	-	-	-
20	**Billgundulu**	Cauvery	-	-	-	-	-	-	-	-	-	-	-	-
21	**T.Bekuppe**	Arkavathi	-	-	-	-	-	-	-	-	-	-	-	-
22	**T.K.Halli**	Shimsha	-	-	-	-	-	-	-	-	-	-	-	-
23	**Kollegal**	Cauvery	-	-	-	-	-	-	-	-	-	-	-	-
24	**T.Narasipur**	Kabini	-	-	-	-	-	-	-	-	-	-	-	-
25	**Muthankera**	Kabini	-	-	-	-	-	-	-	-	-	-	-	-
26	**K.M.Vadi**	Lakshmanathirtha	-	-	-	-	-	-	-	-	-	-	-	-
27	**Akkihebbal**	Hemavathi	-	-	-	-	-	-	-	-	-	-	-	-
28	**M.H.Halli**	Hemavathi	-	-	-	-	-	-	-	-	-	-	-	-
29	**Thimmanahalli**	Yagachi	-	-	-	-	-	-	-	-	-	-	-	-
30	**Sakleshpur**	Hemavathi	-	-	-	-	-	-	-	-	-	-	-	-
31	**Kudige**	Cauvery	-	-	-	-	-	-	-	-	-	-	-	-

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

VII Basin : Cauvery

Sl. No.	Site Name	Name of the River/ Stream	Cadmium (ppm)		Chromium (ppm)		Copper (ppm)		Cyanide (ppm)		Lead (ppm)		Manganese (ppm)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(64)	(65)	(66)	(67)	(68)	(69)	(70)	(71)	(72)	(73)	(74)	(75)
	Year : 2005-2006													
1	**Gopurajapuram**	Puravidaiyanar	-	-	-	-	-	-	-	-	-	-	-	-
2	**Annavasal**	Natter	-	-	-	-	-	-	-	-	-	-	-	-
3	**Menangudi**	Noolar	-	-	-	-	-	-	-	-	-	-	-	-
4	**Porakudi**	Arasalar	-	-	-	-	-	-	-	-	-	-	-	-
5	**Peralam**	Vanijiar	-	-	-	-	-	-	-	-	-	-	-	-
6	**Thengudi**	Thirumalairajanar	-	-	-	-	-	-	-	-	-	-	-	-
7	**Musiri**	Cauvery	-	-	-	-	-	-	-	-	-	-	-	-
8	**Nallamaranpatty**	Amaravathy	-	-	-	-	-	-	-	-	-	-	-	-
9	**Elunuthimangalam**	Noyyal	-	-	-	-	-	-	-	-	-	-	-	-
10	**Kodumudi**	Cauvery	-	-	-	-	-	-	-	-	-	-	-	-
11	**Savandapur**	Bhavani	-	-	-	-	-	-	-	-	-	-	-	-
12	**Thengumarahada**	Moyar	-	-	-	-	-	-	-	-	-	-	-	-
13	**Nellithurai**	Bhavani	-	-	-	-	-	-	-	-	-	-	-	-
14	**Urachikottai**	Cauvery	-	-	-	-	-	-	-	-	-	-	-	-
15	**Thevur**	Sarabenga	-	-	-	-	-	-	-	-	-	-	-	-

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

VII Basin : Cauvery

Sl. No.	Site Name	Name of the River/ Stream	Cadmium (ppm)		Chromium (ppm)		Copper (ppm)		Cyanide (ppm)		Lead (ppm)		Manganese (ppm)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(64)	(65)	(66)	(67)	(68)	(69)	(70)	(71)	(72)	(73)	(74)	(75)
	Year : 2005-2006													
16	**Sevanur**	Chittar	-	-	-	-	-	-	-	-	-	-	-	-
17	**Thoppur**	Thoppaiyae	-	-	-	-	-	-	-	-	-	-	-	-
18	**Kudlur**	Palar	-	-	-	-	-	-	-	-	-	-	-	-
19	**Hogenekkal**	Chinar	-	-	-	-	-	-	-	-	-	-	-	-
20	**Billgundulu**	Cauvery	-	-	-	-	-	-	-	-	-	-	-	-
21	**T.Bekuppe**	Arkavathi	-	-	-	-	-	-	-	-	-	-	-	-
22	**T.K.Halli**	Shimsha	-	-	-	-	-	-	-	-	-	-	-	-
23	**Kollegal**	Cauvery	-	-	-	-	-	-	-	-	-	-	-	-
24	**T.Narasipur**	Kabini	-	-	-	-	-	-	-	-	-	-	-	-
25	**Muthankera**	Kabini	-	-	-	-	-	-	-	-	-	-	-	-
26	**K.M.Vadi**	Lakshmanathirtha	-	-	-	-	-	-	-	-	-	-	-	-
27	**Akkihebbal**	Hemavathi	-	-	-	-	-	-	-	-	-	-	-	-
28	**M.H.Halli**	Hemavathi	-	-	-	-	-	-	-	-	-	-	-	-
29	**Thimmanahalli**	Yagachi	-	-	-	-	-	-	-	-	-	-	-	-
30	**Sakleshpur**	Hemavathi	-	-	-	-	-	-	-	-	-	-	-	-
31	**Kudige**	Cauvery	-	-	-	-	-	-	-	-	-	-	-	-

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

VII Basin : Cauvery

Sl. No.	Site Name	Name of the River/ Stream	Mercury (ppm)		Zinc (ppm)		Hardness		Sodium %		SAR		RSC	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(76)	(77)	(78)	(79)	(80)	(81)	(82)	(83)	(84)	(85)	(86)	(87)
	Year : 2005-2006													
1	**Gopurajapuram**	Puravidaiyanar	-	-	-	-	84	101	-	-	1.3	1.3	0.2	0.4
2	**Annavasal**	Natter	-	-	-	-	87	193	-	-	1.0	2.2	0.0	0.6
3	**Menangudi**	Noolar	-	-	-	-	94	193	-	-	1.2	2.3	0.0	0.4
4	**Porakudi**	Arasalar	-	-	-	-	94	206	-	-	1.3	2.3	0.0	0.6
5	**Peralam**	Vanijiar	-	-	-	-	100	197	-	-	1.2	2.2	0.0	0.5
6	**Thengudi**	Thirumalairajanar	-	-	-	-	92	205	-	-	1.5	2.8	0.0	1.3
7	**Musiri**	Cauvery	-	-	-	-	81	218	-	-	0.8	3.8	0.0	0.2
8	**Nallamaranpatty**	Amaravathy	-	-	-	-	101	226	-	-	0.9	2.5	0.0	0.5
9	**Elunuthimangalam**	Noyyal	-	-	-	-	706	968	-	-	20.2	29.4	0.0	0.0
10	**Kodumudi**	Cauvery	-	-	-	-	72	201	28	47	0.7	2.3	0.0	0.5
11	**Savandapur**	Bhavani	-	-	-	-	85	201	18	29	0.5	1.0	0.0	0.1
12	**Thengumarahada**	Moyar	-	-	-	-	37	109	10	32	0.2	0.9	0.0	0.0
13	**Nellithurai**	Bhavani	-	-	-	-	22	114	13	32	0.2	1.0	0.0	0.0
14	**Urachikottai**	Cauvery	-	-	-	-	68	181	25	38	0.6	1.6	0.0	0.8
15	**Thevur**	Sarabenga	-	-	-	-	101	262	33	44	1.5	2.4	0.0	1.1

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

VII Basin : Cauvery

Sl. No.	Site Name	Name of the River/ Stream	Mercury (ppm)		Zinc (ppm)		Hardness		Sodium %		SAR		RSC	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(76)	(77)	(78)	(79)	(80)	(81)	(82)	(83)	(84)	(85)	(86)	(87)
	Year : 2005-2006													
16	**Sevanur**	Chittar	-	-	-	-	153	319	24	29	0.9	1.4	0.0	0.0
17	**Thoppur**	Thoppaiyae	-	-	-	-	205	295	0.0	0.5	1.2	1.8	0.0	0.5
18	**Kudlur**	Palar	-	-	-	-	161	343	33	42	1.3	2.6	0.3	2.6
19	**Hogenekkal**	Chinar	-	-	-	-	87	154	38	47	1.4	2.3	0.0	0.0
20	**Billgundulu**	Cauvery	-	-	-	-	68	116	33	52	1.1	2.2	0.0	0.8
21	**T.Bekuppe**	Arkavathi	-	-	-	-	-	-	-	-	-	-	-	-
22	**T.K.Halli**	Shimsha	-	-	-	-	40	122	37	67	1.3	2.8	0.0	0.2
23	**Kollegal**	Cauvery	-	-	-	-	28	154	24	60	0.9	3.5	0.0	0.4
24	**T.Narasipur**	Kabini	-	-	-	-	27	158	23	61	0.7	3.0	0.0	0.7
25	**Muthankera**	Kabini	-	-	-	-	16	42	26	34	0.4	0.7	0.0	0.3
26	**K.M.Vadi**	Lakshmanathirtha	-	-	-	-	77	117	48	58	1.9	2.7	0.1	0.4
27	**Akkihebbal**	Hemavathi	-	-	-	-	86	170	24	59	0.8	3.5	0.0	0.3
28	**M.H.Halli**	Hemavathi	-	-	-	-	24	106	39	80	1.4	4.5	0.0	0.2
29	**Thimmanahalli**	Yagachi	-	-	-	-	76	126	25	60	0.8	3.3	0.0	0.8
30	**Sakleshpur**	Hemavathi	-	-	-	-	91	173	30	63	0.0	0.0	1.0	3.3
31	**Kudige**	Cauvery	-	-	-	-	49	95	33	55	1.0	2.1	0.0	0.3

Source: Water Quality Year Book for 2006-07

Note : 1. All the ionic concentrations are expressed in mg./lit. unless mentioned otherwise.

2. (-) indicate that analyis of a particular parameter has not been carried out.

Table 13 : Maximum and minimum values of water quality parameters by site and river basin

VIII Basin : East Flowing Rivers from Mahanadi to Kanyakumari

Sl. No.	Site Name	Name of the River/ Stream	Q (Cumecs)		Temperature °C		pH_GEN		Sp.Conductance		Potassium (K)		Sodium (Na)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
	Year : 2005-2006													
1	**Thammavaram**	Gundalakamma	1.380	310.8	25.0	30.0	7.3	8.7	-	-	3.1	8.6	34.0	276.0
2	**Nellore**	Pennar	32.72	951.8	25.0	27.5	7.5	8.0	-	-	-	-	29.4	32.4
3	**Nandipalli**	Sagileru	0.572	48.09	24.0	28.5	7.4	7.8	-	-	-	-	12.0	14.7
4	**Chennur**	Pennar	3.523	649.4	23.5	26.5	7.0	7.9	-	-	-	-	40.3	179.6
5	**Kamalapuram**	Papagni	3.091	21.73	21.5	21.5	7.7	8.4	-	-	-	-	51.3	60.3
6	**Alladupalli**	Kunderu	3.912	623.9	19.0	28.0	7.3	8.1	-	-	-	-	38.4	142.6
7	**Tadapattri**	Pennar	7.925	7.925	27.5	27.5	7.9	7.9	-	-	-	-	95.4	95.4
8	**Nagalamadike**	Pennar	-	-	-	-	-	-	-	-	-	-	-	-
9	**Singavaram**	Chitravathi	2.742	2.742	26.5	26.5	7.8	7.8	-	-	-	-	28.1	28.1
10	**Naidupet**	Swarnamukhi	23.13	46.06	22.5	25.5	7.3	7.5	-	-	-	-	26.2	30.6
11	**Sulurpet**	Kalngi	4.830	22.73	26.0	27.0	7.3	7.7	-	-	-	-	26.2	30.6
12	**Chengalpet**	Palar	0.441	42.76	17.5	29.5	7.1	7.9	-	-	-	-	23.7	45.1
13	**Magaral**	Cheyar	0.000	15.82	24.0	25.5	7.5	8.2	-	-	-	-	24.4	45.1
14	**Arcot**	Palar	5.985	22.85	24.0	25.3	7.5	7.9	-	-	-	-	60.5	67.6
15	**Avaramkuppam**	Palar	0.023	51.77	22.0	25.0	7.6	8.5	-	-	-	-	33.8	134.2
16	**Kumarapalayam**	Varaganadi	0.092	0.092	25.5	25.5	8.1	8.1	-	-	-	-	28.8	28.8
17	**Villupuram**	Ponniyar	0.141	193.7	23.0	27.0	7.4	8.1	-	-	-	-	49.2	61.2
18	**Vazhavachanur**	Ponniyar	0.278	270.8	23.5	27.0	7.6	8.6	-	-	-	-	43.2	95.4
19	**Gummanur**	Ponniyar	0.547	293.6	21.0	31.7	7.9	8.6	-	-	-	-	25.8	120.0
20	**Kudalaiyathur**	Vellar	43.5	43.5	24.0	28.0	7.2	8.0	-	-	-	-	25.8	88.3
21	**Paramakudi**	Vaigai	0.591	339.3	26.0	31.0	7.1	8.5	-	-	-	-	13.2	32.0
22	**Ambasamudram**	Vaigai	1.557	23.61	23.0	26.5	6.6	8.4	-	-	1.8	7.1	7.2	77.3
23	**Theni**	Suruliyar	0.166	51.92	22.0	28.5	7.4	8.1	-	-	1.3	9.2	4.4	31.5
24	**Irrukkankudi**	Vaippar	0.082	3.922	19.0	27.5	7.6	9.1	-	-	5.1	7.5	21.7	48.0
25	**Murappanadu**	Tambraparani	3.487	18.38	24.0	29.5	7.2	7.8	-	-	1.4	5.0	6.2	21.9
26	**A.P. Puram**	Chittar	0.038	0.084	-	-	7.5	8.0	-	-	8.0	8.7	280.0	439.0

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

VIII Basin : East Flowing Rivers from Mahanadi to Kanyakumari

Sl. No.	Site Name	Name of the River/ Stream	Calcium (Ca++)		Magnesium (Mg)		Aluminium (AL+++)		Ferric ion (Fe+++)		Ammonia(NH4)		Carbonate(CO3--)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)
	Year : 2005-2006													
1	**Thammavaram**	Gundalakamma	26	44	7.0	22.0	-	-	0.0	0.0	0.0	0.0	0.0	29.0
2	**Nellore**	Pennar	22	27	8.7	15.6	-	-	-	-	-	-	0.0	0.0
3	**Nandipalli**	Sagileru	8	23	2.4	15.2	-	-	-	-	-	-	0.0	0.0
4	**Chennur**	Pennar	30	36	8.3	28.1	-	-	-	-	-	-	0.0	0.0
5	**Kamalapuram**	Papagni	28	71	18.0	19.2	-	-	-	-	-	-	0.0	5.1
6	**Alladupalli**	Kunderu	24	39	9.2	26.7	-	-	-	-	-	-	0.0	0.0
7	**Tadapattri**	Pennar	24	24	21.6	21.6	-	-	-	-	-	-	0.0	0.0
8	**Nagalamadike**	Pennar	-	-	-	-	-	-	-	-	-	-	-	-
9	**Singavaram**	Chitravathi	24	24	16.5	16.5	-	-	-	-	-	-		0.0
10	**Naidupet**	Swarnamukhi	18	24	7.8	13.1	-	-	-	-	-	-	0.0	0.0
11	**Sulurpet**	Kalngi	19	38	8.0	27.7	-	-	-	-	-	-	0.0	0.0
12	**Chengalpet**	Palar	17	30	9.7	18.5	-	-	-	-	-	-	0.0	0.0
13	**Magaral**	Cheyar	22	34	15.6	20.4	-	-	-	-	-	-	0.0	0.0
14	**Arcot**	Palar	28	42	19.9	36.5	-	-	-	-	-	-	0.0	0.0
15	**Avaramkuppam**	Palar	16	35	7.1	28.2	-	-	-	-	0.06	0.23	0.0	52.3
16	**Kumarapalayam**	Varaganadi	16	16	10.7	10.7	-	-	-	-	-	-	0.0	0.0
17	**Villupuram**	Ponniyar	30	38	10.7	27.7	-	-	-	-	-	-	0.0	0.0
18	**Vazhavachanur**	Ponniyar	29	62	1.5	36.9	-	-	-	-	-	-	0.0	0.0
19	**Gummanur**	Ponniyar	19	69	9.7	32.1	-	-	-	-	-	-	0.0	28.5
20	**Kudalaiyathur**	Vellar	29	37	1.5	30.6	-	-	-	-	-	-	0.0	0.0
21	**Paramakudi**	Vaigai	20	32	7.1	17.5	-	-	-	-	0.05	0.15	0.0	19.0
22	**Ambasamudram**	Vaigai	10	43	5.3	49.6	-	-	-	-	0.06	0.25	0.0	18.9
23	**Theni**	Suruliyar	8	45	4.9	25.30	-	-	-	-	0.14	0.19	0.0	0.0
24	**Irrukkankudi**	Vaippar	14	29	9.7	13.6	-	-	-	-	0.22	0.22	0.0	23.6
25	**Murappanadu**	Tambraparani	7	25	2.9	11.5	-	-	-	-	0.05	0.15	0.0	0.0
26	**A.P. Puram**	Chittar	71	144	91.4	119.1	-	-	-	-	0.05	0.13	0.0	0.0

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

VIII Basin : East Flowing Rivers from Mahanadi to Kanyakumari

Sl. No.	Site Name	Name of the River/ Stream	Bicarbonate(HCO3--)		Chloride (CL-)		Fluoride (F-)		Sulphate (SO4-)		Sulphite (SO3)		Nitrate (NO3)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)
	Year : 2005-2006													
1	**Thammavaram**	Gundalakamma	140	279	22.1	141.4	0.60	1.76	24.0	128.0	-	-	0.01	0.02
2	**Nellore**	Pennar	142	157	34.4	88.8	-	0.53	0.00	24.5	-	-	-	-
3	**Nandipalli**	Sagileru	44	165	20.6	49.7	-	-	0.00	2.2	-	-	-	-
4	**Chennur**	Pennar	102	300	39.4	167.9	-	0.44	19.7	473.8	-	-	-	-
5	**Kamalapuram**	Papagni	145	381	27.7	70.6	-	-	-	-	-	-	-	-
6	**Alladupalli**	Kunderu	79	351	39.0	204.1	-	0.36	5.9	257.9	-	-	-	-
7	**Tadapattri**	Pennar	218	218	68.5	68.5	-	-	-	-	-	-	-	-
8	**Nagalamadike**	Pennar	-	-	-	-	-	-	-	-	-	-	-	-
9	**Singavaram**	Chitravathi	242	242	5.7	5.7	-	-	-	-	-	-	-	-
10	**Naidupet**	Swarnamukhi	61	165	26.6	66.7	-	-	-	-	-	-	-	-
11	**Sulurpet**	Kalngi	94	259	28.8	76.3	-	-	-	-	-	-	-	-
12	**Chengalpet**	Palar	61	188	32.3	147.0	-	-	-	-	-	-	-	-
13	**Magaral**	Cheyar	145	214	34.4	51.5	-	-	-	-	-	-	-	-
14	**Arcot**	Palar	160	270	41.9	160.1	-	-	-	-	-	-	-	-
15	**Avaramkuppam**	Palar	109	394	16.3	82.3	0.63	1.59	12.6	49.7	-	-	0.88	3.12
16	**Kumarapalayam**	Varaganadi	0.0	173	0.0	38.0	-	-	-	-	-	-	-	-
17	**Villupuram**	Ponniyar	157	259	45.8	110.4	-	-	-	-	-	-	-	-
18	**Vazhavachanur**	Ponniyar	142	305	44.0	109.3	0.00	0.53	4.1	33.8	-	-	-	-
19	**Gummanur**	Ponniyar	110	361	19.9	149.7	0.63	1.50	16.5	30.8	-	-	-	-
20	**Kudalaiyathur**	Vellar	178	279	47.6	83.8	-	-	42.7	42.7	-	-	-	-
21	**Paramakudi**	Vaigai	104	155	15.1	33.0	0.31	0.68	2.1	37.7	-	-	0.88	2.18
22	**Ambasamudram**	Vaigai	54	288	11.3	68.6	0.41	0.74	4.9	95.1	-	-	0.84	5.19
23	**Theni**	Suruliyar	41	235	9.4	39.4	0.23	0.38	1.7	29.8	-	-	0.43	2.89
24	**Irrukkankudi**	Vaippar	87	174	15.5	29.1	0.30	0.49	21.1	41.6	-	-	0.39	1.96
25	**Murappanadu**	Tambraparani	34	102	9.9	33.9	0.21	0.48	2.9	19.9	-	-	0.30	2.23
26	**A.P. Puram**	Chittar	142	348	563.9	723.6	0.78	1.29	88.9	251.0	-	-	2.51	4.78

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

VIII Basin : East Flowing Rivers from Mahanadi to Kanyakumari

Sl. No.	Site Name	Name of the River/ Stream	Nitrite (NO2)		Phosphate (PO4)		Silica (SiO_3)		DO (ppm)		BOD (ppm)		Total Coliform (no.per 10 ml)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(40)	(41)	(42)	(43)	(44)	(45)	(46)	(47)	(48)	(49)	(50)	(51)
	Year : 2005-2006													
1	**Thammavaram**	Gundalakamma	0.0	0.0	-	-	7.1	24.0	5.0	7.3	0.3	1.6	-	-
2	**Nellore**	Pennar	-	-	-	-	-	-	-	-	-	-	-	-
3	**Nandipalli**	Sagileru	-	-	-	-	-	-	-	-	-	-	-	-
4	**Chennur**	Pennar	-	-	-	-	-	-	4.4	6.1	0.9	4.1	-	-
5	**Kamalapuram**	Papagni	-	-	-	-	-	-					-	-
6	**Alladupalli**	Kunderu	-	-	-	-	-	-	5.5	5.9	1.1	3.9	-	-
7	**Tadapattri**	Pennar	-	-	-	-	-	-	-	-	-	-	-	-
8	**Nagalamadike**	Pennar	-	-	-	-	-	-	-	-	-	-	-	-
9	**Singavaram**	Chitravathi	-	-	-	-	-	-	-	-	-	-	-	-
10	**Naidupet**	Swarnamukhi	-	-	-	-	-	-	-	-	-	-	-	-
11	**Sulurpet**	Kalngi	-	-	-	-	-	-	-	-	-	-	-	-
12	**Chengalpet**	Palar	-	-	-	-	-	-	-	-	-	-	-	-
13	**Magaral**	Cheyar	-	-	-	-	-	-	-	-	-	-	-	-
14	**Arcot**	Palar	-	-	-	-	-	-	-	-	-	-	-	-
15	**Avaramkuppam**	Palar	0.0	0.02	-	-	20.2	35.1	-	-	-	-	-	-
16	**Kumarapalayam**	Varaganadi	-	-	-	-	-	-	-	-	-	-	-	-
17	**Villupuram**	Ponniyar	-	-	-	-	-	-	-	-	-	-	-	-
18	**Vazhavachanur**	Ponniyar	-	-	-	-	-	-	-	-	-	-	-	-
19	**Gummanur**	Ponniyar	-	-	-	-	-	-	4.9	10.7	0.4	12.4	-	-
20	**Kudalaiyathur**	Vellar	-	-	-	-	-	-	-	-	-	-	-	-
21	**Paramakudi**	Vaigai	0.01	0.03	-	-	17.2	23.7	-	-	-	-	-	-
22	**Ambasamudram**	Vaigai	0.00	0.02	-	-	3.2	21.9	6.2	7.3	0.3	3.6	-	-
23	**Theni**	Suruliyar	0.00	0.02	-	-	8.5	17.1	5.7	7.5	0.6	2.4	-	-
24	**Irrukkankudi**	Vaippar	0.00	0.03	-	-	10.0	22.3	-	-	-	-	-	-
25	**Murappanadu**	Tambraparani	0.00	0.02	-	-	7.8	34.1	5.2	6.4	0.2	1.8	-	-
26	**A.P. Puram**	Chittar	0.01	0.18	-	-	20.4	65.6	-	-	-	-	-	-

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

VIII Basin : East Flowing Rivers from Mahanadi to Kanyakumari

Sl. No.	Site Name	Name of the River/ Stream	Faecal Coliform (no.per 10 ml)		Total plate count (no.per 10 ml)		Phytoplankton (no.per ml)		Zooplankton (no.per litre)		Arsenic (ppm)		Boron (ppm)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(52)	(53)	(54)	(55)	(56)	(57)	(58)	(59)	(60)	(61)	(62)	(63)
	Year : 2005-2006													
1	**Thammavaram**	Gundalakamma	-	-	-	-	-	-	-	-	-	-	-	-
2	**Nellore**	Pennar	-	-	-	-	-	-	-	-	-	-	-	-
3	**Nandipalli**	Sagileru	-	-	-	-	-	-	-	-	-	-	-	-
4	**Chennur**	Pennar	-	-	-	-	-	-	-	-	-	-	-	-
5	**Kamalapuram**	Papagni	-	-	-	-	-	-	-	-	-	-	-	-
6	**Alladupalli**	Kunderu	-	-	-	-	-	-	-	-	-	-	-	-
7	**Tadapattri**	Pennar	-	-	-	-	-	-	-	-	-	-	-	-
8	**Nagalamadike**	Pennar	-	-	-	-	-	-	-	-	-	-	-	-
9	**Singavaram**	Chitravathi	-	-	-	-	-	-	-	-	-	-	-	-
10	**Naidupet**	Swarnamukhi	-	-	-	-	-	-	-	-	-	-	-	-
11	**Sulurpet**	Kalngi	-	-	-	-	-	-	-	-	-	-	-	-
12	**Chengalpet**	Palar	-	-	-	-	-	-	-	-	-	-	-	-
13	**Magaral**	Cheyar	-	-	-	-	-	-	-	-	-	-	-	-
14	**Arcot**	Palar	-	-	-	-	-	-	-	-	-	-	-	-
15	**Avaramkuppam**	Palar	-	-	-	-	-	-	-	-	-	-	-	-
16	**Kumarapalayam**	Varaganadi	-	-	-	-	-	-	-	-	-	-	-	-
17	**Villupuram**	Ponniyar	-	-	-	-	-	-	-	-	-	-	-	-
18	**Vazhavachanur**	Ponniyar	-	-	-	-	-	-	-	-	-	-	-	-
19	**Gummanur**	Ponniyar	-	-	-	-	-	-	-	-	-	-	-	-
20	**Kudalaiyathur**	Vellar	-	-	-	-	-	-	-	-	-	-	-	-
21	**Paramakudi**	Vaigai	-	-	-	-	-	-	-	-	-	-	-	-
22	**Ambasamudram**	Vaigai	-	-	-	-	-	-	-	-	-	-	-	-
23	**Theni**	Suruliyar	-	-	-	-	-	-	-	-	-	-	-	-
24	**Irrukkankudi**	Vaippar	-	-	-	-	-	-	-	-	-	-	-	-
25	**Murappanadu**	Tambraparani	-	-	-	-	-	-	-	-	-	-	-	-
26	**A.P. Puram**	Chittar	-	-	-	-	-	-	-	-	-	-	-	-

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

VIII Basin : East Flowing Rivers from Mahanadi to Kanyakumari

Sl. No.	Site Name	Name of the River/ Stream	Cadmium (ppm)		Chromium (ppm)		Copper (ppm)		Cyanide (ppm)		Lead (ppm)		Manganese (ppm)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(64)	(65)	(66)	(67)	(68)	(69)	(70)	(71)	(72)	(73)	(74)	(75)
	Year : 2005-2006													
1	**Thammavaram**	Gundalakamma	-	-	-	-	-	-	-	-	-	-	-	-
2	**Nellore**	Pennar	-	-	-	-	-	-	-	-	-	-	-	-
3	**Nandipalli**	Sagileru	-	-	-	-	-	-	-	-	-	-	-	-
4	**Chennur**	Pennar	-	-	-	-	-	-	-	-	-	-	-	-
5	**Kamalapuram**	Papagni	-	-	-	-	-	-	-	-	-	-	-	-
6	**Alladupalli**	Kunderu	-	-	-	-	-	-	-	-	-	-	-	-
7	**Tadapattri**	Pennar	-	-	-	-	-	-	-	-	-	-	-	-
8	**Nagalamadike**	Pennar	-	-	-	-	-	-	-	-	-	-	-	-
9	**Singavaram**	Chitravathi	-	-	-	-	-	-	-	-	-	-	-	-
10	**Naidupet**	Swarnamukhi	-	-	-	-	-	-	-	-	-	-	-	-
11	**Sulurpet**	Kalngi	-	-	-	-	-	-	-	-	-	-	-	-
12	**Chengalpet**	Palar	-	-	-	-	-	-	-	-	-	-	-	-
13	**Magaral**	Cheyar	-	-	-	-	-	-	-	-	-	-	-	-
14	**Arcot**	Palar	-	-	-	-	-	-	-	-	-	-	-	-
15	**Avaramkuppam**	Palar	-	-	-	-	-	-	-	-	-	-	-	-
16	**Kumarapalayam**	Varaganadi	-	-	-	-	-	-	-	-	-	-	-	-
17	**Villupuram**	Ponniyar	-	-	-	-	-	-	-	-	-	-	-	-
18	**Vazhavachanur**	Ponniyar	-	-	-	-	-	-	-	-	-	-	-	-
19	**Gummanur**	Ponniyar	-	-	-	-	-	-	-	-	-	-	-	-
20	**Kudalaiyathur**	Vellar	-	-	-	-	-	-	-	-	-	-	-	-
21	**Paramakudi**	Vaigai	-	-	-	-	-	-	-	-	-	-	-	-
22	**Ambasamudram**	Vaigai	-	-	-	-	-	-	-	-	-	-	-	-
23	**Theni**	Suruliyar	-	-	-	-	-	-	-	-	-	-	-	-
24	**Irrukkankudi**	Vaippar	-	-	-	-	-	-	-	-	-	-	-	-
25	**Murappanadu**	Tambraparani	-	-	-	-	-	-	-	-	-	-	-	-
26	**A.P. Puram**	Chittar	-	-	-	-	-	-	-	-	-	-	-	-

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

VIII Basin : East Flowing Rivers from Mahanadi to Kanyakumari

Sl. No.	Site Name	Name of the River/ Stream	Mercury (ppm)		Zinc (ppm)		Hardness		Sodium %		SAR		RSC	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(76)	(77)	(78)	(79)	(80)	(81)	(82)	(83)	(84)	(85)	(86)	(87)
	Year : 2005-2006													
1	**Thammavaram**	Gundalakamma	-	-	-	-	102	187	41	81	1.5	10.5	0.3	2.9
2	**Nellore**	Pennar	-	-	-	-	104	121	-	-	1.2	1.3	0.0	0.4
3	**Nandipalli**	Sagileru	-	-	-	-	30	91	-	-	0.6	1.0	0.0	1.1
4	**Chennur**	Pennar	-	-	-	-	106	201	-	-	1.6	6.2	0.0	1.5
5	**Kamalapuram**	Papagni	-	-	-	-	128	143	-	-	2.0	2.3	0.0	3.6
6	**Alladupalli**	Kunderu	-	-	-	-	114	209	-	-	1.4	4.8	0.0	1.6
7	**Tadapattri**	Pennar	-	-	-	-	150	150	-	-	0.0	3.4	0.6	0.6
8	**Nagalamadike**	Pennar	-	-	-	-	-	-	-	-	-	-	-	-
9	**Singavaram**	Chitravathi	-	-	-	-	129	129	-	-	0.0	1.1	0.0	1.4
10	**Naidupet**	Swarnamukhi	-	-	-	-	80	115	-	-	12	14	0.0	0.4
11	**Sulurpet**	Kalngi	-	-	-	-	81	209	-	-	0.9	1.3	0.0	0.1
12	**Chengalpet**	Palar	-	-	-	-	93	133	-	-	0.9	2.0	0.0	0.6
13	**Magaral**	Cheyar	-	-	-	-	136	169	-	-	0.9	1.6	0.0	0.2
14	**Arcot**	Palar	-	-	-	-	185	222	-	-	1.9	2.0	0.0	0.1
15	**Avaramkuppam**	Palar	-	-	-	-	73	198	48	61	1.7	4.3	0.3	3.0
16	**Kumarapalayam**	Varaganadi	-	-	-	-	85	85	-	-	0.0	1.4	0.0	1.2
17	**Villupuram**	Ponniyar	-	-	-	-	137	209	-	-	1.6	2.3	0.0	1.0
18	**Vazhavachanur**	Ponniyar	-	-	-	-	162	217	-	-	1.5	2.7	0.0	0.6
19	**Gummanur**	Ponniyar	-	-	-	-	89	306	37	46	1.2	3.2	0.0	1.0
20	**Kudalaiyathur**	Vellar	-	-	-	-	90	210	-	-	0.9	4.1	0.0	2.8
21	**Paramakudi**	Vaigai	-	-	-	-	84	153	25	31	0.6	1.1	0.0	0.2
22	**Ambasamudram**	Vaigai	-	-	-	-	51	255	21	39	0.4	2.1	0.0	0.3
23	**Theni**	Suruliyar	-	-	-	-	44	218	15	25	0.3	0.9	0.0	0.01
24	**Irrukkankudi**	Vaippar	-	-	-	-	77	121	32	50	1.0	1.9	0.0	0.7
25	**Murappanadu**	Tambraparani	-	-	-	-	32	110	22	33	0.4	0.9	0.0	0.0
26	**A.P. Puram**	Chittar	-	-	-	-	657	855	45	53	4.5	6.6	0.0	0.0

Source: Water Quality YearBook for 2005-06 (East Flowing Rivers)

Note : 1. All the ionic concentrations are expressed in mg./lit. unless mentioned otherwise.

2. (-) indicate that analyis of a particular parameter has not been carried out.

Table 13 : Maximum and minimum values of water quality parameters by site and river basin

IX Basin : West Flowing Rivers from Kanyakumari to Tapi

Sl. No.	Site Name	Name of the River/ Stream	Q (Cumecs)		Temperature °C		pH_GEN		Sp.Conductance		Potassium (K)		Sodium (Na)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
	Year : 2005-06													
1	**Badalapur**	Ulhas	4.008	2500	22.0	30.5	7.3	7.9	-	-	1.8	15.3	4	15
2	**Mangaon**	Kal	18.00	360.0	27.0	27.0	6.8	7.6	-	-	4.1	6.3	3	4
3	**Belne Bridge**	Gad	0.380	367.2	25.0	26.0	6.7	7.8	-	-	2.1	7.9	4	7
4	**Santeguli**	Aghanashini	0.475	349.7	16.5	26.5	6.6	7.8	-	-	0.8	9.4	18	48
5	**Haladi**	Haladi	16.85	148.5	23.0	27.0	6.5	7.7	-	-	0.6	6.9	17	34
6	**Yennehole**	Yennehole	1.567	168.50	27.5	28.0	6.8	7.2	-	-	0.4	6.6	17	42
7	**Addoor**	Gurupur	36.06	181.0	25.5	26.0	6.8	7.0	-	-	0.6	8.7	18	41
8	**Avershe**	Sita	2.059	143.3	27.0	28.0	6.6	7.9	-	-	0.4	6.2	7	40
9	**Bantwal**	Netravathi	257.9	1125	25.5	26.5	6.8	6.9	-	-	0.5	6.2	9	39
10	**Erinjipuzha**	Payaswani	0.057	500.2	23.5	28.0	6.8	7.3	-	-	0.5	1.8	3.2	5.0
11	**Perumannu**	Valapatanam	1.470	1335	25.5	30.5	6.9	7.3	-	-	0.4	1.1	3.0	4.4
12	**Kuttiyadi**	Kuttiyadi	1.180	134.3	25.0	29.5	6.6	8.3	-	-	0.4	0.8	2.5	3.7
13	**Kuniyil**	Chaliyar	56.39	1679	24.5	32.0	7.1	8.0	-	-	0.6	2.0	2.9	6.1
14	**Karathodu**	Kadalundi	1.444	164.1	25.0	28.0	6.6	7.1	-	-	1.2	2.3	5.6	7.2
15	**Kumbidi**	Bharathapuzha	2.168	1679	24.5	30.0	7.0	7.9	-	-	1.1	2.4	5.8	14.5
16	**Pulamanthole**	Pulanthodu	1.815	377.2	27.0	33.0	6.3	7.5	-	-	1.0	3.1	4.4	6.4
17	**Mankara**	Bharathapuzha	0.561	164.9	24.0	30.5	7.3	8.1	-	-	2.0	5.9	8.4	26.4
18	**Pudur**	Bharathapuzha	2.781	72.59	24.0	30.0	7.4	8.0	-	-	1.2	3.0	10.6	23.6
19	**Ambaramplayam**	Bharathapuzha	0.579	25.01	23.0	28.5	7.3	8.0	-	-	1.1	4.1	4.4	26.1
20	**Arangaly**	Chalakudy	0.959	881.8	27.0	27.0	6.6	6.8	-	-	1.1	1.9	2.8	3.2
21	**Neeleshwaram**	Periyar	16.68	2391	26.5	29.0	6.6	7.1	-	-	0.8	1.3	2.6	3.9
22	**Vandiperiyar**	Periyar	0.494	150.2	24.0	25.0	6.5	7.0	-	-	1.7	2.9	3.7	7.0
23	**Ramangalam**	Muvattupuzha	62.11	1188	27.0	29.0	6.7	7.0	-	-	1.1	2.7	3.3	4.6
24	**Kalampur**	Kaliyar	3.730	410.4	25.5	27.0	6.3	6.8	-	-	1.0	1.5	3.3	3.5
25	**Kidangoor**	Meenachil	10.07	502.9	25.0	29.0	6.3	6.4	-	-	0.8	1.1	3.3	3.8
26	**Kalloopara**	Manimala	0.708	375.6	27.0	29.5	6.3	6.9	-	-	0.9	1.8	2.9	6.0
27	**Malakkara**	Pamba	44.22	889.2	25.0	29.0	6.4	7.0	-	-	0.7	2.4	2.8	6.9
28	**Thumpamon**	Achankovil	20.00	221.3	26.5	28.0	6.4	6.6	-	-	1.1	1.6	3.6	5.4
29	**Pattazhy**	Kallada	9.383	94.51	25.5	29.0	6.5	6.8	-	-	1.5	2.8	4.0	5.3
30	**Ayilam**	Vamanapuram	7.095	73.90	25.0	27.5	6.6	7.0	-	-	0.3	1.9	4.2	5.8
31	**Kuhithurai**	Thambraparni	23.15	25.85	24.0	25.0	6.7	6.9	-	-	3.4	3.6	10.5	11.0
32	**Ashramam**	Pazhayar	1.991	34.28	26.0	30.0	7.1	7.3	-	-	2.3	9.8	12.0	23.5

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

IX Basin : West Flowing Rivers from Kanyakumari to Tapi

Sl. No.	Site Name	Name of the River/ Stream	Calcium (Ca)		Magnesium (Mg)		Aluminium		Iron (Fe)		Ammonia (NH3-N)		Carbonate (CO3)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)
	Year : 2005-06													
1	**Badalapur**	Ulhas	4.9	14.0	2.0	6.0	-	-	0.2	0.3	-	-	0.0	0.0
2	**Mangaon**	Kal	4.1	6.6	3.0	3.0	-	-	0.1	0.2	-	-	0.0	0.0
3	**Belne Bridge**	Gad	4.1	18.9	2.0	7.5	-	-	0.1	0.2	-	-	0.0	0.0
4	**Santeguli**	Aghanashini	3.2	7.9	1.9	31	-	-	2.2	2.5	-	-	0.0	0.0
5	**Haladi**	Haladi	4.7	20.0	2.0	13.8	-	-	1.1	1.9	-	-	0.0	0.0
6	**Yennehole**	Yennehole	4.7	6.7	0.9	3.8	-	-	0.0	0.1	-	-	0.0	0.0
7	**Addoor**	Gurupur	3.1	9.4	1.9	7.9	-	-	0.1	0.2	-	-	0.0	0.0
8	**Avershe**	Sita	3.2	11.0	2.9	4.9	-	-	0.1	0.1	-	-	0.0	0.0
9	**Bantwal**	Netravathi	3.1	11.0	0.5	1.0	-	-	0.1	0.3	-	-	0.0	0.0
10	**Erinjipuzha**	Payaswani	4	7	2.0	4.9	-	-	-	-	-	-	0.0	0.0
11	**Perumannu**	Valapatanam	5	6	1.5	5.3	-	-	-	-	-	-	0.0	0.0
12	**Kuttiyadi**	Kuttiyadi	2	6	1.5	2.4	-	-	-	-	-	-	0.0	0.0
13	**Kuniyil**	Chaliyar	6	7	2.9	3.9	-	-	-	-	-	-	0.0	0.0
14	**Karathodu**	Kadalundi	4	6	2.0	3.9	-	-	-	-	-	-	0.0	0.0
15	**Kumbidi**	Bharathapuzha	6	18	2.4	8.3	-	-	-	-	-	-	0.0	0.0
16	**Pulamanthole**	Pulanthodu	4	6	1.5	2.9	-	-	-	-	-	-	0.0	0.0
17	**Mankara**	Bharathapuzha	12	35	4.9	14.6	-	-	-	-	-	-	0.0	0.0
18	**Pudur**	Bharathapuzha	24	34	9.7	18.5	-	-	-	-	-	-	0.0	0.0
19	**Ambaramplayam**	Bharathapuzha	8	35	3.5	15.9	-	-	-	-	-	-	0.0	0.0
20	**Arangaly**	Chalakudy	4	4	1.5	2.0	-	-	-	-	-	-	0.0	0.0
21	**Neeleshwaram**	Periyar	4	5	1.5	2.4	-	-	-	-	-	-	0.0	0.0
22	**Vandiperiyar**	Periyar	4	10	2.4	3.4	-	-	-	-	-	-	0.0	0.0
23	**Ramangalam**	Muvattupuzha	3	5	1.0	2.0	-	-	-	-	-	-	0.0	0.0
24	**Kalampur**	Kaliyar	3	4	1.5	2.4	-	-	-	-	-	-	0.0	0.0
25	**Kidangoor**	Meenachil	2	5	1.0	2.4	-	-	-	-	-	-	0.0	0.0
26	**Kalloopara**	Manimala	3	5	1.0	3.4	-	-	-	-	-	-	0.0	0.0
27	**Malakkara**	Pamba	3	6	1.5	2.4	-	-	-	-	-	-	0.0	0.0
28	**Thumpamon**	Achankovil	3	5	1.0	2.4	-	-	-	-	-	-	0.0	0.0
29	**Pattazhy**	Kallada	3	5	1.5	2.4	-	-	-	-	-	-	0.0	0.0
30	**Ayilam**	Vamanapuram	3	4	1.0	2.4	-	-	-	-	-	-	0.0	0.0
31	**Kuhithurai**	Thambraparni	8	10	2.4	4.9	-	-	-	-	-	-	0.0	0.0
32	**Ashramam**	Pazhayar	12	34	2.2	8.8	-	-	-	-	-	-	0.0	0.0

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

IX Basin : West Flowing Rivers from Kanyakumari to Tapi

Sl. No.	Site Name	Name of the River/ Stream	Bicarbonate (HCO3)		Chloride (CL)		Fluoride (F)		Sulphate (SO4)		Sulphite		Nitrate (NO3-N)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)
	Year : 2005-06													
1	**Badalapur**	Ulhas	22.0	79.3	3	11	0.06	0.23	5	30	-	-	0.08	0.94
2	**Mangaon**	Kal	26.8	48.8	5	7	-	-	-	4	-	-	0.17	0.27
3	**Belne Bridge**	Gad	34.2	60.1	6	12	0.09	0.14	1	14	-	-	0.05	0.31
4	**Santeguli**	Aghanashini	36.1	61.0	22	56	0.32	0.66	2	5	-	-	0.00	0.00
5	**Haladi**	Haladi	25.3	111.0	21	40	0.32	0.73	1	2	-	-	0.00	0.00
6	**Yennehole**	Yennehole	35.0	61.0	21	51	0.05	0.10	1	2	-	-	0.00	0.00
7	**Addoor**	Gurupur	40.0	56.3	21	52	0.34	0.36	1	3	-	-	0.00	0.00
8	**Avershe**	Sita	34.2	64.0	9	49	0.49	0.68	1	1	-	-	0.00	0.00
9	**Bantwal**	Netravathi	15.0	35.0	11	47	0.42	0.56	5	6	-	-	0.00	0.00
10	**Erinjipuzha**	Payaswani	17	39	6.4	9.8	0.05	0.16	1.0	6.5	-	-	0.22	2.72
11	**Perumannu**	Valapatanam	16	35	5.7	8.8	0.05	0.14	1.0	2.3	-	-	0.11	3.05
12	**Kuttiyadi**	Kuttiyadi	12	23	4.6	7.1	0.05	0.14	1.0	4.0	-	-	0.44	0.84
13	**Kuniyil**	Chaliyar	24	31	6.7	10.7	0.06	0.20	1.0	3.8	-	-	0.12	1.20
14	**Karathodu**	Kadalundi	22	31	10.3	11.8	0.10	0.22	1.8	4.9	-	-	0.21	0.82
15	**Kumbidi**	Bharathapuzha	23	76	9.9	22.4	0.14	0.32	2.8	8.4	-	-	0.05	0.55
16	**Pulamanthole**	Pulanthodu	18	27	7.5	12.8	0.05	0.19	1.0	4.3	-	-	0.13	1.08
17	**Mankara**	Bharathapuzha	55	184	14.9	44.6	0.21	0.43	1.5	6.7	-	-	0.12	3.35
18	**Pudur**	Bharathapuzha	127	179	14.9	39.4	0.35	0.56	2.8	13.3	-	-	0.14	0.61
19	**Ambaramplayam**	Bharathapuzha	41	158	6.8	19.7	6.8	19.7	1.4	36.3	-	-	0.39	1.67
20	**Arangaly**	Chalakudy	17	18	5.7	6.4	0.09	0.13	1.0	1.6	-	-	0.10	0.57
21	**Neeleshwaram**	Periyar	13	33	5.0	6.7	0.05	0.22	1.0	2.2	-	-	0.43	0.85
22	**Vandiperiyar**	Periyar	19	35	7.1	13.1	0.05	0.15	1.0	1.4	-	-	0.05	3.86
23	**Ramangalam**	Muvattupuzha	16	18	7.5	8.8	0.05	0.76	1.0	1.6	-	-	0.56	1.28
24	**Kalampur**	Kaliyar	16	20	6.0	6.4	0.08	0.24	1.0	2.2	-	-	0.28	0.36
25	**Kidangoor**	Meenachil	15	20	6.0	7.1	0.11	0.21	1.0	2.7	-	-	0.21	0.54
26	**Kalloopara**	Manimala	16	20	6.0	11.4	0.05	0.19	1.0	2.3	-	-	0.23	1.56
27	**Malakkara**	Pamba	13	23	5.3	13.1	0.05	0.22	1.0	1.8	-	-	0.12	0.91
28	**Thumpamon**	Achankovil	16	24	7.8	9.6	0.09	0.14	1.3	4.4	-	-	0.12	0.99
29	**Pattazhy**	Kallada	12	18	7.8	9.9	0.05	0.14	1.1	6.6	-	-	0.22	1.92
30	**Ayilam**	Vamanapuram	13	20	7.8	9.6	0.13	0.14	3.0	6.4	-	-	0.09	0.62
31	**Kuhithurai**	Thambraparni	22	22	16.0	20.2	0.11	0.31	12.8	17.3	-	-	0.49	1.63
32	**Ashramam**	Pazhayar	43	126	19.5	33.4	0.05	0.43	1.6	26.8	-	-	0.24	1.41

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

IX Basin : West Flowing Rivers from Kanyakumari to Tapi

Sl. No.	Site Name	Name of the River/ Stream	Nitrite (NO2-N)		Phosphate		Silica (SiO2)		DO		BOD3-27		Total Coliform (no.per 10 ml)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(40)	(41)	(42)	(43)	(44)	(45)	(46)	(47)	(48)	(49)	(50)	(51)
	Year : 2005-06													
1	**Badalapur**	Ulhas	0.00	0.01	-	-	4.58	9.52	4.2	6.1	0.1	1.9	-	-
2	**Mangaon**	Kal	0.00	0.00	-	-	6.07	6.97	-	-	0.6	0.8	-	-
3	**Belne Bridge**	Gad	0.0	0.1	-	-	5.16	7.82	6.4	6.7	0.1	0.8	-	-
4	**Santeguli**	Aghanashini	0.00	0.00	-	-	0.30	26.10	-	-	-	-	-	-
5	**Haladi**	Haladi	0.00	0.00	-	-	3.60	8.70	-	-	-	-	-	-
6	**Yennehole**	Yennehole	0.00	0.00	-	-	5.40	9.00	-	-	-	-	-	-
7	**Addoor**	Gurupur	0.00	0.00	-	-	4.20	7.80	-	-	-	-	-	-
8	**Avershe**	Sita	0.00	0.00	-	-	7.80	30.60	-	-	-	-	-	-
9	**Bantwal**	Netravathi	0.00	0.00	-	-	6.90	6.90	6.9	7.5	0.4	1.0	-	-
10	**Erinjipuzha**	Payaswani	0.00	0.31	-	-	6.4	15.7	6.4	7.4	0.2	0.4	-	-
11	**Perumannu**	Valapatanam	0.00	0.95	-	-	6.6	16.7	6.0	7.8	0.2	0.4	-	-
12	**Kuttiyadi**	Kuttiyadi	0.00	0.47	-	-	4.8	12.4	-	8.1	-	-	-	-
13	**Kuniyil**	Chaliyar	0.02	0.28	-	-	6.7	24.2	6.0	7.8	0.2	0.6	-	-
14	**Karathodu**	Kadalundi	0.00	0.32	-	-	1.8	13.7	5.2	7.2	0.2	0.4	-	-
15	**Kumbidi**	Bharathapuzha	0.00	0.13	-	-	6.3	16.7	3.9	7.6	0.2	0.6	-	-
16	**Pulamanthole**	Pulanthodu	0.00	0.42	-	-	6.1	15.7	5.8	6.6	0.2	1.4	-	-
17	**Mankara**	Bharathapuzha	0.00	0.53	-	-	7.0	17.7	-	-	-	-	-	-
18	**Pudur**	Bharathapuzha	0.01	0.35	-	-	7.9	20.2	-	-	-	-	-	-
19	**Ambaramplayam**	Bharathapuzha	0.00	0.02	-	-	8.4	19.3	6.0	8.1	0.5	2.0	-	-
20	**Arangaly**	Chalakudy	0.00	0.40	-	-	3.5	11.6	6.0	7.8	0.2	0.6	-	-
21	**Neeleshwaram**	Periyar	0.00	0.45	-	-	5.0	13.0	6.4	7.4	0.4	1.0	-	-
22	**Vandiperiyar**	Periyar	0.00	0.73	-	-	4.5	16.8	-	-	-	-	-	-
23	**Ramangalam**	Muvattupuzha	0.00	0.54	-	-	5.5	11.7	6.4	7.6	0.2	1.2	-	-
24	**Kalampur**	Kaliyar	0.00	0.29	-	-	4.8	12.6	6.0	7.7	0.2	0.6	-	-
25	**Kidangoor**	Meenachil	0.02	0.16	-	-	7.9	11.8	6.4	7.3	0.2	0.8	-	-
26	**Kalloopara**	Manimala	0.00	0.60	-	-	5.1	13.0	5.8	7.4	0.2	1.4	-	-
27	**Malakkara**	Pamba	0.00	0.43	-	-	5.0	12.2	5.4	8.0	0.2	0.8	-	-
28	**Thumpamon**	Achankovil	0.01	0.63	-	-	5.8	12.5	6.2	7.8	0.2	1.2	-	-
29	**Pattazhy**	Kallada	0.01	0.45	-	-	5.5	13.3	5.4	7.2	0.2	0.8	-	-
30	**Ayilam**	Vamanapuram	0.02	0.29	-	-	6.2	16.5	5.8	7.4	0.2	0.6	-	-
31	**Kuhithurai**	Thambraparni	0.10	0.98	-	-	7.5	16.8	-	-	-	-	-	-
32	**Ashramam**	Pazhayar	0.06	0.46	-	-	7.0	17.3	-	7.3	-	-	-	-

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

IX Basin : West Flowing Rivers from Kanyakumari to Tapi

Sl. No.	Site Name	Name of the River/ Stream	Faecal Coliform (no.per 10 ml)		Total plate count (no.per 10 ml)		Phytoplankton (no.per ml)		Zooplankton (no.per litre)		Arsenic (ppm)		Boron (ppm)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(52)	(53)	(54)	(55)	(56)	(57)	(58)	(59)	(60)	(61)	(62)	(63)
	Year : 2005-06													
1	**Badalapur**	Ulhas	-	-	-	-	-	-	-	-	-	-	-	-
2	**Mangaon**	Kal	-	-	-	-	-	-	-	-	-	-	-	-
3	**Belne Bridge**	Gad	-	-	-	-	-	-	-	-	-	-	-	-
4	**Santeguli**	Aghanashini	-	-	-	-	-	-	-	-	-	-	-	-
5	**Haladi**	Haladi	-	-	-	-	-	-	-	-	-	-	-	-
6	**Yennehole**	Yennehole	-	-	-	-	-	-	-	-	-	-	-	-
7	**Addoor**	Gurupur	-	-	-	-	-	-	-	-	-	-	-	-
8	**Avershe**	Sita	-	-	-	-	-	-	-	-	-	-	-	-
9	**Bantwal**	Netravathi	-	-	-	-	-	-	-	-	-	-	-	-
10	**Erinjipuzha**	Payaswani	-	-	-	-	-	-	-	-	-	-	-	-
11	**Perumannu**	Valapatanam	-	-	-	-	-	-	-	-	-	-	-	-
12	**Kuttiyadi**	Kuttiyadi	-	-	-	-	-	-	-	-	-	-	-	-
13	**Kuniyil**	Chaliyar	-	-	-	-	-	-	-	-	-	-	-	-
14	**Karathodu**	Kadalundi	-	-	-	-	-	-	-	-	-	-	-	-
15	**Kumbidi**	Bharathapuzha	-	-	-	-	-	-	-	-	-	-	-	-
16	**Pulamanthole**	Pulanthodu	-	-	-	-	-	-	-	-	-	-	-	-
17	**Mankara**	Bharathapuzha	-	-	-	-	-	-	-	-	-	-	-	-
18	**Pudur**	Bharathapuzha	-	-	-	-	-	-	-	-	-	-	-	-
19	**Ambaramplayam**	Bharathapuzha	-	-	-	-	-	-	-	-	-	-	-	-
20	**Arangaly**	Chalakudy	-	-	-	-	-	-	-	-	-	-	-	-
21	**Neeleshwaram**	Periyar	-	-	-	-	-	-	-	-	-	-	-	-
22	**Vandiperiyar**	Periyar	-	-	-	-	-	-	-	-	-	-	-	-
23	**Ramangalam**	Muvattupuzha	-	-	-	-	-	-	-	-	-	-	-	-
24	**Kalampur**	Kaliyar	-	-	-	-	-	-	-	-	-	-	-	-
25	**Kidangoor**	Meenachil	-	-	-	-	-	-	-	-	-	-	-	-
26	**Kalloopara**	Manimala	-	-	-	-	-	-	-	-	-	-	-	-
27	**Malakkara**	Pamba	-	-	-	-	-	-	-	-	-	-	-	-
28	**Thumpamon**	Achankovil	-	-	-	-	-	-	-	-	-	-	-	-
29	**Pattazhy**	Kallada	-	-	-	-	-	-	-	-	-	-	-	-
30	**Ayilam**	Vamanapuram	-	-	-	-	-	-	-	-	-	-	-	-
31	**Kuhithurai**	Thambraparni	-	-	-	-	-	-	-	-	-	-	-	-
32	**Ashramam**	Pazhayar	-	-	-	-	-	-	-	-	-	-	-	-

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

IX Basin : West Flowing Rivers from Kanyakumari to Tapi

Sl. No.	Site Name	Name of the River/ Stream	Cadmium (ppm)		Chromium (ppm)		Copper (ppm)		Cyanide (ppm)		Lead (ppm)		Manganese (ppm)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(64)	(65)	(66)	(67)	(68)	(69)	(70)	(71)	(72)	(73)	(74)	(75)
	Year : 2005-06													
1	**Badalapur**	Ulhas	-	-	-	-	-	-	-	-	-	-	-	-
2	**Mangaon**	Kal	-	-	-	-	-	-	-	-	-	-	-	-
3	**Belne Bridge**	Gad	-	-	-	-	-	-	-	-	-	-	-	-
4	**Santeguli**	Aghanashini	-	-	-	-	-	-	-	-	-	-	-	-
5	**Haladi**	Haladi	-	-	-	-	-	-	-	-	-	-	-	-
6	**Yennehole**	Yennehole	-	-	-	-	-	-	-	-	-	-	-	-
7	**Addoor**	Gurupur	-	-	-	-	-	-	-	-	-	-	-	-
8	**Avershe**	Sita	-	-	-	-	-	-	-	-	-	-	-	-
9	**Bantwal**	Netravathi	-	-	-	-	-	-	-	-	-	-	-	-
10	**Erinjipuzha**	Payaswani	-	-	-	-	-	-	-	-	-	-	-	-
11	**Perumannu**	Valapatanam	-	-	-	-	-	-	-	-	-	-	-	-
12	**Kuttiyadi**	Kuttiyadi	-	-	-	-	-	-	-	-	-	-	-	-
13	**Kuniyil**	Chaliyar	-	-	-	-	-	-	-	-	-	-	-	-
14	**Karathodu**	Kadalundi	-	-	-	-	-	-	-	-	-	-	-	-
15	**Kumbidi**	Bharathapuzha	-	-	-	-	-	-	-	-	-	-	-	-
16	**Pulamanthole**	Pulanthodu	-	-	-	-	-	-	-	-	-	-	-	-
17	**Mankara**	Bharathapuzha	-	-	-	-	-	-	-	-	-	-	-	-
18	**Pudur**	Bharathapuzha	-	-	-	-	-	-	-	-	-	-	-	-
19	**Ambaramplayam**	Bharathapuzha	-	-	-	-	-	-	-	-	-	-	-	-
20	**Arangaly**	Chalakudy	-	-	-	-	-	-	-	-	-	-	-	-
21	**Neeleshwaram**	Periyar	-	-	-	-	-	-	-	-	-	-	-	-
22	**Vandiperiyar**	Periyar	-	-	-	-	-	-	-	-	-	-	-	-
23	**Ramangalam**	Muvattupuzha	-	-	-	-	-	-	-	-	-	-	-	-
24	**Kalampur**	Kaliyar	-	-	-	-	-	-	-	-	-	-	-	-
25	**Kidangoor**	Meenachil	-	-	-	-	-	-	-	-	-	-	-	-
26	**Kalloopara**	Manimala	-	-	-	-	-	-	-	-	-	-	-	-
27	**Malakkara**	Pamba	-	-	-	-	-	-	-	-	-	-	-	-
28	**Thumpamon**	Achankovil	-	-	-	-	-	-	-	-	-	-	-	-
29	**Pattazhy**	Kallada	-	-	-	-	-	-	-	-	-	-	-	-
30	**Ayilam**	Vamanapuram	-	-	-	-	-	-	-	-	-	-	-	-
31	**Kuhithurai**	Thambraparni	-	-	-	-	-	-	-	-	-	-	-	-
32	**Ashramam**	Pazhayar	-	-	-	-	-	-	-	-	-	-	-	-

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

IX Basin : West Flowing Rivers from Kanyakumari to Tapi

Sl. No.	Site Name	Name of the River/ Stream	Mercury (ppm)		Zinc (ppm)		Total Hardness		Sodium % (Na%)		SAR		RSC	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(76)	(77)	(78)	(79)	(80)	(81)	(82)	(83)	(84)	(85)	(86)	(87)
	Year : 2005-06													
1	**Badalapur**	Ulhas	-	-	-	-	21	52	14	34	0	1	0.00	0.27
2	**Mangaon**	Kal	-	-	-	-	23	29	17	20	0	0	0.00	0.23
3	**Belne Bridge**	Gad	-	-	-	-	19	62	12	35	0	1	0.00	0.23
4	**Santeguli**	Aghanashini	-	-	-	-	16	32	60	79	2	5	0.11	0.48
5	**Haladi**	Haladi	-	-	-	-	20	93	34	65	1	2	0.00	0.24
6	**Yennehole**	Yennehole	-	-	-	-	16	32	58	79	2	4	0.07	0.61
7	**Addoor**	Gurupur	-	-	-	-	20	41	48	70	1	3	0.12	0.26
8	**Avershe**	Sita	-	-	-	-	28	47	35	69	1	3	0.00	0.24
9	**Bantwal**	Netravathi	-	-	-	-	12	30	58	81	1	5	0.00	0.25
10	**Erinjipuzha**	Payaswani	-	-	-	-	18	38	19	32	0.3	0.4	0.00	0.00
11	**Perumannu**	Valapatanam	-	-	-	-	20	34	18	29	0.2	0.4	0.00	0.00
12	**Kuttiyadi**	Kuttiyadi	-	-	-	-	12	20	23	34	0.3	0.4	0.00	0.00
13	**Kuniyil**	Chaliyar	-	-	-	-	28	34	17	27	0.2	0.5	0.0	0.0
14	**Karathodu**	Kadalundi	-	-	-	-	18	30	28	40	0.5	0.6	0.0	0.1
15	**Kumbidi**	Bharathapuzha	-	-	-	-	28	78	26	38	0.5	0.8	0.0	0.0
16	**Pulamanthole**	Pulanthodu	-	-	-	-	16	26	26	40	0.4	0.6	0.0	0.1
17	**Mankara**	Bharathapuzha	-	-	-	-	60	143	21	30	0.5	1.0	0.0	0.2
18	**Pudur**	Bharathapuzha	-	-	-	-	105	155	18	25	0.5	0.8	0.0	0.5
19	**Ambaramplayam**	Bharathapuzha	-	-	-	-	37	139	16	28	0.3	1.0	0.0	0.2
20	**Arangaly**	Chalakudy	-	-	-	-	16	18	23	26	0.3	0.3	0.0	0.0
21	**Neeleshwaram**	Periyar	-	-	-	-	16	22	23	30	0.3	0.4	0.0	0.1
22	**Vandiperiyar**	Periyar	-	-	-	-	22	35	28	32	0.3	0.5	0.0	0.0
23	**Ramangalam**	Muvattupuzha	-	-	-	-	14	18	29	37	0.4	0.5	0.0	0.0
24	**Kalampur**	Kaliyar	-	-	-	-	14	20	26	32	0.3	0.4	0.0	0.0
25	**Kidangoor**	Meenachil	-	-	-	-	14	18	27	32	0.3	0.4	0.0	0.0
26	**Kalloopara**	Manimala	-	-	-	-	16	24	25	39	0.3	0.6	0.0	0.0
27	**Malakkara**	Pamba	-	-	-	-	14	26	25	34	0.3	0.6	0.0	0.0
28	**Thumpamon**	Achankovil	-	-	-	-	14	20	31	39	0.4	0.6	0.0	0.1
29	**Pattazhy**	Kallada	-	-	-	-	14	18	31	38	0.4	0.5	0.0	0.0
30	**Ayilam**	Vamanapuram	-	-	-	-	14	20	29	47	0.4	0.7	0.0	0.0
31	**Kuhithurai**	Thambraparni	-	-	-	-	30	46	31	41	0.7	0.9	0.0	0.0
32	**Ashramam**	Pazhayar	-	-	-	-	41	121	28	37	0.8	1.0	0.0	0.2

Source: Water Quality Year Book for 2005-06 (West Flowing River)

Note : 1. All the ionic concentrations are expressed in mg./lit. unless mentioned otherwise.

2. (-) indicate that analyis of a particular parameter has not been carried out.

Table 13 : Maximum and minimum values of water quality parameters by site and river basin

X Basin : Tapi

Sl. No.	Site Name	Name of the River/ Stream	Q (Cumecs)		Temperature °C		pH		Sp.Conductance		Potassium (K+)		Sodium (Na)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
	Year : 2003-2004													
1	**Dedtalai**	Tapi	0.000	240	19.0	30.0	7.7	9.26	178	912	0.026	0.051	0.435	1.043
2	**Burhanpur**	Tapi	0.000	444.7	20.0	31.0	7.8	9.03	200	532	0.026	0.051	0.609	1.217
3	**Lakhpuri**	Purna	0.000	18.37	20.0	28.0	7.8	8.58	268	1215	0;026	0.103	0.783	5.652
4	**Gopalkheda**	Purna	0.000	20.27	22.0	27.0	7.80	8.50	338	807	0.026	0.103	0.870	4.174
5	**Yerli**	Purna	0.000	127.0	25.0	27.0	8.10	8.60	263	745	0.026	0.051	0.783	3.826
6	**Savkheda**	Tapi	0.000	700.4	24.0	26.5	8.00	8.61	269	472	0.026	0.051	0.696	1.304
7	**Malkheda**	Tapi	0.000	48.33	23.5	25.5	7.80	8.64	253	600	0.026	0.051	0.783	2.087
8	**Gidhade**	Tapi	0.000	1124	23.0	28.5	7.90	8.70	265	397	0.026	0.026	0.783	0.957
9	**Sarangkheda**	Tapi	0.000	1539	23.0	26.5	7.90	8.64	289	431	0.026	0.051	0.783	1.043
10	**Ghala**	Tapi	18.76	1286	14.0	28.0	7.80	8.68	280	1217	0.026	0.103	0.870	5.565

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

X Basin : Tapi

Sl. No.	Site Name	Name of the River/ Stream	Calcium (Ca++)		Magnesium (Mg)		Aluminium (AL+++)		Ferric ion (Fe+++)		Ammonia(NH4)		Carbonate (CO3--)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)
	Year : 2003-2004													
1	**Dedtalai**	Tapi	1.188	1.761	0.395	0.879	0.000	0.004	0.000	0.001	0.000	0.004	0.000	0.200
2	**Burhanpur**	Tapi	1.522	1.671	0.395	0.959	0.000	0.018	0.000	0.001	0.000	0.014	0.000	0.200
3	**Lakhpuri**	Purna	1.600	1.936	0.477	0.954	0.002	0.007	0.001	0.002	0.001	0.033	0.000	0.200
4	**Gopalkheda**	Purna	1.522	1.650	0.477	0.641	0.002	0.004	0.000	0.001	0.001	0.003	0.000	0.200
5	**Yerli**	Purna	1.522	1.650	0.477	0.641	0.001	0.004	0.000	0.002	0.000	0.002	0.000	0.200
6	**Savkheda**	Tapi	1.522	1.600	0.395	0.559	0.001	0.002	0.000	0.001	0.000	0.001	0.000	0.200
7	**Malkheda**	Tapi	1.522	1.677	0.477	0.641	0.001	0.004	0.000	0.001	0.000	0.001	0.000	0.200
8	**Gidhade**	Tapi	1.522	1.600	0.395	0.559	0.001	0.002	0.000	0.001	0.000	0.001	0.000	0.267
9	**Sarangkheda**	Tapi	1.522	1.600	0.395	0.559	0.001	0.004	0.000	0.001	0.001	0.001	0.000	0.200
10	**Ghala**	Tapi	1.522	1.936	0.395	0.789	0.000	0.007	0.000	0.001	0.000	0.004	0.000	0.244

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

X Basin : Tapi

Sl. No.	Site Name	Name of the River/ Stream	Bicarbonate (HCO3--)		Chloride (CL-)		Fluoride (F-)		Sulphate (SO4-)		Sulphite (SO3)		Nitrate (NO3)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)
	Year : 2003-2004													
1	**Dedtalai**	Tapi	1.199	3.198	0.338	3.306	0.009	0.020	0.143	0.393	-	-	0.000	0.006
2	**Burhanpur**	Tapi	1.721	2.598	0.563	3.239	0.009	0.022	0.204	0.482	-	-	0.002	0.006
3	**Lakhpuri**	Purna	1.803	2.967	0.732	4.845	0.014	0.036	0.204	0.088	-	-	0.003	0.006
4	**Gopalkheda**	Purna	1.754	2.361	0.845	3.606	0.014	0.020	0.200	0.309	-	-	0.003	0.005
5	**Yerli**	Purna	1.672	2.164	0.732	3.437	0.012	0.018	0.200	0.247	-	-	0.002	0.005
6	**Savkheda**	Tapi	1.639	1.967	0.732	1.183	0.013	0.018	0.200	0.268	-	-	0.003	0.003
7	**Malkheda**	Tapi	1.754	2.033	0.732	1.803	0.015	0.020	0.200	0.301	-	-	0.002	0.004
8	**Gidhade**	Tapi	1.607	1.836	0.676	0.901	0.013	0.018	0.200	0.268	-	-	0.002	0.003
9	**Sarangkheda**	Tapi	1.607	1.836	0.732	0.958	0.013	0.019	0.225	0.268	-	-	0.002	0.003
10	**Ghala**	Tapi	1.599	3.898	0.479	4.789	0.003	0.022	0.098	0.390	-	-	0.001	0.005

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

X Basin : Tapi

Sl. No.	Site Name	Name of the River/ Stream	Nitrite (NO_2)		Phosphate (PO_4)		Silica (SiO_3)		DO (ppm)		BOD (ppm)		Total Coliform (no.per 10 ml)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(40)	(41)	(42)	(43)	(44)	(45)	(46)	(47)	(48)	(49)	(50)	(51)
	Year : 2003-2004													
1	**Dedtalai**	Tapi	0.000	0.001	0.000	0.009	0.252	0.533	-	-	0.20	1.50	-	-
2	**Burhanpur**	Tapi	0.000	0.002	0.000	0.010	0.258	0.512	-	-	0.20	2.80	-	-
3	**Lakhpuri**	Purna	0.000	0.002	0.000	0.004	0.275	0.652	-	-	0.20	1.70	-	-
4	**Gopalkheda**	Purna	0.000	0.001	0.000	0.001	0.302	0.443	-	-	0.30	1.20	-	-
5	**Yerli**	Purna	0.000	0.002	0.000	0.001	0.258	0.538	-	-	0.10	0.80	-	-
6	**Savkheda**	Tapi	0.000	0.001	0.000	0.001	0.285	0.391	-	-	0.30	1.60	-	-
7	**Malkheda**	Tapi	0.000	0.002	0.000	0.001	0.302	0.591	-	-	0.30	1.80	-	-
8	**Gidhade**	Tapi	0.000	0.001	0.000	0.000	0.258	0.496	-	-	0.10	1.40	-	-
9	**Sarangkheda**	Tapi	0.000	0.001	0.000	0.001	0.275	0.538	-	-	0.30	1.30	-	-
10	**Ghala**	Tapi	0.000	0.001	0.000	0.003	0.258	0.495	-	-	0.10	1.60	-	-

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

X Basin : Tapi

Sl. No.	Site Name	Name of the River/ Stream	Faecal Coliform (no.per 10 ml)		Total plate count (no.per 10 ml)		Phytoplankton (no.per ml)		Zooplankton (no.per litre)		Arsenic (ppm)		Boron (ppm)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(52)	(53)	(54)	(55)	(56)	(57)	(58)	(59)	(60)	(61)	(62)	(63)
	Year : 2003-2004													
1	**Dedtalai**	Tapi	-	-	-	-	-	-	-	-	-	-	-	-
2	**Burhanpur**	Tapi	-	-	-	-	-	-	-	-	-	-	-	-
3	**Lakhpuri**	Purna	-	-	-	-	-	-	-	-	-	-	-	-
4	**Gopalkheda**	Purna	-	-	-	-	-	-	-	-	-	-	-	-
5	**Yerli**	Purna	-	-	-	-	-	-	-	-	-	-	-	-
6	**Savkheda**	Tapi	-	-	-	-	-	-	-	-	-	-	-	-
7	**Malkheda**	Tapi	-	-	-	-	-	-	-	-	-	-	-	-
8	**Gidhade**	Tapi	-	-	-	-	-	-	-	-	-	-	-	-
9	**Sarangkheda**	Tapi	-	-	-	-	-	-	-	-	-	-	-	-
10	**Ghala**	Tapi	-	-	-	-	-	-	-	-	-	-	-	-

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

X Basin : Tapi

Sl. No.	Site Name	Name of the River/ Stream	Cadmium (ppm)		Chromium (ppm)		Copper (ppm)		Cyanide (ppm)		Lead (ppm)		Manganese (ppm)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(64)	(65)	(66)	(67)	(68)	(69)	(70)	(71)	(72)	(73)	(74)	(75)
	Year : 2003-2004													
1	**Dedtalai**	Tapi	-	-	-	-	-	-	-	-	-	-	-	-
2	**Burhanpur**	Tapi	-	-	-	-	-	-	-	-	-	-	-	-
3	**Lakhpuri**	Purna	-	-	-	-	-	-	-	-	-	-	-	-
4	**Gopalkheda**	Purna	-	-	-	-	-	-	-	-	-	-	-	-
5	**Yerli**	Purna	-	-	-	-	-	-	-	-	-	-	-	-
6	**Savkheda**	Tapi	-	-	-	-	-	-	-	-	-	-	-	-
7	**Malkheda**	Tapi	-	-	-	-	-	-	-	-	-	-	-	-
8	**Gidhade**	Tapi	-	-	-	-	-	-	-	-	-	-	-	-
9	**Sarangkheda**	Tapi	-	-	-	-	-	-	-	-	-	-	-	-
10	**Ghala**	Tapi	-	-	-	-	-	-	-	-	-	-	-	-

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

X Basin : Tapi

Sl. No.	Site Name	Name of the River/ Stream	Mercury (ppm)		Zinc (ppm)		Hardness		Sodium %		SAR		RSC	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(76)	(77)	(78)	(79)	(80)	(81)	(82)	(83)	(84)	(85)	(86)	(87)
	Year : 2003-2004													
1	**Dedtalai**	Tapi	-	-	-	-	79.12	132.03	21.28	34.01	0.40	1.04	0.0	0.56
2	**Burhanpur**	Tapi	-	-	-	-	95.83	131.48	23.86	35.78	0.62	1.17	0.04	0.38
3	**Lakhpuri**	Purna	-	-	-	-	103.84	144.50	27.13	68.32	0.77	4.77	0.11	0.19
4	**Gopalkheda**	Purna	-	-	-	-	99.95	114.56	29.01	65.64	0.85	4.02	0.20	0.32
5	**Yerli**	Purna	-	-	-	-	99.95	114.56	27.13	63.13	0.77	3.64	0.16	0.23
6	**Savkheda**	Tapi	-	-	-	-	95.83	107.95	25.57	37.38	0.70	1.26	0.00	0.00
7	**Malkheda**	Tapi	-	-	-	-	99.95	112.06	27.88	47.65	0.78	1.97	0.00	0.00
8	**Gidhade**	Tapi	-	-	-	-	95.83	104.06	27.88	32.09	0.78	0.96	0.00	0.00
9	**Sarangkheda**	Tapi	-	-	-	-	95.83	103.95	28.72	34.95	0.80	1.07	0.00	0.00
10	**Ghala**	Tapi	-	-	-	-	95.83	136.28	29.78	66.75	0.87	4.78	0.02	2.14

Source: Water Quality Year Book for 2003-04

Note : 1. All the ionic concentrations are expressed in mg./lit. unless mentioned otherwise.

2. (-) indicate that analyis of a particular parameter has not been carried out.

Table 13 : Maximum and minimum values of water quality parameters by site and river basin

XI Basin : Narmada

Sl. No.	Site Name	Name of the River/ Stream	Q (Cumecs)		Temperature °C		pH		Sp.Conductance		Potassium		Sodium	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
	Year 2004-05													
1	**Chandwada**	Orsang	0.000	150.9	0.0	31.0	0.00	8.52	0.000	313	0.00	0.051	0.000	1.479
2	**Garudeshwar**	Narmada	0.000	150.9	20.0	30.0	7.37	8.78	153	546	0.026	0.051	0.522	1.566
3	**Rajghat**	Narmada	37.31	3976	18.0	30.0	6.10	8.66	247	886	0.028	0.483	0.448	5.376
4	**Mandleshwar**	Narmada	20.0	3398	20.0	30.5	8.01	8.64	201	299	0.028	0.051	0.304	0.605
5	**Kogaon**	Kundi	0.000	144.9	19.0	30.0	8.06	8.50	218	633	0.031	0.072	0.209	1.753
6	**Mortakka**	Narmada	40.62	3218	16.0	29.5	7.80	8.54	210	330	0.020	0.054	0.226	0.787
7	**Handia**	Narmada	62.41	4823	20.0	30.5	7.89	8.64	180	376	0.023	0.059	0.183	1.557
8	**Chhidgaon**	Ganjal	0.000	83.12	17.0	32.5	7.79	8.85	201	577	0.018	0.077	0.235	2.279
9	**Hoshangabad**	Narmada	85.4	5122	17.0	30.0	7.84	8.62	146	440	0.023	0.051	0.113	0.826
10	**Sandia**	Narmada	85.55	4024	19.0	30.0	7.58	8.48	145	391	0.023	0.054	0.113	0.826
11	**Gadarwara**	Shakker	0.454	65.86	17.0	29.0	7.78	8.60	133	443	0.018	0.051	0.104	0.953
12	**Barmanghat**	Narmada	33.26	535	20.0	31.0	7.17	8.34	137	367	0.023	0.59	0.117	0.539
13	**Belkheri**	Sher	0.251	109.3	19.0	31.0	7.82	8.44	204	519	0.018	0.090	0.191	0.900
14	**Patan**	Hiran	1.710	214.80	16.5	30.6	7.49	8.55	218	534	0.069	0.125	0.226	1.409
15	**Bamni**	Banjar	0.241	158.00	17.0	29.5	7.30	8.36	135	338	0.023	0.102	0.152	0.696
16	**Mohgaon**	Burhner	0.2	339.3	18.0	28.5	7.49	8.35	130	373	0.018	0.077	0.122	0.609
17	**Manot**	Narmada	0.943	412.5	12.0	31.0	7.50	8.60	133	597	0.013	0.46	0.117	0.644
18	**Dindori**	Narmada	0.540	188.1	14.5	28.0	6.32	8.50	174	300	0.015	0.072	0.157	0.596

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

XI Basin : Narmada

Sl. No.	Site Name	Name of the River/ Stream	Calcium		Magnesium		Aluminium		Iron		Ammonia(NH_3)		Carbonate	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)
	Year 2004-05													
1	**Chandwada**	Orsang	0.000	1.600	0.000	0.642	0.000	0.004	0.000	0.009	0.000	0.013	0.000	0.167
2	**Garudeshwar**	Narmada	1.522	1.600	0.477	0.642	0.001	0.016	0.002	0.012	0.000	0.021	0.000	0.333
3	**Rajghat**	Narmada	1.123	2.046	0.716	1.761	-	-	-	-	-	-	0.000	0.750
4	**Mandleshwar**	Narmada	1.143	2.041	0.321	2.074	-	-	-	-	-	-	0.000	0.843
5	**Kogaon**	Kundi	1.218	2.450	0.700	2.296	-	-	-	-	-	-	0.000	1.177
6	**Mortakka**	Narmada	0.813	2.395	0.543	1.621	-	-	-	-	-	-	0.000	0.750
7	**Handia**	Narmada	0.788	2.525	0.510	1.901	-	-	-	-	-	-	0.000	0.707
8	**Chhidgaon**	Ganjal	0.768	2.525	0.337	1.984	-	-	-	-	-	-	0.000	1.497
9	**Hoshangabad**	Narmada	0.734	2.400	0.420	1.918	-	-	-	-	-	-	0.000	0.657
10	**Sandia**	Narmada	0.739	2.495	0.461	1.556	-	-	-	-	-	-	0.000	4.67
11	**Gadarwara**	Shakker	0.659	2.794	0.477	2.362	-	-	-	-	-	-	0.000	0.657
12	**Barmanghat**	Narmada	0.404	2.206	0.296	1.424	-	-	-	-	-	-	0.000	0.373
13	**Belkheri**	Sher	1.063	2.844	0.140	2.634	-	-	-	-	-	-	0.000	0.467
14	**Patan**	Hiran	1.188	3.079	0.757	2.519	-	-	-	-	-	-	0.000	0.823
15	**Bamni**	Banjar	0.629	1.756	0.296	1.820	-	-	-	-	-	-	0.000	0.237
16	**Mohgaon**	Burhner	0.609	2.071	0.239	1.498	-	-	-	-	-	-	0.000	0.373
17	**Manot**	Narmada	0.584	2.345	0.198	1.802	-	-	-	-	-	-	0.000	0.750
18	**Dindori**	Narmada	0.848	1.786	0.486	2.041	-	-	-	-	-	-	0.000	0.657

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

XI Basin : Narmada

Sl. No.	Site Name	Name of the River/ Stream	Bicarbonate		Chloride		Fluoride		Sulphate		Sulphite		Nitrate	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	35.00	(36)	(37)	(38)	(39)
	Year 2004-05													
1	**Chandwada**	Orsang	0.984	2.787	0.294	0.970	0.001	0.015	0.205	0.294	-	-	0.001	0.004
2	**Garudeshwar**	Narmada	1.065	4.261	0.147	2.038	0.001	0.015	0.177	0.520	-	-	0.001	0.027
3	**Rajghat**	Narmada	2.098	13.225	0.181	0.542	0.001	0.024	0.142	0.337	-	-	0.004	0.55
4	**Mandleshwar**	Narmada	2.016	6.162	0.186	0.299	0.002	0.028	0.121	0.408	-	-	0.000	0.148
5	**Kogaon**	Kundi	2.294	8.997	0.178	0.592	0.003	0.028	0.167	0.496	-	-	0.011	0.145
6	**Mortakka**	Narmada	2.098	7.063	0.186	0.341	0.002	0.022	0.131	0.502	-	-	0.002	0.045
7	**Handia**	Narmada	1.917	8.473	0.181	0.254	0.002	0.023	0.131	0.496	-	-	0.001	0.055
8	**Chhidgaon**	Ganjal	2.753	8.882	0.183	0.339	0.004	0.026	0.087	0.437	-	-	0.001	0.052
9	**Hoshangabad**	Narmada	1.639	6.178	0.169	0.262	0.003	0.028	0.129	0.456	-	-	0.001	0.058
10	**Sandia**	Narmada	1.540	7.047	0.178	0.350	0.002	0.22	0.119	0.312	-	-	0.003	0.110
11	**Gadarwara**	Shakker	1.491	7.997	0.181	0.260	0.002	0.019	0.104	0.316	-	-	0.000	0.052
12	**Barmanghat**	Narmada	1.540	7.2930	0.183	0.254	0.002	0.018	0.021	0.408	-	-	0.001	0.048
13	**Belkheri**	Sher	2.147	8.637	0.178	0.257	0.002	0.018	0.079	0.464	-	-	0.002	0.040
14	**Patan**	Hiran	2.393	9.702	0.169	0.319	0.002	0.035	0.150	0.371	-	-	0.003	0.048
15	**Bamni**	Banjar	1.442	5.523	5.523	0.254	0.001	0.022	0.112	0.487	-	-	0.003	0.026
16	**Mohgaon**	Burhner	1.360	4.818	4.818	0.260	0.06	0.024	0.021	0.412	-	-	0.001	0.039
17	**Manot**	Narmada	1.409	6.555	0.071	0.260	0.01	0.018	0.037	0.296	-	-	0.001	0.029
18	**Dindori**	Narmada	1.672	5.179	0.169	0.395	0.000	0.017	0.021	0.246	-	-	0.000	0.037

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

XI Basin : Narmada

Sl. No.	Site Name	Name of the River/ Stream	Nitrite		Phosphate		Silica (SiO_3)		DO (ppm)		BOD (ppm)		Total Coliform (no.per 10 ml)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(40)	(41)	(42)	(43)	(44)	(45)	(46)	(47)	(48)	(49)	(50)	(51)
	Year 2004-05													
1	**Chandwada**	Orsang	0.000	0.005	0.001	0.003	0.295	0.483	-	-	0.2	0.8	-	-
2	**Garudeshwar**	Narmada	0.000	0.261	0.001	0.003	0.295	0.585	-	-	0.2	1.6	-	-
3	**Rajghat**	Narmada	0.000	0.003	0.001	0.006	0.505	1.225	6.0	8.8	0.7	2.3	-	-
4	**Mandleshwar**	Narmada	0.000	0.002	0.000	0.006	0.44	1.130	6.30	8.5	0.6	1.4	-	-
5	**Kogaon**	Kundi	0.000	0.008	0.001	0.025	0.403	1.788	-	-	0.6	2.8	-	-
6	**Mortakka**	Narmada	0.000	0.002	0.000	0.004	0.505	1.262	-	-	0.8	3.0	-	-
7	**Handia**	Narmada	0.000	0.002	0.000	0.006	0.436	0.962	5.8	6.9	0.6	1.8	-	-
8	**Chhidgaon**	Ganjal	0.000	0.002	0.000	0.007	0.631	1.472	-	-	-	-	-	-
9	**Hoshangabad**	Narmada	0.000	0.002	0.001	0.025	0.523	1.288	6.6	8.8	0.2	2.1	-	-
10	**Sandia**	Narmada	0.000	0.002	0.000	0.006	0.573	1.146	7.6	8.6	-	-	-	-
11	**Gadarwara**	Shakker	0.000	0.002	0.000	0.004	0.607	1.367	7.1	8.4	0.6	3.2	-	-
12	**Barmanghat**	Narmada	0.000	0.002	0.000	0.003	0.526	1.188	7.1	8.4	0.6	2	-	-
13	**Belkheri**	Sher	0.000	0.002	0.000	0.006	0.536	1.551	-	0.0	0.0	0.0	-	-
14	**Patan**	Hiran	0.000	0.002	0.000	0.013	0.473	1.488	-	-	0.6	3.1	-	-
15	**Bamni**	Banjar	0.000	0.003	0.000	0.005	0.310	1.283	-	-	-	-	-	-
16	**Mohgaon**	Burhner	0.000	0.005	0.000	0.003	0.163	1.078	-	-	-	-	-	-
17	**Manot**	Narmada	0.000	0.009	0.000	0.006	0.505	1.682	6.3	9.5	0.6	1.80	-	-
18	**Dindori**	Narmada	0.000	0.002	0.000	0.003	0.473	1.157	-	-	-	-	-	-

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

XI Basin : Narmada

Sl. No.	Site Name	Name of the River/ Stream	Faecal Coliform (no.per 10 ml)		Total plate count (no.per 10 ml)		Phytoplankton (no.per ml)		Zooplankton (no.per litre)		Arsenic (ppm)		Boron (ppm)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(52)	(53)	(54)	(55)	(56)	(57)	(58)	(59)	(60)	(61)	(62)	(63)
	Year 2004-05													
1	**Chandwada**	Orsang	-	-	-	-	-	-	-	-	-	-	-	-
2	**Garudeshwar**	Narmada	-	-	-	-	-	-	-	-	-	-	-	-
3	**Rajghat**	Narmada	-	-	-	-	-	-	-	-	-	-	-	-
4	**Mandleshwar**	Narmada	-	-	-	-	-	-	-	-	-	-	-	-
5	**Kogaon**	Kundi	-	-	-	-	-	-	-	-	-	-	-	-
6	**Mortakka**	Narmada	-	-	-	-	-	-	-	-	-	-	-	-
7	**Handia**	Narmada	-	-	-	-	-	-	-	-	-	-	-	-
8	**Chhidgaon**	Ganjal	-	-	-	-	-	-	-	-	-	-	-	-
9	**Hoshangabad**	Narmada	-	-	-	-	-	-	-	-	-	-	-	-
10	**Sandia**	Narmada	-	-	-	-	-	-	-	-	-	-	-	-
11	**Gadarwara**	Shakker	-	-	-	-	-	-	-	-	-	-	-	-
12	**Barmanghat**	Narmada	-	-	-	-	-	-	-	-	-	-	-	-
13	**Belkheri**	Sher	-	-	-	-	-	-	-	-	-	-	-	-
14	**Patan**	Hiran	-	-	-	-	-	-	-	-	-	-	-	-
15	**Bamni**	Banjar	-	-	-	-	-	-	-	-	-	-	-	-
16	**Mohgaon**	Burhner	-	-	-	-	-	-	-	-	-	-	-	-
17	**Manot**	Narmada	-	-	-	-	-	-	-	-	-	-	-	-
18	**Dindori**	Narmada	-	-	-	-	-	-	-	-	-	-	-	-

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

XI Basin : Narmada

Sl. No.	Site Name	Name of the River/ Stream	Cadmium (ppm)		Chromium (ppm)		Copper (ppm)		Cyanide (ppm)		Lead (ppm)		Manganese (ppm)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(64)	(65)	(66)	(67)	(68)	(69)	(70)	(71)	(72)	(73)	(74)	(75)
	Year 2004-05													
1	**Chandwada**	Orsang	-	-	-	-	-	-	-	-	-	-	-	-
2	**Garudeshwar**	Narmada	-	-	-	-	-	-	-	-	-	-	-	-
3	**Rajghat**	Narmada	-	-	-	-	-	-	-	-	-	-	-	-
4	**Mandleshwar**	Narmada	-	-	-	-	-	-	-	-	-	-	-	-
5	**Kogaon**	Kundi	-	-	-	-	-	-	-	-	-	-	-	-
6	**Mortakka**	Narmada	-	-	-	-	-	-	-	-	-	-	-	-
7	**Handia**	Narmada	-	-	-	-	-	-	-	-	-	-	-	-
8	**Chhidgaon**	Ganjal	-	-	-	-	-	-	-	-	-	-	-	-
9	**Hoshangabad**	Narmada	-	-	-	-	-	-	-	-	-	-	-	-
10	**Sandia**	Narmada	-	-	-	-	-	-	-	-	-	-	-	-
11	**Gadarwara**	Shakker	-	-	-	-	-	-	-	-	-	-	-	-
12	**Barmanghat**	Narmada	-	-	-	-	-	-	-	-	-	-	-	-
13	**Belkheri**	Sher	-	-	-	-	-	-	-	-	-	-	-	-
14	**Patan**	Hiran	-	-	-	-	-	-	-	-	-	-	-	-
15	**Bamni**	Banjar	-	-	-	-	-	-	-	-	-	-	-	-
16	**Mohgaon**	Burhner	-	-	-	-	-	-	-	-	-	-	-	-
17	**Manot**	Narmada	-	-	-	-	-	-	-	-	-	-	-	-
18	**Dindori**	Narmada	-	-	-	-	-	-	-	-	-	-	-	-

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

XI Basin : Narmada

Sl. No.	Site Name	Name of the River/ Stream	Mercury (ppm)		Zinc (ppm)		Hardness		Sodium %		SAR		RSC	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(76)	(77)	(78)	(79)	(80)	(81)	(82)	(83)	(84)	(85)	(86)	(87)
	Year 2004-05													
1	**Chandwada**	Orsang	-	-	-	-	96	112	21.2	40.4	0.53	1.40	0.15	0.79
2	**Garudeshwar**	Narmada	-	-	-	-	100	112	20.5	41.7	0.52	1.51	0.06	2.02
3	**Rajghat**	Narmada	-	-	-	-	100	170	2.8	60.9	0.07	4.26	0.20	10.04
4	**Mandleshwar**	Narmada	-	-	-	-	99	182	9.6	22.7	0.21	0.68	0.24	3.14
5	**Kogaon**	Kundi	-	-	-	-	96	235	7.6	32.8	0.19	1.28	0.28	6.15
6	**Mortakka**	Narmada	-	-	-	-	96	162	8.4	19.7	0.20	0.70	0.17	4.74
7	**Handia**	Narmada	-	-	-	-	77	175	10.0	39.0	0.21	0.63	0.27	6.17
8	**Chhidgaon**	Ganjal	-	-	-	-	79	197	7.5	39.3	0.24	1.69	0.39	5.56
9	**Hoshangabad**	Narmada	-	-	-	-	64	201	9.7	21.3	0.14	0.67	0.27	4.63
10	**Sandia**	Narmada	-	-	-	-	61	180	8.2	23.9	0.14	0.94	0.14	3.98
11	**Gadarwara**	Shakker	-	-	-	-	61	222	7.8	25.6	0.13	0.74	0.16	3.95
12	**Barmanghat**	Narmada	-	-	-	-	54	173	5.7	25.6	0.15	0.57	0.14	4.02
13	**Belkheri**	Sher	-	-	-	-	77	251	7.4	21.7	0.19	0.61	0.15	3.98
14	**Patan**	Hiran	-	-	-	-	97	263	9.7	29.7	0.22	1.08	0.21	5.71
15	**Bamni**	Banjar	-	-	-	-	59	160	9.0	22.4	0.20	0.57	0.02	2.37
16	**Mohgaon**	Burhner	-	-	-	-	56	169	6.7	26.6	0.15	0.57	0.01	2.37
17	**Manot**	Narmada	-	-	-	-	59	175	6.9	16.4	0.19	0.49	0.15	3.11
18	**Dindori**	Narmada	-	-	-	-	78	174	7.9	21.6	0.17	0.53	0.07	2.84

Source: Water Quality Year Book for 2004-05 (Narmada Basin).

Note : 1. All the ionic concentrations are expressed in mg./lit. unless mentioned otherwise.

2. (-) indicate that analyis of a particular parameter has not been carried out.

Table 13 : Maximum and minimum values of water quality parameters by site and river basin

XII Basin : Mahi and Sabarmati

Sl. No.	Site Name	Name of the River/ Stream	Q (Cumecs)		Temperature °C		pH		Sp.Conductance		Potassium (K+)		Sodium (Na)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
	Year : 2003-2004													
1	**Mataji**	Mahi	0.000	158.9	19.8	32.0	7.80	8.25	214	512	0.026	0.051	0.522	1.130
2	**Rangeli**	Som	0.000	10.50	16.0	30.0	7.60	8.50	407	996	0.026	0.130	0.870	1.739
3	**Paderdibadi**	Mahi	0.000	243.1	19.0	30.5	7.20	8.33	305	706	0.026	0.051	0.696	1.652
4	**Khanpur**	Mahi	1.807	290.3	15.5	32.2	7.36	8.40	280	563	0.026	0.051	0.609	1.391
5	**Derol Bridge**	Sabarmati	0.000	0.000	RD	RD	RD	RD	RD	RD	RD	RD	RD	RD
6	**Vautha**	Sabarmati	0.000	995.3	23.0	38.1	7.50	8.50	311	3692	0.051	0.308	0.870	11.391
7	**Lakhpuri**	Purna	0.000	18.37	20.0	28.0	7.8	8.58	268	1215	0;026	0.103	0.783	5.652
8	**Gopalkheda**	Purna	0.000	20.27	22.0	27.0	7.80	8.50	338	807	0.026	0.103	0.870	4.174
9	**Yerli**	Purna	0.000	127.0	25.0	27.0	8.10	8.60	263	745	0.026	0.051	0.783	3.826
10	**Dapuri**	Girna	0.000	419.8	24.5	29.0	8.00	8.58	233	524	0.026	0.051	0.783	1.130
11	**Morane**	Panjhara	0.000	139.5	25.5	28.50	8.16	8.65	329	507	0.026	0.051	0.083	1.043
12	**Abu Road**	Banas	0.000	8.926	26.0	29.0	7.50	8.35	237	416	0.026	0.026	0.696	1.043
13	**Kamalpur**	Banas	0.000	0.000	RD	RD	RD	RD	RD	RD	RD	RD	RD	RD
14	**Chitrasani**	Balaram	0.000	0.800	RD	RD	RD	RD	RD	RD	RD	RD	RD	RD
15	**Luwara**	Shetrunji	0.000	95.84	27.0	28.0	8.00	8.10	290	863	0.026	0.051	0.696	3.103
16	**Ganod**	Bhadar	0.000	25.83	27.0	29.0	7.60	8.20	192	612	0.026	0.051	0.522	1.391
17	**Mahuwa**	Purna	0.000	172.8	19.0	31.0	7.86	8.69	233	532	0.026	0.051	0.783	1.217
18	**Gadat**	Ambika	0.000	156.9	18.0	31.5	7.90	8.66	206	644	0.026	0.051	0.696	3.565
19	**Durvesh**	Vaitama	0.000	432.4	0.0	29.0	7.60	8.51	139	292	0.026	0.026	0.348	1.043
20	**Pingalwada**	Dhadhar	0.758	42.17	18.5	31.00	7.50	8.54	325	1637	0.000	0.256	0.000	6.870
21	**Motinaroli**	Kim	0.712	74.90	18.0	31.0	7.94	8.60	451	1744	0.000	0.103	0.000	7.304

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

XII Basin : Mahi and Sabarmati

Sl. No.	Site Name	Name of the River/ Stream	Calcium (Ca++)		Magnesium (Mg)		Aluminium (AL+++)		Ferric ion (Fe+++)		Ammonia(NH4)		Carbonate (CO3--)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)	(27)
	Year : 2003-2004													
1	**Mataji**	Mahi	1.321	1.620	0.321	0.558	0.001	0.002	0.000	0.002	0.000	0.001	0.000	0.033
2	**Rangeli**	Som	1.522	1.936	0.395	0.806	0.000	0.002	0.001	0.003	0.000	0.003	0.000	0.167
3	**Paderdibadi**	Mahi	1.522	1.716	0.395	0.625	0.001	0.002	0.000	0.001	0.001	0.003	0.000	0.067
4	**Khanpur**	Mahi	1.437	1.677	0.395	0.641	0.001	0.004	0.001	0.002	0.000	0.006	0.000	0.100
5	**Derol Bridge**	Sabarmati	RD	RD	RD	RD	RD	RD	RD	RD	RD	RD	RD	RD
6	**Vautha**	Sabarmati	1.600	3.293	0.641	1.793	0.002	0.011	0.001	0.002	0.040	0.798	0.000	0.167
7	**Lakhpuri**	Purna	1.600	1.936	0.477	0.954	0.002	0.007	0.001	0.002	0.001	0.033	0.000	0.200
8	**Gopalkheda**	Purna	1.522	1.650	0.477	0.641	0.002	0.004	0.000	0.001	0.001	0.003	0.000	0.200
9	**Yerli**	Purna	1.522	1.650	0.477	0.641	0.001	0.004	0.000	0.002	0.000	0.002	0.000	0.200
10	**Dapuri**	Girna	1.522	1.650	0.395	0.641	0.001	0.004	0.000	0.001	0.000	0.001	0.000	0.200
11	**Morane**	Panjhara	1.522	1.600	0.477	0.559	0.001	0.002	0.000	0.001	0.000	0.001	0.000	0.267
12	**Abu Road**	Banas	1.522	1.600	0.477	0.559	0.001	0.002	0.001	0.001	0.000	0.001	0.000	0.100
13	**Kamalpur**	Banas	RD	RD	RD	RD	RD	RD	RD	RD	RD	RD	RD	RD
14	**Chitrasani**	Balaram	RD	RD	RD	RD	RD	RD	RD	RD	RD	RD	RD	RD
15	**Luwara**	Shetrunji	1.552	1.789	0.477	0.806	0.001	0.004	0.001	0.001	0.001	0.002	0.000	0.000
16	**Ganod**	Bhadar	1.238	1.677	0.395	0.707	0.002	0.002	0.001	0.002	0.001	0.002	0.000	0.000
17	**Mahuwa**	Purna	1.440	1.677	0.395	0.715	0.000	0.004	0.000	0.001	0.000	0.004	0.000	0.200
18	**Gadat**	Ambika	1.277	1.780	0.395	1.039	0.000	0.004	0.000	0.001	0.000	0.008	0.000	0.244
19	**Durvesh**	Vaitama	1.098	1.522	0.235	0.477	0.001	0.002	0.000	0.001	0.000	0.001	0.000	0.167
20	**Pingalwada**	Dhadhar	1.522	2.485	0.559	1.530	0.001	0.009	0.000	0.002	0.053	0.559	0.000	0.167
21	**Motinaroli**	Kim	1.600	2.136	0.477	1.222	0.000	0.007	0.000	0.001	0.000	0.136	0.000	0.200

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

XII Basin : Mahi and Sabarmati

Sl. No.	Site Name	Name of the River/ Stream	Bicarbonate (HCO3--)		Chloride (CL-)		Fluoride (F-)		Sulphate (SO4-)		Sulphite (SO3)		Nitrate (NO3)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)
	Year : 2003-2004													
1	**Mataji**	Mahi	1.443	1.967	0.507	0.958	0.009	0.021	0.131	0.264	-	-	0.002	0.003
2	**Rangeli**	Som	1.754	2.754	0.845	1.465	0.011	0.024	.1`54	0.301	-	-	0.002	0.004
3	**Paderdibadi**	Mahi	1.721	2.361	0.676	1.408	0.012	0.023	0.154	0.318	-	-	0.003	0.004
4	**Khanpur**	Mahi	1.639	2.115	0.563	1.239	0.011	0.025	0.133	0.268	-	-	0.000	0.004
5	**Derol Bridge**	Sabarmati	RD	RD	RD	RD	RD	RD	RD	RD	-	-	RD	RD
6	**Vautha**	Sabarmati	2.033	4.967	0.732	10.141	0.025	0.052	0.260	1.633	-	-	0.005	0.021
7	**Lakhpuri**	Purna	1.803	2.967	0.732	4.845	0.014	0.036	0.204	0.088	-	-	0.003	0.006
8	**Gopalkheda**	Purna	1.754	2.361	0.845	3.606	0.014	0.020	0.200	0.309	-	-	0.003	0.005
9	**Yerli**	Purna	1.672	2.164	0.732	3.437	0.012	0.018	0.200	0.247	-	-	0.002	0.005
10	**Dapuri**	Girna	1.672	1.918	0.732	1.070	0.013	0.021	0.204	0.268	-	-	0.002	0.003
11	**Morane**	Panjhara	1.639	1.803	0.676	0.901	0.012	0.017	0.204	0.268	-	-	0.003	0.003
12	**Abu Road**	Banas	1.754	1.967	0.620	0.958	0.012	0.015	0.204	0.235	-	-	0.002	0.003
13	**Kamalpur**	Banas	RD	RD	RD	RD	RD	RD	RD	RD	-	-	RD	RD
14	**Chitrasani**	Balaram	RD	RD	RD	RD	RD	RD	RD	RD	-	-	RD	RD
15	**Luwara**	Shetrunji	1.836	2.754	0.620	2.648	0.016	0.025	0.176	0.310	-	-	0.002	0.004
16	**Ganod**	Bhadar	1.393	2.246	0.563	1.296	0.013	0.018	0.179	0.260	-	-	0.002	0.003
17	**Mahuwa**	Purna	1.607	2.236	0.732	2.648	0.005	0.024	0.079	0.307	-	-	0.001	0.003
18	**Gadat**	Ambika	1.639	2.199	0.676	3.042	0.004	0.022	0.054	0.339	-	-	0.000	0.006
19	**Durvesh**	Vaitama	1.164	1.803	0.338	1.014	0.008	0.019	0.089	0.218	-	-	0.001	0.003
20	**Pingalwada**	Dhadhar	1.803	3.393	1.070	7.662	0.009	0.043	0.187	1.480	-	-	0.005	0.056
21	**Motinaroli**	Kim	1.499	3.361	1.352	6.704	0.009	0.023	0.033	1.604	-	-	0.001	0.006

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

XII Basin : Mahi and Sabarmati

Sl. No.	Site Name	Name of the River/ Stream	Nitrite (NO_2)		Phosphate (PO_4)		Silica (SiO_3)		DO (ppm)		BOD (ppm)		Total Coliform (no.per 10 ml)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(40)	(41)	(42)	(43)	(44)	(45)	(46)	(47)	(48)	(49)	(50)	(51)
	Year : 2003-2004													
1	**Mataji**	Mahi	0.000	0.001	0.000	0.000	0.222	0.391	-	-	0.30	1.30	-	-
2	**Rangeli**	Som	0.000	0.002	0.000	0.001	0.216	0.391	-	-	0.10	2.20	-	-
3	**Paderdibadi**	Mahi	0.000	0.001	0.000	0.001	0.258	0.354	-	-	0.20	1.50	-	-
4	**Khanpur**	Mahi	0.000	0.002	0.000	0.002	0.258	0.391	-	-	0.20	1.80	-	-
5	**Derol Bridge**	Sabarmati	RD	RD	RD	RD	RD	RD	-	-	RD	RD	-	-
6	**Vautha**	Sabarmati	0.000	0.007	0.021	0.072	0.302	0.652	-	-	0.60	58.00	-	-
7	**Lakhpuri**	Purna	0.000	0.002	0.000	0.004	0.275	0.652	-	-	0.20	1.70	-	-
8	**Gopalkheda**	Purna	0.000	0.001	0.000	0.001	0.302	0.443	-	-	0.30	1.20	-	-
9	**Yerli**	Purna	0.000	0.002	0.000	0.001	0.258	0.538	-	-	0.10	0.80	-	-
10	**Dapuri**	Girna	0.000	0.002	0.000	0.001	0.289	0.391	-	-	0.10	1.40	-	-
11	**Morane**	Panjhara	0.000	0.001	0.000	0.001	0.275	0.391	-	-	0.30	1.10	-	-
12	**Abu Road**	Banas	0.000	0.001	0.000	0.001	0.275	0.328	-	-	0.10	1.50	-	-
13	**Kamalpur**	Banas	RD	RD	RD	RD	RD	RD	-	-	RD	RD	-	-
14	**Chitrasani**	Balaram	RD	RD	RD	RD	RD	RD	-	-	RD	RD	-	-
15	**Luwara**	Shetrunji	0.000	0.001	0.000	0.001	0.275	0.496	-	-	1.00	2.00	-	-
16	**Ganod**	Bhadar	0.000	0.001	0.000	0.001	0.275	0.391	-	-	0.30	1.40	-	-
17	**Mahuwa**	Purna	0.000	0.001	0.000	0.006	0.249	0.391	-	-	0.10	1.20	-	-
18	**Gadat**	Ambika	0.000	0.002	0.000	0.006	0.273	0.495	-	-	0.10	1.90	-	-
19	**Durvesh**	Vaitama	0.000	0.001	0.000	0.000	0.126	0.285	-	-	0.20	0.70	-	-
20	**Pingalwada**	Dhadhar	0.000	0.021	0.000	0.065	0.706	0.275	-	-	0.40	20.00	-	-
21	**Motinaroli**	Kim	0.000	0.002	0.000	0.039	0.273	0.548	-	-	0.20	1.70	-	-

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

XII Basin : Mahi and Sabarmati

Sl. No.	Site Name	Name of the River/ Stream	Faecal Coliform (no.per 10 ml)		Total plate count (no.per 10 ml)		Phytoplankton (no.per ml)		Zooplankton (no.per litre)		Arsenic (ppm)		Boron (ppm)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(52)	(53)	(54)	(55)	(56)	(57)	(58)	(59)	(60)	(61)	(62)	(63)
	Year : 2003-2004													
1	**Mataji**	Mahi	-	-	-	-	-	-	-	-	-	-	-	-
2	**Rangeli**	Som	-	-	-	-	-	-	-	-	-	-	-	-
3	**Paderdibadi**	Mahi	-	-	-	-	-	-	-	-	-	-	-	-
4	**Khanpur**	Mahi	-	-	-	-	-	-	-	-	-	-	-	-
5	**Derol Bridge**	Sabarmati	-	-	-	-	-	-	-	-	-	-	-	-
6	**Vautha**	Sabarmati	-	-	-	-	-	-	-	-	-	-	-	-
7	**Lakhpuri**	Purna	-	-	-	-	-	-	-	-	-	-	-	-
8	**Gopalkheda**	Purna	-	-	-	-	-	-	-	-	-	-	-	-
9	**Yerli**	Purna	-	-	-	-	-	-	-	-	-	-	-	-
10	**Dapuri**	Girna	-	-	-	-	-	-	-	-	-	-	-	-
11	**Morane**	Panjhara	-	-	-	-	-	-	-	-	-	-	-	-
12	**Abu Road**	Banas	-	-	-	-	-	-	-	-	-	-	-	-
13	**Kamalpur**	Banas	-	-	-	-	-	-	-	-	-	-	-	-
14	**Chitrasani**	Balaram	-	-	-	-	-	-	-	-	-	-	-	-
15	**Luwara**	Shetrunji	-	-	-	-	-	-	-	-	-	-	-	-
16	**Ganod**	Bhadar	-	-	-	-	-	-	-	-	-	-	-	-
17	**Mahuwa**	Purna	-	-	-	-	-	-	-	-	-	-	-	-
18	**Gadat**	Ambika	-	-	-	-	-	-	-	-	-	-	-	-
19	**Durvesh**	Vaitama	-	-	-	-	-	-	-	-	-	-	-	-
20	**Pingalwada**	Dhadhar	-	-	-	-	-	-	-	-	-	-	-	-
21	**Motinaroli**	Kim	-	-	-	-	-	-	-	-	-	-	-	-

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

XII Basin : Mahi and Sabarmati

Sl. No.	Site Name	Name of the River/ Stream	Cadmium (ppm)		Chromium (ppm)		Copper (ppm)		Cyanide (ppm)		Lead (ppm)		Manganese (ppm)	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(64)	(65)	(66)	(67)	(68)	(69)	(70)	(71)	(72)	(73)	(74)	(75)
	Year : 2003-2004													
1	**Mataji**	Mahi	-	-	-	-	-	-	-	-	-	-	-	-
2	**Rangeli**	Som	-	-	-	-	-	-	-	-	-	-	-	-
3	**Paderdibadi**	Mahi	-	-	-	-	-	-	-	-	-	-	-	-
4	**Khanpur**	Mahi	-	-	-	-	-	-	-	-	-	-	-	-
5	**Derol Bridge**	Sabarmati	-	-	-	-	-	-	-	-	-	-	-	-
6	**Vautha**	Sabarmati	-	-	-	-	-	-	-	-	-	-	-	-
7	**Lakhpuri**	Purna	-	-	-	-	-	-	-	-	-	-	-	-
8	**Gopalkheda**	Purna	-	-	-	-	-	-	-	-	-	-	-	-
9	**Yerli**	Purna	-	-	-	-	-	-	-	-	-	-	-	-
10	**Dapuri**	Girna	-	-	-	-	-	-	-	-	-	-	-	-
11	**Morane**	Panjhara	-	-	-	-	-	-	-	-	-	-	-	-
12	**Abu Road**	Banas	-	-	-	-	-	-	-	-	-	-	-	-
13	**Kamalpur**	Banas	-	-	-	-	-	-	-	-	-	-	-	-
14	**Chitrasani**	Balaram	-	-	-	-	-	-	-	-	-	-	-	-
15	**Luwara**	Shetrunji	-	-	-	-	-	-	-	-	-	-	-	-
16	**Ganod**	Bhadar	-	-	-	-	-	-	-	-	-	-	-	-
17	**Mahuwa**	Purna	-	-	-	-	-	-	-	-	-	-	-	-
18	**Gadat**	Ambika	-	-	-	-	-	-	-	-	-	-	-	-
19	**Durvesh**	Vaitama	-	-	-	-	-	-	-	-	-	-	-	-
20	**Pingalwada**	Dhadhar	-	-	-	-	-	-	-	-	-	-	-	-
21	**Motinaroli**	Kim	-	-	-	-	-	-	-	-	-	-	-	-

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Table 13 : Maximum and minimum values of water quality parameters by site and river basin

XII Basin : Mahi and Sabarmati

Sl.No.	Site Name	Name of the River/ Stream	Mercury (ppm)		Zinc (ppm)		Hardness		Sodium %		SAR		RSC	
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
(1)	(2)	(3)	(76)	(77)	(78)	(79)	(80)	(81)	(82)	(83)	(84)	(85)	(86)	(87)
	Year : 2003-2004													
1	**Mataji**	Mahi	-	-	-	-	82.10	108.87	23.83	35.83	0.58	1.13	0.00	0.00
2	**Rangeli**	Som	-	-	-	-	95.83	137.10	30.05	38.37	0.87	1.49	0.00	0.01
3	**Paderdibadi**	Mahi	-	-	-	-	95.83	121.96	25.57	39.88	0.70	1.50	0.0	0.01
4	**Khanpur**	Mahi	-	-	-	-	91.59	112.06	24.68	35.84	0.64	1.34	0.0	0.0
5	**Derol Bridge**	Sabarmati	-	-	-	-	RD	RD	RD	RD	RD	RD	RD	RD
6	**Vautha**	Sabarmati	-	-	-	-	112.06	254.31	27.50	70.58	0.82	7.46	0.02	0.31
7	**Lakhpuri**	Purna	-	-	-	-	103.84	144.50	27.13	68.32	0.77	4.77	0.11	0.19
8	**Gopalkheda**	Purna	-	-	-	-	99.95	114.56	29.01	65.64	0.85	4.02	0.20	0.32
9	**Yerli**	Purna	-	-	-	-	99.95	114.56	27.13	63.13	0.77	3.64	0.16	0.23
10	**Dapuri**	Girna	-	-	-	-	95.83	112.06	26.89	35.27	0.77	1.16	0.00	0.00
11	**Morane**	Panjhara	-	-	-	-	99.95	107.95	27.13	32.09	0.77	1.00	0.00	0.00
12	**Abu Road**	Banas	-	-	-	-	99.95	107.95	25.57	32.32	0.70	1.00	0.00	0.00
13	**Kamalpur**	Banas	-	-	-	-	RD	RD	RD	RD	RD	RD	RD	RD
14	**Chitrasani**	Balaram	-	-	-	-	RD	RD	RD	RD	RD	RD	RD	RD
15	**Luwara**	Shetrunji	-	-	-	-	99.95	129.77	25.57	54.19	0.70	2.75	0.16	0.16
16	**Ganod**	Bhadar	-	-	-	-	81.61	119.19	23.94	36.36	0.58	1.27	0.00	0.00
17	**Mahuwa**	Purna	-	-	-	-	91.74	119.78	28.72	39.26	0.80	1.40	0.06	0.40
18	**Gadat**	Ambika	-	-	-	-	83.61	116.05	26.37	63.83	0.71	3.57	0.25	0.50
19	**Durvesh**	Vaitama	-	-	-	-	66.65	99.95	19.18	34.01	0.41	1.04	0.00	0.00
20	**Pingalwada**	Dhadhar	-	-	-	-	104.06	200.73	34.65	65.66	1.11	4.98	0.03	0.94
21	**Motinaroli**	Kim	-	-	-	-	103.84	167.89	40.99	64.85	1.45	5.64	0.04	0.40

Source: Water Quality Year Book for 2003-04

Note : 1. All the ionic concentrations are expressed in mg./lit. unless mentioned otherwise.

2. (-) indicate that analyis of a particular parameter has not been carried out.

3. RD - River Dry.

Table 14 : Land utilisation pattern by river basin and State

(Area in hectare)

Sl. No.	Basin/State/District Name	District Area	District Basin Area	Reporting Area For Land Utilisation	Classification of Reporting Area					Area Sown more than once	Total Cropped Area
					Forest	Not available for Cultivation	Other uncultivated Lands Excluding Fallow Lands	Fallow Lands	Net Area Sown		
1	2	3	4	5	6	7	8	9	10	11	12
I	**Basin : Mahanadi**										
i)	**JHARKHAND**										
	Gumla	907700	63500	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	**907700**	**63500**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
ii)	**ORISSA**										
1	**Sambalpur**	1751600	1390400	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	**Sundergarh**	971200	410000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	**Cuttak**	1114200	752800	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4	**Dhenkanal**	1082700	311000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
5	**Phulbani**	1111900	907500	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
6	**Balangir**	891300	891300	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
7	**Kalahandi**	1177200	981900	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
8	**Koraput**	2696100	197700	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
9	**Puri**	1018200	606100	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	**11814400**	**6448700**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
iii)	**MADHYA PRADESH**										
1	**Shahdol**	1402800	8400	561006	227886	54521	46425	52506	179668	26978	206646
2	**Surguja**	2233700	496200	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	**Bilaspur**	1989700	1895700	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4	**Raigarh**	1292400	1090600	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
5	**Rajnandgaon**	1112700	756500	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
6	**Durg**	853700	853700	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
7	**Raipur**	2125800	2115200	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
8	**Bastar**	3911400	222100	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	**14922200**	**7438400**	**561006**	**227886**	**54521**	**46425**	**52506**	**179668**	**26978**	**206646**
iv)	**MAHARASHTRA**										
1	**Chandrapur+**	2585500	28600	1091800	388200	117900	104600	29600	451500	80600	532100
2	**Gadchiroli**			1491600	1099200	85800	78200	57200	171200	27400	198600
	Sub Total	**2585500**	**28600**	**1091800**	**388200**	**117900**	**104600**	**29600**	**451500**	**80600**	**532100**
	Grand Total	**30229800**	**13979200**	**1652806**	**616086**	**172421**	**151025**	**82106**	**631168**	**107578**	**738746**

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Table 14 : Land utilisation pattern by river basin and State

(Area in hectare)

Sl. No.	Basin/State/District Name	District Area	District Basin Area	Reporting Area For Land Utilisation	Classification of Reporting Area					Area Sown more than once	Total Cropped Area
					Forest	Not available for Cultivation	Other uncultivated Lands Excluding Fallow Lands	Fallow Lands	Net Area Sown		
1	2	3	4	5	6	7	8	9	10	11	12
II	**Subernarekha, Burhabalang and Baitarni**										
i)	**BIHAR**										
1	**Ranchi**	769800	488000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	**Singhbhum**	1344000	902100	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	**2113800**	**1390100**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
ii)	**ORISSA**										
1	**Mayurbhanj**	1041800	751800	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	**Balasore**	631100	472100	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	**1672900**	**1223900**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
iii)	WEST BENGAL										
1	Midnapur(East)	1408100	311600	396594	899	93434	3905	4300	294056	221247	515303
2	Purulia	625900	101800	625646	75048	107453	11774	122728	308643	20999	329642
	Sub Total	**2034000**	**413400**	**1022240**	**75947**	**200887**	**15679**	**127028**	**602699**	**242246**	**844945**
	Grand Total	**5820700**	**3027400**	**1022240**	**75947**	**200887**	**15679**	**127028**	**602699**	**242246**	**844945**
III	**Basin : Brahamani**										
i)	**BIHAR**										
1	**Lohardaga**	149100	89100	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	**Gumla**	907700	794200	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	**Ranchi**	769800	230000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4	**Pa. Singhbhum**	1344000	412000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	**3170600**	**1525300**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
ii)	**MADHYA PRADESH**										
	Raigarh	1292400	126800	598664	-	71130	96297	6720	424517	123857	548374
	Sub Total	**1292400**	**126800**	**598664**	**0**	**71130**	**96297**	**6720**	**424517**	**123857**	**548374**

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Table 14 : Land utilisation pattern by river basin and State

(Area in hectare)

Sl. No.	Basin/State/District Name	District Area	District Basin Area	Reporting Area For Land Utilisation	Classification of Reporting Area					Area Sown more than once	Total Cropped Area
					Forest	Not available for Cultivation	Other uncultivated Lands Excluding Fallow Lands	Fallow Lands	Net Area Sown		
1	2	3	4	5	6	7	8	9	10	11	12
	ORISSA										
1	**Sambalpur**	1751600	361200	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	**Sundergarh**	971200	561200	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	**Keonjhar**	830300	830300	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4	**Mayurbhanj**	1041800	290000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
5	**Balasore**	631100	159000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
6	**Cuttack**	1114200	361400	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
7	**Dhenkanal**	1082700	771700	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	**7422900**	**3334800**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	Grand Total	**11885900**	**4986900**	**598664**	**0**	**71130**	**96297**	**6720**	**424517**	**123857**	**548374**
IV	**Rushikulya, Vamsadhra, Sarada and Nagavali**										
	<----- Not Available Data ----->										
V	**Basin : Godavari**										
i)	**ANDHRA PRADESH**										
1	**Visakhapatnam**	1116100	370400	1134284	477791	232167	48930	87127	288269	73293	361562
2	**East Godavari**	1080700	154900	1081843	323107	222117	49550	76985	410084	337522	747606
3	**West Godavari**	0	0	779538	81186	185368	41546	29749	441689	266889	708578
4	**Rangareddy**	749300	34200	753247	73075	125182	61123	248653	245214	32762	277976
5	**Medak**	969900	835500	951903	95394	125863	54604	252871	423171	101551	524722
6	**Nizamabad**	795600	795600	806215	169341	135493	45979	207782	247620	154909	402529
7	**Adilabad**	1610500	1610500	1620381	689517	104603	37713	251571	536977	27845	564822
8	**Karimnagar**	1182300	1178700	1188499	250410	164309	81217	194303	498260	195486	693746
9	**Warangal**	1284600	724200	1283552	371313	112875	87667	222738	488959	123989	612948
10	**Khammam**	1602900	1616200	1580936	743793	215369	78391	87808	455575	66934	522509
	Sub Total	**10391900**	**7320200**	**11180398**	**3274927**	**1623346**	**586720**	**1659587**	**4035818**	**1381180**	**5146998**
ii)	**KARNATAKA**										
	Bidar	544800	448700	541765	27707	41133	44066	74554	354305	85141	439446
	Sub Total	**544800**	**448700**	**541765**	**27707**	**41133**	**44066**	**74554**	**354305**	**85141**	**439446**

Contd/…

Table 14 : Land utilisation pattern by river basin and State

(Area in hectare)

Sl. No.	Basin/State/District Name	District Area	District Basin Area	Reporting Area For Land Utilisation	Classification of Reporting Area					Area Sown more than once	Total Cropped Area
					Forest	Not available for Cultivation	Other uncultivated Lands Excluding Fallow Lands	Fallow Lands	Net Area Sown		
1	2	3	4	5	6	7	8	9	10	11	12
iii)	**MADHYA PRADESH**										
1	**Betul**	1004300	224300	1025436	414641	72740	68353	66173	403529	151097	554626
2	**Mandla**	1326900	82400	965559	593126	53425	39280	60673	219055	68160	287215
3	**Chhindwara**	1181500	896100	1184923	479484	80216	71123	76925	477175	115811	592986
4	**Seoni**	875800	654000	875401	328211	60138	59618	59453	367981	131617	499598
5	**Balaghat**	922900	701400	924500	504986	56899	59723	28993	273899	70088	343987
6	**Rajnandgaon**	1112700	259000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
7	**Raipur**	2125800	10600	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
8	**Bastar**	3911400	3689300	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	**12461300**	**6517100**	**4975819**	**2320448**	**323418**	**298097**	**292217**	**1741639**	**536773**	**2278412**
iv)	**MAHARASHTRA**										
1	**Nashik**	1553000	736100	1563400	311000	210400	46000	111400	884600	91700	792900
2	**Jalgaon**	1176500	6000	1163900	155900	95600	47700	13800	850900	27800	878700
3	**Ahmadnagar**	1704800	1089100	1702000	164300	143200	63700	212100	1118700	130700	1249400
4	**Pune**	1564300	14000	1562000	162300	267800	125800	65300	940800	98000	1038800
5	**Solapur**	1489500	11900	1487800	35300	79000	90900	251000	1031600	3500	1035100
6	**Aurangabad**	1010700	899100	1007700	72600	81200	58400	105600	689900	168200	858100
7	**Jalana**	771800	771800	772600	4900	28100	51500	116800	571300	156200	727500
8	**Parbhani**	1104100	1104100	631100	6400	36800	37500	64900	485500	317600	803100
9	**Beed**	1069300	946900	1068600	22900	67100	78700	143000	756900	201800	958700
10	**Nanded**	1052800	1052800	1033100	85300	54800	92800	97700	702500	149900	852400
11	**Osmanabad**	756900	226400	748500	4400	24400	69000	172200	478500	298300	776800
12	**Latur**	715700	715700	715700	1800	40300	66300	88500	518800	186900	705700
13	**Buldghana**	966100	384600	967100	88300	99900	66500	44900	667500	5300	662200
14	**Akola**	1057400	374500	542900	29900	41600	21000	15400	435000	49200	484200
15	**Amravati**	1221000	419600	1221700	309800	64100	49200	46700	751900	37600	789500
16	**Yavatmal**	1358200	1358200	1351900	242900	104100	96800	60500	847600	39800	887400
17	**Wardha**	630900	630900	628900	62400	55300	62100	84600	364500	69300	433800
18	**Nagpur**	989200	989200	986400	164200	126400	103500	45000	547300	83600	630900
19	**Bhandara**	932100	932100	342000	62000	41700	53000	7000	178300	64900	243200
20	**Chandrapur**	1144300	1115700	1091800	388200	117900	104600	29600	451500	80600	532100
21	**Gadchiroli**	1441200	1441200	1491600	1099200	85800	78200	57200	171200	27400	198600
	Sub Total	**23709800**	**15219900**	**22080700**	**3474000**	**1865500**	**1463200**	**1833200**	**13444800**	**2288300**	**15539100**

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Table 14 : Land utilisation pattern by river basin and State

(Area in hectare)

Sl. No.	Basin/State/District Name	District Area	District Basin Area	Reporting Area For Land Utilisation	Classification of Reporting Area					Area Sown more than once	Total Cropped Area
					Forest	Not available for Cultivation	Other uncultivated Lands Excluding Fallow Lands	Fallow Lands	Net Area Sown		
1	2	3	4	5	6	7	8	9	10	11	12
v)	**ORISSA**										
1	**Kalahandi**	1177200	145300	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	**Koraput**	2696100	1629900	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	**3873300**	**1775200**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	Grand Total	**50981100**	**31281100**	**38778682**	**9097082**	**3853397**	**2392083**	**3859558**	**19576562**	**4291394**	**23403956**
Sources:- Directorate of Economics & Statistics, Ministry of Agriculture.											
VI	**Basin : Krishna**										
	ANDHRA PRADESH										
1	**Krishna**	872700	385400	879694	66388	238197	43571	67132	464406	250628	715034
2	**Anantapur**	1913000	451400	1913492	196778	359508	122705	130842	1103659	65579	1169238
2	**Guntoor +**	5975100	1567700	1132824	161941	196412	99817	65371	609283	203504	812787
3	**Prakasam**	-	-	1714062	442500	306726	139476	212555	612805	37294	650099
4	**Nellore +**	-	-	1316042	246400	407109	204672	123944	333917	25502	359419
5	**Kurnool**			1760034	318250	234694	83335	237499	886256	105234	991490
6	**Mahaboobnagar**	1843200	1843200	1847241	266566	175720	47164	581207	776584	56121	832705
7	**Rangareddy**	749300	715100	753247	73075	125182	61123	248653	245214	32762	277976
8	**Hyderabad**	21700	21700	23002	-	23002	-	0	0	-	0
9	**Medak**	969900	134400	951903	95394	125863	54604	252871	423171	101551	524722
10	**Karimnagar**	1182300	3600	1188499	250410	164309	81217	194303	498260	195486	693746
11	**Warangal**	1284600	560400	1283552	371313	112875	87667	222738	488959	123989	612948
12	**East Godavari**	1080700	-	1081843	323107	222117	49550	76985	410084	337522	747606
13	**Khammam**	2683600	518300	1580936	743793	215369	78391	87808	455575	66934	522509
14	**Nalgonda**	1424000	1424000	1422324	85830	210183	104104	483969	538238	147594	685832
	Sub Total	**20000100**	**7625200**	**18848695**	**3641745**	**3117266**	**1257396**	**2985877**	**7846411**	**1749700**	**9596111**

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Table 14 : Land utilisation pattern by river basin and State

(Area in hectare)

Sl. No.	Basin/State/District Name	District Area	District Basin Area	Reporting Area For Land Utilisation	Classification of Reporting Area					Area Sown more than once	Total Cropped Area
					Forest	Not available for Cultivation	Other uncultivated Lands Excluding Fallow Lands	Fallow Lands	Net Area Sown		
1	2	3	4	5	6	7	8	9	10	11	12
ii)	**KARNATAKA**										
1	**Belgaum**	1341500	1244900	1344382	190424	113581	38769	202511	799097	261920	1061017
2	**Bellary**	988500	988500	813196	97017	122080	33875	81036	479188	116499	595687
3	**Bidar**	544800	96100	541765	27707	41133	44066	74554	354305	85141	439446
4	**Bijapur**	1706900	1706900	1053471	1977	64906	16383	130745	839460	189372	1028832
5	**Chikmagalur**	720100	620800	722075	200485	70961	133674	18060	298895	44229	343124
6	**Chitradurga**	1085200	1085200	770702	73719	76646	121672	82176	416489	96144	512633
7	**Dharwad**	1373800	1188000	427329	35235	25732	6402	34411	325549	182754	508303
8	**Gulbarga**	1622400	1622400	1610208	69089	131107	51204	177664	1181144	239667	1420811
9	**Hassan**	681400	131800	662602	58775	108768	54042	44530	396487	82811	479298
10	**Raichur**	1401700	1401700	835843	18167	40647	44208	129075	603746	133666	737412
11	**Shimoga**	1055300	783500	847784	276855	101765	206782	38513	223869	34424	258293
12	**Tumkur**	1059800	393700	1064755	45177	151532	159326	89066	619654	40157	659811
13	**Uttar Kannada**	1029100	63700	1024679	813595	50600	28456	16951	115077	11473	126550
	Sub Total	**14610500**	**11327200**	**11718791**	**1908222**	**1099458**	**938859**	**1119292**	**6652960**	**1518257**	**8171217**
iii)	**MAHARASHTRA**										
1	**Ratnagiri**	820800	11700	816400	5700	247700	156300	162300	244400	47300	197100
2	**Ahmadnagar**	1704800	618000	1702000	164300	143200	63700	212100	1118700	130700	1249400
3	**Pune**	1564300	1548300	1562000	162300	267800	125800	65609	65300	98000	140800
4	**Satara**	1048000	1048000	1058000	142700	153500	124800	85000	552000	82600	634600
5	**Sangli**	857200	857200	861000	43500	83000	43700	83400	607400	7300	614700
6	**Solapur**	1489500	1488400	1487800	35300	79000	90900	251000	1031600	3500	1035100
7	**Kolhapur**	768500	758600	776500	146900	81700	85100	34300	428500	18400	446900
8	**Bid**	1069300	156700	1068600	22900	67100	78700	143000	756900	201800	958700
9	**Osmanabad+**	1472600	455600	748500	4400	24400	69000	172200	478500	298300	776800
10	**Latur**			715700	1800	40300	66300	88500	518800	186900	705700
	Sub Total	**10795000**	**6942500**	**10080800**	**728000**	**1147400**	**838000**	**1208909**	**5283300**	**887900**	**6054100**
	Grand Total	**45405600**	**25894900**	**40648286**	**6277967**	**5364124**	**3034255**	**5314078**	**19782671**	**4155857**	**23821428**

Sources:- Directorate of Economics & Statistics, Ministry of Agriculture. (Through receeived the data fro Internet) Updated 25.02.2009

Note : 1. Totals may not tally due to rounding off. 2. N.A. : Not availabe data.

3. Estimated on the basis of the percentage of the area of each district, within the basin, to the district as a whole.

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Table 14 : Land utilisation pattern by river basin and State

(Area in hectare)

Sl. No.	Basin/State/District Name	District Area	District Basin Area	Reporting Area For Land Utilisation	Classification of Reporting Area					Area Sown more than once	Total Cropped Area
					Forest	Not available for Cultivation	Other uncultivated Lands Excluding Fallow Lands	Fallow Lands	Net Area Sown		
1	2	3	4	5	6	7	8	9	10	11	12
VII	**Basin : Cauvery**										
i)	**KARNATAKA**										
1	**Bangalore**	219000	171500	585431	81268	100169	47673	40101	316220	11125	327345
2	**Bangalore R.**	581500	395500	217410	5055	103470	17621	17664	73600	2295	75895
3	**Chikmagalur**	720100	84800	722075	200485	70961	133674	18060	298895	44229	343124
4	**Hassan**	681400	489600	662602	58775	108768	54042	44530	396487	82811	479298
5	**Kodagu (Coorg)**	410200	217200	410505	134597	54701	61597	7861	151749	3883	155632
6	**Mandya**	496100	496100	498244	24765	82425	83317	76533	231204	50307	281511
7	**Mysore**	1195400	1195400	676382	62851	112820	83133	72487	345091	224323	569414
8	**Tumkur**	1059800	445300	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	**5363500**	**3495400**	**3772649**	**567796**	**633314**	**481057**	**277236**	**1813246**	**418973**	**2232219**
ii)	**KERALA**										
1	**Kannur**	296600	65000	297112	48734	36750	4683	6322	200623	57414	258037
2	**Wayanad**	213100	-	212966	78787	12892	1470	1833	117984	94752	212736
3	**Kozhikode**	447500	120000	234641	41386	30688	1378	2253	158936	70226	229162
4	**Palakkad**	448000	57500	447584	136257	49569	20099	20916	220743	108815	329558
5	**Idukki**	501900	40000	436328	198413	18274	3879	1399	14363	84299	298662
	Sub Total	**1907100**	**282500**	**1628631**	**503577**	**148173**	**31509**	**32723**	**712649**	**415506**	**1328155**
iii)	**TAMIL NADU**										
1	**Dharmapuri +**	1827100	1042100	449777	164177	70896	14467	37184	163053	33657	196710
2	**Salem**			520530	125682	97771	14194	65437	217446	32968	250414
3	**South Arcot**	1089500	62500	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4	**Coimbatore+Periyar**	1567800	1323800	747079	158801	113489	17465	142367	314957	20560	335517
5	**Nilgiri**	254900	209900	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
6	**Madurai +**	1262300	445300	374173	48473	87571	11374	73673	153082	9693	162775
7	**Dindigul**			626664	138923	101394	23291	109551	253505	6706	260211
8	**Pudukottai**	1574700	1117200	466329	23535	139160	43630	99773	160231	1843	162074
9	**Triuchirapalli**			440383	36246	98390	11446	102954	191347	12886	204233
10	**Thanjavur**	828000	543000	339657	3390	83825	21095	39317	192030	49262	241292
	Sub Total	**8404300**	**4743800**	**3964592**	**699227**	**792496**	**156962**	**670256**	**1645651**	**167575**	**1813226**

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Table 14 : Land utilisation pattern by river basin and State

(Area in hectare)

Sl. No.	Basin/State/District Name	District Area	District Basin Area	Reporting Area For Land Utilisation	Classification of Reporting Area					Area Sown more than once	Total Cropped Area
					Forest	Not available for Cultivation	Other uncultivated Lands Excluding Fallow Lands	Fallow Lands	Net Area Sown		
1	2	3	4	5	6	7	8	9	10	11	12
iv)	**PONDICHERY**										
1	**Karaikal**	49200	16000	16012	-	4747	2644	2132	6489	3698	10187
2	**Sub Total**	**49200**	**16000**	**16012**	**0**	**4747**	**2644**	**2132**	**6489**	**3698**	**10187**
	Grand Total	**15724100**		**9381884**	**1770600**	**1578730**	**672172**	**982347**	**4178035**	**1005752**	**5383787**
Sources: Directorate of Economics & Statistics , Ministry of Agriculture.											
VIII	**Basin : East Folowing Rivers from Mahanadi to Kanyakumari**										
i)	**ANDHRA PRADESH**										
1	**Srikakulam**	2353700	1983300	584290	70840	144388	4154	86591	278317	111981	390298
2	**Vizianagaram**			630038	111969	155142	16156	61270	285501	97097	382598
3	**Vishakhapatnam**			1134284	477791	232167	48930	87127	288269	73293	361562
4	**East Godavari**	1854900	619300	1081843	323107	222117	49550	76985	410084	337522	747606
5	**West Godavari**			779538	81186	185368	41546	29749	441689	266889	708578
6	**Krishna**	872700	487300	879694	66388	238197	43571	67132	464406	250628	715034
7	**Guntur+**	5975100	2997800	1132824	161941	196412	99817	65371	609283	203504	812787
8	**Prakasam+**			1714062	442500	306726	139476	212555	612805	37294	650099
9	**Nellore**			1316042	246400	407109	204672	123944	333917	25502	359419
10	**Khammam**	1602900	549100	1580936	743793	215369	78391	87808	455575	66934	522509
11	**kurnool**			1760034	318250	234694	83335	237499	886256	105234	991490
12	**Chittoor**	1515200	1030000	1498770	451341	306836	101148	224402	415043	42505	457548
	Sub Total	**14174500**	**7666800**	**14092355**	**3495506**	**2844525**	**910746**	**1360433**	**5481145**	**1618383**	**7099528**
ii)	**KARNATAKA**										
1	**Bangalore**	219000	47500	585431	81268	100169	47673	40101	316220	11125	327345
2	**Bangalore R.**	581500	142500	217410	5055	103470	17621	17664	73600	2295	75895
3	**Kolar**	822300	465700	779467	70324	137783	124959	98010	348391	13923	362314
	Sub Total	**1622800**	**655700**	**1582308**	**156647**	**341422**	**190253**	**155775**	**738211**	**27343**	**765554**
iii)	**KERALA**										
	Thiruvantrum	219200	300	218781	49861	26046	479	1981	140414	39807	180221
	Sub Total	**219200**	**300**	**218781**	**49861**	**26046**	**479**	**1981**	**140414**	**39807**	**180221**

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Table 14 : Land utilisation pattern by river basin and State

(Area in hectare)

Sl. No.	Basin/State/District Name	District Area	District Basin Area	Reporting Area For Land Utilisation	Classification of Reporting Area					Area Sown more than once	Total Cropped Area
					Forest	Not available for Cultivation	Other uncultivated Lands Excluding Fallow Lands	Fallow Lands	Net Area Sown		
1	2	3	4	5	6	7	8	9	10	11	12
iv)	**ORISSA**										
1	**Phulbani**	1111900	204400	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	**Kalahandi**	1177200	50000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	**Koraput**	2696100	868500	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4	**Ganjam**	1253100	1253100	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
5	**Puri**	1018200	412100	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	**7256500**	**2788100**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
v)	**TAMIL NADU**										
1	**Chennai**	17400	17400	17098	300	16798	-	-	-	-	-
2	**Chengai-Anna**	785700	785700								
3	**North Arcot**	607700	607700								
4	**Dharmapuri+**	1827100	785000	449777	164177	70896	14467	37184	163053	33657	196710
5	**Salem**			520503	125682	97771	14194	65437	217446	32968	250414
6	**Tiruchirapalli**	619100	619100	440383	36246	98390	11446	102954	191347	12886	204233
7	**South Arcot**	1089500	1027000								
8	**Dindugul +**	1262300	817000	626664	138923	101394	23291	109551	253505	6706	260211
9	**Madurai**			374173	48473	87571	11374	73673	153082	9693	162775
10	**Thanjavur**	828000	285000	339657	3390	83825	21095	39317	192030	49262	241292
11	**Pudukottai**	465100	465100	466329	23535	139160	43630	99773	160231	1843	162074
12	**PMT+**	1260100	1260100								
13	**Kamarajar+**										
14	**Ramanathpuram**			408957	4488	89074	45609	84223	185563	-	185563
15	**Chidambaranar+**	1143100	1143100								
16	**Tirunelveli**			682308	120801	134630	62722	197534	166621	34040	200661
17	**Kanyakumari**	168400	168400	167200	54155	30039	714	2969	79323	12484	91807
	Sub Total	**10073500**	**7980600**	**4493049**	**720170**	**949548**	**248542**	**812615**	**1762201**	**193539**	**1955740**
vi)	**PONDICHERY**										
	Pondicherry (District)	49200	29300	29378	-	11714	2072	2642	12950	11369	24319
	Sub Total	**49200**	**29300**	**29378**	**0**	**11714**	**2072**	**2642**	**12950**	**11369**	**24319**
	Total	**33395700**	**19120800**	**20415871**	**4422184**	**4173255**	**1352092**	**2333446**	**8134921**	**1890441**	**10025362**

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Table 14 : Land utilisation pattern by river basin and State

(Area in hectare)

Sl. No.	Basin/State/District Name	District Area	District Basin Area	Reporting Area For Land Utilisation	Classification of Reporting Area					Area Sown more than once	Total Cropped Area
					Forest	Not available for Cultivation	Other uncultivated Lands Excluding Fallow Lands	Fallow Lands	Net Area Sown		
1	2	3	4	5	6	7	8	9	10	11	12
	Basin : Penner										
i)	**ANDHRA PRADESH**										
1	**Kurnool**	1765800	1409600	1760034	318250	234694	83335	237499	886256	105234	991490
2	**Cuddapah**	1535900	1535900	1537838	505495	411467	92821	122845	405210	92828	498038
3	**Anantapur**	1913000	1461600	1913492	196778	359508	122705	130842	1103659	65679	1169238
4	**Prakasam+**	5724500	485200	1714062	442500	306726	139476	212555	612805	37294	650099
5	**Guntur+**			1132824	161942	196412	99817	65371	609283	203504	812787
6	**Nellore+**			1316042	246400	407109	204672	123944	333917	25502	359419
7	**Chittor**			1498770	451341	306836	101148	224402	415043	42505	457548
	Sub Total	**10939200**	**4892300**	**8058250**	**1624965**	**1508807**	**538154**	**769112**	**3617213**	**504539**	**4121652**
ii)	**KARNATAKA**										
1	**Bangalore R.**	581500	43500	217410	5055	103470	17621	17664	73600	2295	75895
2	**Kolar**	822300	356600	779467	70324	137783	124959	98010	348391	13923	362314
3	**Tumkur**	1059800	220800	1064755	45177	151532	159326	89066	619654	40157	659811
	Sub Total	**2463600**	**620900**	**2061632**	**120556**	**392785**	**301906**	**204740**	**1041645**	**56375**	**1098020**
	Total	**13402800**	**5513200**	**10119882**	**1745521**	**1901592**	**840060**	**973852**	**4658858**	**560914**	**5219672**
	Grand Total	**46798500**	**24634000**	**30535753**	**6167705**	**6074847**	**2192152**	**3307298**	**12793779**	**2451355**	**1524034**
IX	**Basin : West Flowing Rivers fro Kanyakumari to Tapi**										
i)	**DADRA & NAGAR HAVELI**										
1	**Daman & Diu**	11200	7200	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	**Dadra & Nagar Haveli**	49100	49100	48882	19967	3680	1074	2201	21960	5778	27738
	Sub Total	**60300**	**56300**	**48882**	**19967**	**3680**	**1074**	**2201**	**21960**	**5778**	**27738**
ii)	**Goa**	370200	370200	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	**370200**	**370200**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
iii)	**GUJARAT**										
1	**Surat**	765700	282700	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	**Valsad**	524400	524400	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	**Dangs**	176400	176400	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	**1466500**	**983500**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

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Table 14 : Land utilisation pattern by river basin and State

(Area in hectare)

Sl. No.	Basin/State/District Name	District Area	District Basin Area	Reporting Area For Land Utilisation	Classification of Reporting Area					Area Sown more than once	Total Cropped Area
					Forest	Not available for Cultivation	Other uncultivated Lands Excluding Fallow Lands	Fallow Lands	Net Area Sown		
1	2	3	4	5	6	7	8	9	10	11	12
iv)	**KARNATAKA**										
1	**Belgaum**	1341500	96600	1344382	190424	113581	38769	202511	799097	261920	1061017
2	**Dharwad**	1373800	185800	427329	35235	25732	6402	34411	325549	182754	508303
3	**U. Kannada**	1029100	845400	1024679	813595	50600	28456	16951	115077	11473	126550
4	**Chikmaglur**	720100	14500	722075	200485	70961	133674	18060	298895	44229	343124
5	**Dak. Kannada**	844100	844100	477149	128476	121340	82103	13243	131987	26696	158683
6	**Hassan**	681400	60000	662602	58775	108768	54042	44530	396487	82811	479298
7	**Kodagu**	410200	193000	410505	134597	54701	61597	7861	151749	3883	155632
8	**Shimoga**	1055300	271800	847784	276855	101765	206782	38513	223869	34424	258293
9	**Utt. Kannada**	1029100	120000	1024679	813595	50600	28456	16951	115077	11473	126550
	Sub Total	**8484600**	**2631200**	**6941184**	**2652037**	**698048**	**640281**	**393031**	**2557787**	**659663**	**3217450**
v)	**KERALA**										
1	**Kasargod**	199200	199200	199166	5625	38609	12267	7439	135226	19571	154797
2	**Kannur**	296600	231600	297112	48734	36750	4683	6322	200623	57414	258037
3	**Kozhikode**	447500	327500	234641	41386	30688	1378	2253	158936	70226	229162
4	**Malappuram**	355000	355000	355446	103417	42618	5486	10858	193067	82533	275600
5	**Palakkad**	448000	390500	447584	136257	49569	20099	20916	220743	108815	329558
6	**Thrissur**	303200	303200	302919	103619	40871	3662	15171	139596	53591	193187
7	**Ernakulam**	240700	240700	305826	70617	64797	10600	19594	140218	67905	208123
8	**Idukki**	501900	461900	436328	198413	18274	3879	1399	214363	84299	298662
9	**Kottayam**	220300	220300	220442	8141	32037	2915	8549	168800	50871	219671
10	**Alappuzha**	141400	141400	141011	-	38019	6699	9087	87206	34205	121411
11	**Pathanamthitt**	264200	264200	265277	155214	19539	1684	5508	83332	31755	115087
12	**Kollam**	249100	249100	248788	81438	30316	632	4427	131975	57500	189475
13	**Thiruvantrum**	219200	218900	218781	49861	26046	479	1981	140414	39807	180221
	Sub Total	**3886300**	**3603500**	**3673321**	**1002722**	**468133**	**74463**	**113504**	**2014499**	**758492**	**2772991**

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Table 14 : Land utilisation pattern by river basin and State

(Area in hectare)

Sl. No.	Basin/State/District Name	District Area	District Basin Area	Reporting Area For Land Utilisation	Classification of Reporting Area					Area Sown more than once	Total Cropped Area
					Forest	Not available for Cultivation	Other uncultivated Lands Excluding Fallow Lands	Fallow Lands	Net Area Sown		
1	2	3	4	5	6	7	8	9	10	11	12
vi)	**MAHARASHTRA**										
1	**Mumbai Sub**	60300	60300	38000	1500	35900	600	0	0	-	0
2	**Thane**	955800	955800	933700	396400	151200	113100	28400	244600	37000	207600
3	**Raigarh**	715200	715200	686900	150000	187300	100700	60400	188500	3500	185000
4	**Sindhudurg**	1341500	1329800	504000	33100	120300	93600	116700	140300	24300	164600
5	**Nasik**	1553000	420600	1563400	311000	210400	46000	111400	884600	91700	792900
6	**Dhule**	1315000	7500	733000	211400	45600	21700	18500	435800	41900	393900
7	**Kolhapur**	768500	9900	776500	146900	81700	85100	34300	428500	18400	446900
	Sub Total	**6709300**	**3499100**	**5235500**	**1250300**	**832400**	**460800**	**369700**	**2322300**	**216800**	**2190900**
vii)	**TAMIL NADU**										
1	**The Nilgiri**	254900	45000	254485	142577	13350	10634	6924	81000	79	81079
2	**Coimbatore**	746900	244000	747079	158801	113489	17465	142367	314957	20560	335517
	Sub Total	**1001800**	**289000**	**1001564**	**301378**	**126839**	**28099**	**149291**	**395957**	**20639**	**416596**
viii)	**PONDICHERY**										
1	**Yanam**	3000	3000	2391	-	1183	502	56	650	677	1327
2	**Mahe**	900	900	87	-	215	15	16	624	65	559
	Sub Total	**3900**	**3900**	**2478**	**0**	**1398**	**517**	**72**	**1274**	**742**	**1886**
	Grand Total	**21982900**	**11436700**	**16902929**	**5226404**	**2130498**	**1205234**	**1027799**	**7313777**	**1662114**	**8627561**
X	**Basin : Tapi**										
	<----- Not Available Data ----->										
XI	**Basin : Narmada**										
i)	**GUJARAT**										
1	**Vadodara**	779400	396000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	**Bharuch**	903800	468000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	**Surat**	765700	18000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	**2448900**	**882000**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

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Table 14 : Land utilisation pattern by river basin and State

(Area in hectare)

Sl. No.	Basin/State/District Name	District Area	District Basin Area	Reporting Area For Land Utilisation	Classification of Reporting Area					Area Sown more than once	Total Cropped Area
					Forest	Not available for Cultivation	Other uncultivated Lands Excluding Fallow Lands	Fallow Lands	Net Area Sown		
1	2	3	4	5	6	7	8	9	10	11	12
ii)	**MADHYA PRADESH**										
1	**Sagar**	1025200	171600	1022759	297802	72012	91926	22016	539003	171687	710690
2	**Damoh**	730600	65100	728583	267084	91395	47318	11749	311037	87611	398648
3	**Dewas**	702000	394400	701307	206636	46895	60356	1390	38603	174533	213136
4	**Jhabua**	678200	335700	675716	131662	140769	34298	10089	558898	55295	414193
5	**Dhar**	815300	471400	819541	120736	125967	62111	6254	504473	134267	638740
6	**Indore**	389800	97400	383097	52208	33929	33139	5579	258242	112057	370299
7	**West Nimar**	1345000	1171000	647789	76188	71384	83816	11013	405388	47958	453346
8	**East Nimar**	1077900	725900	775616	309503	88716	55294	17704	304399	77339	381738
9	**Vidisha**	737100	46100	730197	108503	47384	36865	6347	531071	132047	663118
10	**Sehore**	657800	225600	656368	172539	46713	49156	4427	383530	195987	579517
11	**Raisen**	846600	467800	848746	333672	43250	36672	4110	431042	76342	507384
12	**Betul**	1004300	370000	1025436	414641	72740	68353	66173	403259	151097	554626
13	**Hoshangabad**	1003700	1003700	668689	255981	45735	52669	15255	299059	194987	494046
14	**Jabalpur**	1016000	648300	519757	77654	73564	22708	33424	272660	91911	364571
15	**Narsimhapur**	513300	513300	513651	136223	25683	39022	9190	303533	87248	390781
16	**Mandla**	1326900	1139500	965559	593126	53425	39280	60673	219055	68160	287215
17	**Chhindwara**	1181500	285400	1184923	479484	80216	71123	76925	477175	115811	592986
18	**Seoni**	875800	221800	875401	328211	60138	59618	59453	367981	131617	499598
19	**Balaghat**	922900	221500	924500	504986	56899	59723	28993	273899	70088	343987
20	**Shahdol**	1402800	77800	561006	227886	54521	46425	52506	179668	26978	206646
21	**Rajnandgaon**	1112700	97200								
	Sub Total	**19365400**	**8750500**	**15228641**	**5094725**	**1331335**	**1049872**	**503270**	**7061975**	**2203020**	**9412692**
iii)	**MAHARASHTRA**										
	Dhule	1315000	396000	733000	211400	45600	21700	18500	435800	41900	393900
	Sub Total	**1315000**	**396000**	**733000**	**211400**	**45600**	**21700**	**18500**	**435800**	**41900**	**393900**
	Grand Total	**23129300**	**10028500**	**15961641**	**5306125**	**1376935**	**1071572**	**521770**	**7497775**	**2244920**	**9806592**

Contd/…

Table 14 : Land utilisation pattern by river basin and State

(Area in hectare)

Sl. No.	Basin/State/District Name	District Area	District Basin Area	Reporting Area For Land Utilisation	Classification of Reporting Area					Area Sown more than once	Total Cropped Area
					Forest	Not available for Cultivation	Other uncultivated Lands Excluding Fallow Lands	Fallow Lands	Net Area Sown		
1	2	3	4	5	6	7	8	9	10	11	12
XII	**Basin : Mahi and Sabarmati**										
i)	**GUJARAT**										
1	**Kheda**	719400	105000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	**Panchmahals**	886600	885600	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	**Vadodara**	779400	383400	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4	**Bharuch**	903800	294800	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	**3289200**	**1668800**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
ii)	**MADHYA PRADESH**										
1	**Ratlam**	486100	180700	486007	34299	72021	44842	2902	331943	114037	445980
2	**Jhabua**	678200	342500	675716	131662	140769	34298	10089	558898	55295	414193
3	**Dhar**	815300	150000	819541	120736	125967	62111	6254	504473	134267	638740
4	**Mandsaur**	979100	3300	551790	38398	119206	30262	3188	360736	117206	477942
	Sub Total	**2958700**	**676500**	**2533054**	**325095**	**457963**	**171513**	**22433**	**1756050**	**420805**	**1976855**
iii)	**RAJASTHAN**										
1	**Udaipur**	1727900	637500	1462105	414485	493627	220226	79960	253807	116632	370439
2	**Chittorgarh**	1085600	289700	1035704	195445	138633	231261	37734	432631	243388	676019
3	**Dungarpur**	377000	327000	385593	61475	95556	59511	46912	122139	52448	174587
4	**Bansewara**	503700	503700	506279	112949	69145	43803	45105	235277	103269	338546
	Sub Total	**3694200**	**1757900**	**3389681**	**784354**	**796961**	**554801**	**209711**	**1043854**	**515737**	**1559591**
b)	**Basin: Sabarmati**										
i)	**GUJARAT**										
1	**Surendranagar**	1048900	365000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	**Banaskantha**	1270300	52500	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	**Sabarkantha**	739000	739000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4	**Mahesana**	902700	102000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
5	**Gandhinagar**	64900	64900	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
6	**Ahmedabad**	870700	460000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
7	**Kheda**	719400	614400	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	**5615900**	**2397800**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

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Table 14 : Land utilisation pattern by river basin and State

(Area in hectare)

Sl. No.	Basin/State/District Name	District Area	District Basin Area	Reporting Area For Land Utilisation	Classification of Reporting Area					Area Sown more than once	Total Cropped Area
					Forest	Not available for Cultivation	Other uncultivated Lands Excluding Fallow Lands	Fallow Lands	Net Area Sown		
1	2	3	4	5	6	7	8	9	10	11	12
ii)	**RAJASTHAN**										
1	**Sirohi**	513600	10000	517947	155439	99947	43942	64493	154126	56682	210808
2	**Udaipur**	1727900	258900	1462105	414485	493627	220226	79960	253807	116632	370439
3	**Dungarpur**	377000	50000	385593	61475	95556	59511	46912	122139	52448	174587
	Sub Total	**2618500**	**318900**	**2365645**	**631399**	**689130**	**323679**	**191365**	**530072**	**225762**	**755834**
c)	**Basin : Luni & Others**										
i)	**GUJARAT**										
1	**Jamnagar**	1412500	1412500	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	**Rajkot**	1120300	1120300	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	**Surendranagar**	1048900	683900	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4	**Bhavnagar**	1115500	1115500	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
5	**Amreli**	676000	676000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
6	**Junagadh**	1060700	1060700	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
7	**Kachch**	4565200	4565200	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
8	**Banaskantha**	1270300	1217800	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
9	**Mahesana**	902700	800700	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
10	**Ahemdabad**	870700	410700	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	**14042800**	**13063300**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
ii)	**RAJASTHAN**										
1	**Ajmer**	848100	84900	842345	55617	138879	148617	68674	430558	89440	519998
2	**Jodhpur**	2285000	685500	2256405	6996	224642	162201	593135	1269431	108268	1377699
3	**Nagaur**	1771800	708900	1764380	18271	145373	87207	259273	1254256	228999	1483255
4	**Pali**	1238700	1238700	1233079	82010	202199	136769	204610	607491	49966	657457
5	**Jalor**	1064000	1064000	1056602	21756	122867	77592	178570	655817	131340	787157
6	**Sirohi**	513600	503600	517947	155439	99947	43942	64493	154126	56682	210808
	Sub Total	**7721200**	**4285600**	**7670758**	**340089**	**933907**	**656328**	**1368755**	**4371679**	**664695**	**5036374**
iii)	**Daman& Diu**										
	Diu	11200	4000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	**11200**	**4000**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	Grant Total	**39951700**	**24172800**	**15959138**	**2080937**	**2877961**	**1706321**	**1792264**	**7701655**	**1826999**	**9328654**

Sources:- Directorate of Economics & Statistics, Ministry of Agriculture. (Data received from DES website)

Table 15 : Gross area irrigated by Sources by river basin and State

(Area in hectares)

Sl. No.	State/District	District Area	Basin Area	Canals		Total Canals	Tanks	Wells		Other Sources	Grand Total
				Government	Private			Tubewells	Other Wells		
1	2	3	4	5	6	7	8	9	10	11	12
I	**Basin : Mahanadi**										
i)	**BIHAR**										
	Gumla	907700	63500	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	**907700**	**63500**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
ii)	**ORISSA**										
1	**Sambalpur**	1751600	1390400	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	**Sundergarh**	971200	410000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	**Cuttak**	1114200	752800	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4	**Dhenkanal**	1082700	311000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
5	**Phulbani**	1111900	907500	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
6	**Balangir**	891300	891300	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
7	**Kalahandi**	1177200	981900	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
8	**Koraput**	2696100	197700	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
9	**Puri**	1018200	606100	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	**11814400**	**6448700**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
iii)	**MADHYA PRADESH**										
1	**Shahdol**	1402800	8400	4837	-	4837	1776	2598	3789	7984	20984
2	**Surguja**	2233700	496200	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	**Bilaspur**	1989700	1895700	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4	**Raigarh**	1292400	1090600	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
5	**Rajnandgaon**	1112700	756500	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
6	**Durg**	853700	853700	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
7	**Raipur**	2125800	2115200	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
8	**Bastar**	3911400	222100	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	**14922200**	**7438400**	**4837**	**0**	**4837**	**1776**	**2598**	**3789**	**7984**	**20984**
iv)	**MAHARASHTRA**										
1	**Chandrapur+**	2585500	28600	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	**Gadchiroli**			N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	**2585500**	**28600**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	Grand Total	**30229800**	**13979200**	**4837**	**0**	**4837**	**1776**	**2598**	**3789**	**7984**	**20984**

Contd./….

Table 15 : Gross area irrigated by Sources by river basin and State

(Area in hectares)

Sl. No.	State/District	District Area	Basin Area	Canals		Total Canals	Tanks	Wells		Other Sources	Grand Total
				Government	Private			Tubewells	Other Wells		
1	2	3	4	5	6	7	8	9	10	11	12
II	**Subernarekha, Burhabalang and Baitarni**										
i)	**BIHAR**										
	Ranchi	769800	488000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Singhbhum	1344000	902100	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	2113800	1390100	0	0	0	0	0	0	0	0
ii)	**ORISSA**										
	Mayurbhanj	1041800	751800	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Balasore	631100	472100	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	1672900	1223900	0	0	0	0	0	0	0	0
iii)	**WEST BENGAL**										
	Medinipur	1408100	311600	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Purulia	625900	101800	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	2034000	413400	0	0	0	0	0	0	0	0
	Grand Total	5820700	3027400	0	0	0	0	0	0	0	0
III	**Basin : Brahamani**										
i)	**BIHAR**										
1	**Lohardaga**	149100	89100	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	**Gumla**	907700	794200	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	**Ranchi**	769800	230000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4	**Pa. Singhbhum**	1344000	412000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	**3170600**	**1525300**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
ii)	**MADHYA PRADESH**										
	Raigarh	1292400	126800	3061	-	3061	2344	22499	80661	10436	118281
	Sub Total	**1292400**	**126800**	**3061**	**0**	**3061**	**2344**	**22499**	**80661**	**10436**	**118281**
iii)	**ORISSA**										
1	**Sambalpur**	1751600	361200	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	**Sundergarh**	971200	561200	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.

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Table 15 : Gross area irrigated by Sources by river basin and State

(Area in hectares)

Sl. No.	State/District	District Area	Basin Area	Canals		Total Canals	Tanks	Wells		Other Sources	Grand Total
				Government	Private			Tubewells	Other Wells		
1	2	3	4	5	6	7	8	9	10	11	12
3	**Keonjhar**	830300	830300	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4	**Mayurbhanj**	1041800	290000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
5	**Balasore**	631100	159000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
6	**Cuttack**	1114200	361400	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
7	**Dhenkanal**	1082700	771700	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	**7422900**	**3334800**	**0**	**0**	**0**	**8**	**9**	**10**	**0**	**0**
	Grand Total	**11885900**	**4986900**	**3061**	**0**	**3061**	**2352**	**22508**	**80671**	**10436**	**118281**
IV	**Rushikulya, Vamsadhra, Sarada and Nagavali**										
	<----- Not Available Data ----->										
V	**Basin Godavari**										
i)	**ANDHRA PRADESH**										
1	**Visakhapatnam**	1116100	370400	35652	-	35652	31438	18041	14213	25449	124793
2	**East Godavari**	1080700	154900	336115	-	336115	25752	101731	553	11200	475351
3	**West Godavari**	774200	151000	370151	-	370151	23402	205787	11429	11454	622223
4	**Rangareddy**	749300	34200	1587	-	1587	1821	64174	12743	3054	83379
5	**Medak**	969900	835500	3557	-	3557	15998	145904	9416	1759	176634
6	**Nizamabad**	795600	795600	21199	-	21199	24757	219053	8159	6393	279561
7	**Adilabad**	1610500	1610500	20478	-	20478	19640	43310	22160	4094	109682
8	**Karimnagar**	1182300	1178700	136934	-	136934	64831	45868	235695	792	484120
9	**Warangal**	1284600	724200	4191	-	4191	91660	85032	205121	5466	391470
10	**Khammam**	1602900	1616200	77310	-	77310	58091	33656	46801	24879	240737
	Sub Total	**11166100**	**7471200**	**1007174**	**0**	**1007174**	**357390**	**962556**	**566290**	**94540**	**2987950**
ii)	**KARNATAKA**										
	Bidar	544800	448700	619	-	619	878	14426	25183	1139	42245
	Sub Total	**544800**	**448700**	**619**	**0**	**619**	**878**	**14426**	**25183**	**1139**	**42245**

Contd/…

Table 15 : Gross area irrigated by Sources by river basin and State

(Area in hectares)

Sl. No.	State/District	District Area	Basin Area	Canals		Total Canals	Tanks	Wells		Other Sources	Grand Total
				Government	Private			Tubewells	Other Wells		
1	2	3	4	5	6	7	8	9	10	11	12
iii)	**MADHYA PRADESH**										
1	**Betul**	1004300	224300	13392	-	13392	105	11649	70195	11824	107163
2	**Mandla**	1326900	82400	15349	-	15349	42	-	2732	1723	19846
3	**Chhindwara**	1181500	896100	9790	-	9790	2672	26431	89956	4854	133703
4	**Seoni**	875800	654000	55979	52	56031	7706	2895	30492	13388	110512
5	**Balaghat**	922900	701400	84146	-	84146	30105	150	21440	5762	141603
6	**Rajnandgaon**	1112700	259000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
7	**Raipur**	2125800	10600	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
8	**Bastar**	3911400	3689300	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	**12461300**	**6517100**	**178656**	**52**	**178708**	**40630**	**41125**	**214815**	**37551**	**512827**
iv)	**MAHARASHTRA**										
1	**Nashik**	1553000	736100	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	**Jalgaon**	1176500	6000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	**Ahmadnagar**	1704800	1089100	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4	**Pune**	1564300	14000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
5	**Solapur**	1489500	11900	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
6	**Aurangabad**	1010700	899100	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
7	**Jalana**	771800	771800	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
8	**Parbhani**	1104100	1104100	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
9	**Bid**	1069300	946900	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
10	**Nanded**	1052800	1052800	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
11	**Osmanabad**	756900	226400	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
12	**Latur**	715700	715700	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.

Contd/…

Table 15 : Gross area irrigated by Sources by river basin and State

(Area in hectares)

Sl. No.	State/District	District Area	Basin Area	Canals		Total Canals	Tanks	Wells		Other Sources	Grand Total
				Government	Private			Tubewells	Other Wells		
1	2	3	4	5	6	7	8	9	10	11	12
13	**Buldghana**	966100	384600	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
14	**Akola**	1057400	374500	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
15	**Amravati**	1221000	419600	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
16	**Yavatmal**	1358200	1358200	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
17	**Wardha**	630900	630900	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
18	**Nagpur**	989200	989200	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
19	**Bhandara**	932100	932100	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
20	**Chandrapur**	1144300	1115700	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
21	**Gadchiroli**	1441200	1441200	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	**23709800**	**15219900**	**0**	**0**	**0**	**8**	**9**	**10**	**0**	**0**
v)	**ORISSA**										
1	**Kalahandi**	1177200	145300	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	**Koraput**	2696100	1629900	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	**3873300**	**1775200**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	Grand Total	**51755300**	**31432100**	**1186449**	**52**	**1186501**	**398906**	**1018116**	**806298**	**133230**	**3543022**
VI	**Basin : Krishna**										
i)	**ANDHRA PRADESH**										
1	**Krishna**	872700	385400	319058	-	319058	31473	66206	11187	15314	443238
2	**Anantapur**	1913000	451400	30164	-	30164	8105	96064	17314	1959	153606
3	**Guntoor+**	5975100	1567700	308121	-	308121	5576	70839	5519	18182	408237
4	**Praksham+**	-	-	78014	-	78014	30741	70855	10024	24935	214569
5	**Kurnool+**	-	-	87834	-	87834	17415	79742	34607	11644	231242
6	**Nellore**	-	-	84017	-	84017	83005	73733	25489	8170	274414
7	**Mehbubnagar**	1843200	1843200	24276	-	24276	12681	144840	21970	7687	211454
8	**Rangareddy**	749300	715100	1587	-	1587	1821	64174	12743	3054	83379
9	**Hyderabad**	21700	21700	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
10	**Medak**	969900	134400	3557	-	3557	15998	145904	9416	1759	176634
11	**Karimnagar**	1182300	3600	136934	-	136934	64831	45868	235695	792	484120
12	**Warangal**	1284600	560400	4191	-	4191	91660	85032	205121	5466	391470

Contd/…

Table 15 : Gross area irrigated by Sources by river basin and State

(Area in hectares)

Sl. No.	State/District	District Area	Basin Area	Canals		Total Canals	Tanks	Wells		Other Sources	Grand Total
				Government	Private			Tubewells	Other Wells		
1	2	3	4	5	6	7	8	9	10	11	12
13	**East Godavari**	1080700	-	336115	-	336115	25752	101731	553	11200	475351
14	**Khammam**	2683600	518300	77310	-	77310	58091	33656	46801	24879	240737
15	**Nalgonda**	1424000	1424000	128256	-	128256	29739	132503	65894	17371	373763
	Sub Total	**20000100**	**7625200**	**1619434**	**0**	**1619434**	**476896**	**1211156**	**702343**	**152412**	**4162214**
ii)	**KARNATAKA**										
1	**Belgaum**	1341500	1244900	66737	-	66737	2357	113808	126314	142974	452190
2	**Bellary**	988500	988500	111286	-	111286	3773	77826	15660	39304	247849
3	**Bidar**	544800	96100	619	-	619	878	14426	25183	1139	42245
4	**Bijapur**	1706900	1706900	86375	-	86375	3342	67548	62705	28311	248281
5	**Chikmaglur**	720100	620800	9444	-	9444	11377	9997	525	9419	40762
6	**Chitradurga**	1085200	1085200	6408	-	6408	1844	83618	-	-	91870
7	**Dharwad**	1373800	1188000	43848	-	43848	267	13041	-	474	57630
8	**Gulbarga**	1622400	1622400	181823	-	181823	4188	15143	29889	8348	239391
9	**Hassan**	681400	131800	37195	-	37195	31293	41344	1387	1309	112528
10	**Raichur**	1401700	1401700	217797	-	217797	3310	18795	22552	7616	270070
11	**Shimoga**	1055300	783500	60514	-	60514	56328	24413	7493	12610	161358
12	**Tumkur**	1059800	393700	5034	-	5034	25485	141023	2081	-	173623
13	**Uttar Kannada**	1029100	63700	466	-	466	5201	2384	7439	11438	26928
	Sub Total	**14610500**	**11327200**	**827546**	**0**	**827546**	**149643**	**623366**	**301228**	**262942**	**2164725**

Contd/…

Table 15 : Gross area irrigated by Sources by river basin and State

(Area in hectares)

Sl. No.	State/District	District Area	Basin Area	Canals		Total Canals	Tanks	Wells		Other Sources	Grand Total
				Government	Private			Tubewells	Other Wells		
1	2	3	4	5	6	7	8	9	10	11	12
iii)	**MAHARASHTRA**										
1	**Ratnagiri**	820800	11700	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	**Ahmadnagar**	1704800	618000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	**Pune**	1564300	1548300	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4	**Satara**	1048000	1048000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
5	**Sangli**	857200	857200	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
6	**Solapur**	1489500	1488400	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
7	**Kolhapur**	768500	758600	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
8	**Bid**	1069300	156700	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
9	**Osmanabad+**	1472600	455600	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
10	**Latur**			N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	**10795000**	**6942500**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	Grand Total	**45405600**	**25894900**	**2446980**	**0**	**2446980**	**626539**	**1834522**	**1003571**	**415354**	**6326939**

Source : Directorate of Economics and Statistics, Ministry of Agriculture

Note : 1. Totals may not tally due to rounding off. 2. N.A. : Not availabe data.

3. Estimated on the basis of the percentage of the area of each district, within the basin, to the district as a whole.

Contd/…

Table 15 : Gross area irrigated by Sources by river basin and State

(Area in hectares)

Sl. No.	State/District	District Area	Basin Area	Canals		Total Canals	Tanks	Wells		Other Sources	Grand Total
				Government	Private			Tubewells	Other Wells		
1	2	3	4	5	6	7	8	9	10	11	12
VII	**Basin : Cauvery**										
i)	**KARNATAKA**										
1	**Bangalore (Urban)**	219000	171500		-	-	2549	12552	717	-	15818
2	**Bangalore R.**	581500	395500	6229	-	6229	3638	64418	3782	1688	79755
3	**Chikmagalur**	720100	84800	9444	-	9444	11377	9997	525	9419	40762
4	**Hassan**	681400	489600	37195	-	37195	31293	41344	1387	1309	112528
5	**Kadagu**	410200	217200	3435	-	3435	100	701	50	2092	6378
6	**Mandya**	496100	496100	111046	-	111046	12790	12165	12341	2133	150475
7	**Mysore**	1195400	1195400	124659	-	124659	14233	5624	24628	282	169426
8	**Tumkur**	1059800	445300	5034	-	5034	25485	141023	2081	-	173623
	Sub Total	**5363500**	**3495400**	**297042**	**0**	**297042**	**101465**	**287824**	**45511**	**16923**	**748765**
ii)	**KERALA**										
1	**Kannur**	296600	65000	-	-	-	-	-	-	-	-
2	**Wayanad**	213100	-	-	-	-	-	-	-	-	-
3	**Kozhikode**	447500	120000	-	-	-	-	-	-	-	-
4	**Palakkad**	448000	57500	-	-	-	-	-	-	-	-
5	**Idukki**	501900	40000	-	-	-	-	-	-	-	-
	Sub Total	**1907100**	**282500**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
iii)	**TAMIL NADU**										
1	**Dharmapuri+**	1827100	1042100	7154	-	7154	7036	2215	61969	7	78381
2	**Salem**			2205	-	2205	1803	10248	105424	-	119680
3	**South Arcot**	1089500	62500	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4	**Coimbatore+**	1567800	1323800	55767	560	56327	663	20517	103964	-	181471
5	**Periyar**			N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
6	**Nilgiri**	254900	209900								
7	**Madurai**	1262300	445300	40154	-	40154	19406	634	39214	-	99408
8	**Pudukottai+**	1574700	1117200	10790	-	10790	72221	19451	8720	-	111182
9	**Tiruchirapalli**			37694	-	37694	9745	11506	62907	-	129636
10	**Thanjavur**	828000	543000	155378	-	155378	500	37279	513	-	193670

Contd/…

Table 15 : Gross area irrigated by Sources by river basin and State

(Area in hectares)

Sl. No.	State/District	District Area	Basin Area	Canals		Total Canals	Tanks	Wells		Other Sources	Grand Total
				Government	Private			Tubewells	Other Wells		
1	2	3	4	5	6	7	8	9	10	11	12
11	**Sub Total**	**8404300**	**4743800**								
12	**PONDICHERY**										
13	**Karaikal**	49200	16000	5988	-	5988	-	721	-	14	6723
	Sub Total	**49200**	**16000**	**5988**	**0**	**5988**	**0**	**721**	**0**	**14**	**6723**
	Grand Total	**15724100**	**8537700**	**303030**	**0**	**303030**	**101465**	**288545**	**45511**	**16937**	**755488**

Contd./….

VIII Basin : East Folowing Rivers from Mahanadi to Kanyakumari

i)	**ANDHRA PRADESH**										
1	**Srikakulam**	2353700	1983300	102780	-	102780	49563	13590	12215	2185	180333
2	**Vizianagaram**			34290	-	34290	70536	17022	15376	3408	140632
3	**Vishakhapatnam**			35652	-	35652	31438	18041	14213	25449	124793
4	**East Godavari**	1854900	619300	336115	-	336115	25752	101731	553	11200	475351
5	**West Godavari**			370151	-	370151	23402	205487	11429	11454	622223
6	**Krishna**	872700	487300	319058	-	319058	31473	66206	11187	15314	443238
7	**Guntur+**	5975100	2997800	308121	-	308121	5576	70839	5519	18182	408237
8	**Prakasam+**			78014	-	78014	30741	70855	10024	24935	214569
9	**Nellore+Kunoor**			84017	-	84017	83005	73733	25489	8170	274414
10	**Khammam**	1602900	549100	77310	-	77310	58091	33656	46801	24879	240737
11	**Kurnool**			87834	-	87834	17415	79742	34607	11644	231242
12	**Chittoor**	1515200	1030000	1702	-	1702	50875	101140	44201	152	198070
	Sub Total	**14174500**	**7666800**	**1835044**	**0**	**1835044**	**477867**	**852042**	**231614**	**156972**	**3553839**
ii)	**KARNATAKA**										
	Bangalore (Urban)	219000	47500	-	-	-	2549	12552	717	-	15818
	Bangalore R.	581500	142500	6229	-	6229	3638	64418	3782	1688	79755
	Kolar	822300	465700	-	-	-	6390	84880	-	-	91270
	Sub Total	**1622800**	**655700**	**6229**	**0**	**6229**	**12577**	**161850**	**4499**	**1688**	**186843**
iii)	**KERALA**										
	Thiruvantrum	219200	300	-	-	-	-	-	-	-	-
	Sub Total	**219200**	**300**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Contd/…

Table 15 : Gross area irrigated by Sources by river basin and State

(Area in hectares)

Sl. No.	State/District	District Area	Basin Area	Canals		Total Canals	Tanks	Wells		Other Sources	Grand Total
				Government	Private			Tubewells	Other Wells		
1	2	3	4	5	6	7	8	9	10	11	12
iv)	**ORISSA**										
1	**Phulbani**	1111900	204400	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	**Kalahandi**	1177200	50000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	**Koraput**	2696100	868500	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4	**Ganjam**	1253100	1253100	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
5	**Puri**	1018200	412100	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	**7256500**	**2788100**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
v)	**TAMIL NADU**										
1	**Madras**	17400	17400	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	**Chengai-Anna**	785700	785700	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	**North Arcot**	607700	607700	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4	**Dharmapuri+**	1827100	785000	7154	-	7154	7036	2215	61969	7	78381
5	**Salem**			2205	-	2205	1803	10248	105424	-	119680
6	**Tiruvannmalai**	619100	619100	4362	-	4362	60637	1197	152954	-	219150
7	**South Arcot**	1089500	1027000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
8	**Dindigul +**	1262300	817000	8283	-	8283	3700	2427	96243	1418	112071
9	**Madurai**			40154	-	40154	19406	634	39214	-	99408
10	**Thanjavur**	828000	285000	155378	-	155378	500	37279	513	-	193670
11	**Pudukottai**	465100	465100	10790	-	10790	72221	19451	8720	-	111182
12	**PMT+Kamarajar+**	1260100	1260100	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
13	**Ramanathapuram**			-	-	-	57034	443	11070	-	68547
14	**Chidambaranar+**	1143100	1143100								
15	**Tirunelveli**			30376	-	30376	59443	1031	48585	343	139778
16	**Kanyakumari**	168400	168400	22542	-	22542	13657	913	1535	238	38885
	Sub Total	10073500	7980600	281244	0	281244	295437	75838	526227	2006	1180752
vi)	**PONDICHERY**										
	Pondicherry	49200	29300	-	-	-	-	21983	-	-	21983
	Sub Total	**49200**	**29300**	**0**	**0**	**0**	**0**	**21983**	**0**	**0**	**21983**
	Total	**33395700**	**19120800**	**2122517**	**0**	**2122517**	**785881**	**1111713**	**762340**	**160666**	**4943417**

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Table 15 : Gross area irrigated by Sources by river basin and State

(Area in hectares)

Sl. No.	State/District	District Area	Basin Area	Canals		Total Canals	Tanks	Wells		Other Sources	Grand Total
				Government	Private			Tubewells	Other Wells		
1	2	3	4	5	6	7	8	9	10	11	12
	Basin : Penner										
i)	**ANDHRA PRADESH**										
1	**Kurnool**	1765800	1409600	87834	-	87834	17415	79742	34607	11644	231242
2	**Cuddapah**	1535900	1535900	25464	-	25464	14692	129607	7297	1898	178958
3	**Anantapur**	1913000	1461600	30164	-	30164	8105	96064	17314	1959	153606
4	**Prakasam+**	5724500	485200	78014	-	78014	30741	70855	10024	24935	214569
5	**Guntur+**			308121	-	308121	5576	70839	5519	18182	408237
6	**Nellore+Kunoor**			84017	-	84017	83005	73733	25489	8170	274414
7	**Chittoor**			1702	-	1702	50875	101140	44201	152	198070
	Sub Total	**10939200**	**4892300**	**615316**	**0**	**615316**	**210409**	**621980**	**144451**	**66940**	**1659096**
ii)	**KARNATAKA**										
1	**Bangalore R.**	581500	43500	6229	-	6229	3638	64418	3782	1688	79755
2	**Kolar**	822300	356600	-	-	-	6390	84880	-	-	91270
3	**Tumkur**	1059800	220800	5034	-	5034	25485	141023	2081	-	173623
	Sub Total	**2463600**	**620900**	**11263**	**0**	**11263**	**35513**	**290321**	**5863**	**1688**	**344648**
	Total	**13402800**	**5513200**	**626579**	**0**	**626579**	**245922**	**912301**	**150314**	**68628**	**2003744**
	Grand Total	**46798500**	**24634000**	**2749096**	**0**	**2749096**	**1031803**	**2024014**	**912654**	**229294**	**6947161**
IX	**Basin : West Flowing Rivers fro Kanyakumari to Tapi**										
	DADRA & NAGAR HAVELI										
1	**Daman & Diu**	11200	7200	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	**Dadra & Nagar Haveli**	49100	49100	2635	-	2635	-	174	1663	2936	7408
3	**Sub Total**	60300	56300	2635	0	2635	0	174	1663	2936	7408
4	**Goa**	370200	370200	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	**370200**	**370200**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	GUJARAT										
1	**Surat**	765700	282700	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	**Valsad**	524400	524400	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	**Dangs**	176400	176400	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	**1466500**	**983500**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Contd/…

Table 15 : Gross area irrigated by Sources by river basin and State

(Area in hectares)

Sl. No.	State/District	District Area	Basin Area	Canals		Total Canals	Tanks	Wells		Other Sources	Grand Total
				Government	Private			Tubewells	Other Wells		
1	2	3	4	5	6	7	8	9	10	11	12
	KARNATAKA										
1	**Belgaum**	1341500	96600	66737	-	66737	2357	113808	126314	142974	452190
2	**Dharwad**	1373800	185800	43848	-	43848	267	13041	-	474	57630
3	**U. Kannada**	1029100	845400	466	-	466	5201	2384	7439	11438	26928
4	**Chikmaglur**	720100	14500	9444	-	9444	11377	9997	525	9419	40762
5	**Dak. Kannada**	844100	844100	-	-	-	-	9428	46527	18727	74682
6	**Hassan**	681400	60000	37195	-	37195	31293	41344	1387	1309	112528
7	**Kodagu**	410200	193000	3435	-	3435	100	701	50	2092	6378
8	**Shimoga**	1055300	271800	60514	-	60514	56328	24413	7493	12610	161358
9	**Utt. Kannada**	1029100	120000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	**8484600**	**2631200**	**221639**	**0**	**221639**	**106923**	**215116**	**189735**	**199043**	**932456**
	KERALA										
1	**Kasargod**	199200	199200	-	-	-	-	-	-	-	-
2	**Kannur**	296600	231600	-	-	-	-	-	-	-	-
3	**Kozhikode**	447500	327500	-	-	-	-	-	-	-	-
4	**Mallapuram**	355000	355000	-	-	-	-	-	-	-	-
5	**Palakkad**	448000	390500	-	-	-	-	-	-	-	-
6	**Thrissur**	303200	303200	-	-	-	-	-	-	-	-
7	**Ernakulam**	240700	240700	-	-	-	-	-	-	-	-
8	**Idukki**	501900	461900	-	-	-	-	-	-	-	-
9	**Kottayam**	220300	220300	-	-	-	-	-	-	-	-
10	**Alappuzha**	141400	141400	-	-	-	-	-	-	-	-
11	**Pathaamthitta**	264200	264200	-	-	-	-	-	-	-	-
12	**Kollam**	249100	249100	-	-	-	-	-	-	-	-
13	**Thiruvananthapuram**	219200	218900	-	-	-	-	-	-	-	-
	Sub Total	**3886300**	**3603500**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	MAHARASHTRA										
1	**Bombay**	60300	60300	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	**Thane**	955800	955800	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	**Raigarh**	715200	715200	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.

Contd/…

Table 15 : Gross area irrigated by Sources by river basin and State

(Area in hectares)

Sl. No.	State/District	District Area	Basin Area	Canals		Total Canals	Tanks	Wells		Other Sources	Grand Total
				Government	Private			Tubewells	Other Wells		
1	2	3	4	5	6	7	8	9	10	11	12
4	**Sindhudurg**	1341500	1329800	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
5	**Nasik**	1553000	420600	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
6	**Dhule**	1315000	7500	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
7	**Kolhapur**	768500	9900	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
8	**Sub Total**	**6709300**	**3499100**	**0**	**0**	**0**	**8**	**9**	**10**	**0**	**0**
	TAMIL NADU										
1	**Nilgiri**	254900	45000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	**Coimbatore**	746900	244000	55767	560	56327	663	20517	103964	-	181471
3	**Sub Total**	1001800	289000	55767	560	56327	663	20517	103964	0	181471
4	**PONDICHERY**										
5	**Yanam**	3000	3000	635	-	635	-	-	-	-	635
6	**Mahe**	900	900	-	-	-	-	-	-	43	43
	Sub Total	**3900**	**3900**	**635**	**0**	**635**	**0**	**0**	**0**	**43**	**678**
	Grand Total	**21982900**	**11436700**	**280676**	**560**	**281236**	**107594**	**235816**	**295372**	**202022**	**1122013**
X	**Basin : Tapi**										
	<----- Not Available Data ----->										
XI	**Basin : Narmada**										
	GUJARAT										
1	**Vadodara**	779400	396000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	**Bharuch**	903800	468000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	**Surat**	765700	18000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	**2448900**	**882000**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	MADHYA PRADESH										
1	**Sagar**	1025200	171600	4825	-	4825	2564	39852	116959	72435	236635
2	**Damoh**	730600	65100	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	**Dewas**	702000	394400	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4	**Jhabua**	678200	335700	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.

Contd/…

Table 15 : Gross area irrigated by Sources by river basin and State

(Area in hectares)

Sl. No.	State/District	District Area	Basin Area	Canals		Total Canals	Tanks	Wells		Other Sources	Grand Total
				Government	Private			Tubewells	Other Wells		
1	2	3	4	5	6	7	8	9	10	11	12
5	**Dhar**	815300	471400	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
6	**Indore**	389800	97400	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
7	**West Nimar**	1345000	1171000	14687	-	14687	810	18528	73893	38065	145983
8	**East Nimar**	1077900	725900	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
9	**Vidisha**	737100	46100	38656	-	38656	4256	100295	39305	60638	243150
10	**Sehore**	657800	225600	39317	-	39317	4583	52448	76710	30507	203565
11	**Raisen**	846600	467800	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
12	**Betul**	1004300	370000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
13	**Hoshangabad**	1003700	1003700	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
14	**Jabalpur**	1016000	648300	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
15	**Narsimhapur**	513300	513300	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
16	**Mandla**	1326900	1139500	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
17	**Chhindwara**	1181500	285400	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
18	**Seoni**	875800	221800	55979	52	56031	7706	2895	30492	13388	110512
19	**Balaghat**	922900	221500	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
20	**Shahdol**	1402800	77800	4837	-	4837	1776	2598	3789	7984	20984
21	**Rajnandgaon**	1112700	97200	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	19365400	8750500	158301	52	158353	21703	216625	341158	223017	960829
	MAHARASHTRA										
	Dhule	**1315000**	**396000**	**N.A.**	**N.A.**	**N.A.**	**N.A.**	**N.A.**	**N.A.**	**N.A.**	**N.A.**
	Sub Total	**1315000**	**396000**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	Grand Total	**23129300**	**10028500**	**158301**	**52**	**158353**	**21703**	**216625**	**341158**	**223017**	**960829**

Contd./….

Table 15 : Gross area irrigated by Sources by river basin and State

(Area in hectares)

Sl. No.	State/District	District Area	Basin Area	Canals		Total Canals	Tanks	Wells		Other Sources	Grand Total
				Government	Private			Tubewells	Other Wells		
1	2	3	4	5	6	7	8	9	10	11	12
XII	**Basin : Mahi and Sabarmati**										
a)	**Basin:Mahi**										
i)	**GUJARAT**										
1	**Kheda**	719400	105000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	**Panchmahals**	886600	885600	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	**Vadodara**	779400	383400	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4	**Bharuch**	903800	294800	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	**3289200**	**1668800**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
ii)	**MADHYA PRADESH**										
1	**Ratlam**	486100	180700	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	**Jhabua**	678200	342500	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	**Dhar**	815300	150000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4	**Mandsaur**	979100	3300	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	**2958700**	**676500**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
iii)	**RAJASTHAN**										
1	**Udaipur**	1727900	637500	16963	-	16963	17746	5621	62479	2855	105664
2	**Chittorgarh**	1085600	289700	14549	-	14549	4555	113589	125038	2030	259761
3	**Dungarpur**	377000	327000	7276	-	7276	3437	1632	21863	2805	37013
4	**Bansewara**	503700	503700	54461	-	54461	6429	2024	17389	18123	98426
	Sub Total	**3694200**	**1757900**	**93249**	**0**	**93249**	**32167**	**122866**	**226769**	**25813**	**500864**
b)	**Basin: Sabarmati**										
i)	**GUJARAT**										
1	**Surendranagar**	1048900	365000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	**Banaskantha**	1270300	52500	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	**Sabarkantha**	739000	739000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4	**Mahesana**	902700	102000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
5	**Gandhinagar**	64900	64900	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
6	**Ahmedabad**	870700	460000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
7	**Kheda**	719400	614400	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	**5615900**	**2397800**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Contd./….

Table 15 : Gross area irrigated by Sources by river basin and State

(Area in hectares)

Sl. No.	State/District	District Area	Basin Area	Canals		Total Canals	Tanks	Wells		Other Sources	Grand Total
				Government	Private			Tubewells	Other Wells		
1	2	3	4	5	6	7	8	9	10	11	12
ii)	**RAJASTHAN**										
1	**Sirohi**	513600	10000	9014	-	9014	5620	8497	70066	-	93197
2	**Udaipur**	1727900	258900	16963	-	16963	17746	5621	62479	2855	105664
	Dungarpur	377000	50000	7276	-	7276	3437	1632	21863	2805	37013
	Sub Total	**2618500**	**318900**	**33253**	**0**	**33253**	**26803**	**15750**	**154408**	**5660**	**235874**
c)	**Basin: Luni & Others**										
i)	**GUJARAT**										
1	**Jamnagar**	1412500	1412500	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	**Rajkot**	1120300	1120300	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	**Surendranagar**	1048900	683900	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4	**Bhavnagar**	1115500	1115500	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
5	**Amreli**	676000	676000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
6	**Junagadh**	1060700	1060700	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
7	**Kachch**	4565200	4565200	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
8	**Banaskantha**	1270300	1217800	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
9	**Mahesana**	902700	800700	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
10	**Ahemdabad**	870700	410700	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	**14042800**	**13063300**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
ii)	**RAJASTHAN**										
1	**Ajmer**	848100	84900	15	-	15	2858	739	74209	1789	79610
2	**Jodhpur**	2285000	685500	173	-	173	-	253586	7650	7	261416
3	**Nagaur**	1771800	708900	-	-	-	-	228928	154968	-	383896
4	**Pali**	1238700	1238700	-	-	-	12559	17166	58816	213	88754
5	**Jalor**	1064000	1064000	3932	-	3932	-	50728	195590	-	250250
6	**Sirohi**	513600	503600	9014	-	9014	5620	8497	70066	-	93197
	Sub Total	**7721200**	**4285600**	**13134**	**0**	**13134**	**21037**	**559644**	**561299**	**2009**	**1157123**
iii)	**Daman& Diu**										
	Diu	11200	4000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	**11200**	**4000**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	Grand Total	**39951700**	**24172800**	**139636**	**0**	**139636**	**80007**	**698260**	**942476**	**33482**	**1893861**

Sources:- Directorate of Economics & Statistics, Ministry of Agriculture. (Through receeived the data fro Internet)

Table 16 : Net area iIrrigated by sources by river basin and State

(Area in hectares)

Sl. No.	State/District	District Area	Basin Area	Canals		Total Canals	Tanks	Wells		Other Sources	Grand Total
				Government	Private			Tubewells	Other Wells		
1	2	3	4	5	6	7	8	9	10	11	12
I	**Basin : Mahanadi**										
i)	**BIHAR**										
	Gumla	907700	63500	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	**907700**	**63500**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
ii)	**ORISSA**										
1	**Sambalpur**	1751600	1390400	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	**Sundergarh**	**971200**	410000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	**Cuttak**	1114200	752800	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4	**Dhenkanal**	1082700	311000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
5	**Phulbani**	1111900	907500	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
6	**Balangir**	891300	891300	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
7	**Kalahandi**	1177200	981900	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
8	**Koraput**	2696100	197700	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
9	**Puri**	1018200	606100	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	**11814400**	**6448700**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
iii)	**MADHYA PRADESH**										
1	**Shahdol**	1402800	8400	4837		4837	1776	2598	3789	7984	20984
2	**Surguja**	2233700	496200	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	**Bilaspur**	1989700	1895700	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4	**Raigarh**	1292400	1090600	3061		3061	2344	22455	80641	10436	118937
5	**Rajnandgaon**	1112700	756500	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
6	**Durg**	853700	853700	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
7	**Raipur**	2125800	2115200	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
8	**Bastar**	3911400	222100	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	**14922200**	**7438400**	**7898**	**0**	**7898**	**4120**	**25053**	**84430**	**18420**	**139921**
iv)	**MAHARASHTRA**										
1	**Chandrapur+**	2585500	28600	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	**Gadchiroli**			N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	**2585500**	**28600**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	Grand Total	**30229800**	**13979200**	**7898**	**0**	**7898**	**4120**	**25053**	**84430**	**18420**	**139921**

Contd./…

Table 16 : Net area iIrrigated by sources by river basin and State

(Area in hectares)

Sl. No.	State/District	District Area	Basin Area	Canals		Total Canals	Tanks	Wells		Other Sources	Grand Total
				Government	Private			Tubewells	Other Wells		
1	2	3	4	5	6	7	8	9	10	11	12
II	**Subernarekha, Burhabalang and Baitarni**										
i)	**BIHAR**										
1	**Ranchi**	769800	488000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	**Singhbhum**	1344000	902100	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	**2113800**	**1390100**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
ii)	**ORISSA**										
1	**Mayurbhanj**	1041800	751800	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	**Balasore**	631100	472100	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	**1672900**	**1223900**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
iii)	**WEST BENGAL**										
1	**Medinipur**	1408100	311600	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	**Purulia**	625900	101800	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	**2034000**	**413400**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	Grand Total	**5820700**	**3027400**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
III	**Basin : Brahamani**										
i)	**BIHAR**										
1	**Lohardaga**	149100	89100	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	**Gumla**	907700	794200	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	**Ranchi**	769800	230000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4	**Pa. Singhbhum**	1344000	412000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	**3170600**	**1525300**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
ii)	**MADHYA PRADESH**										
	Raigarh	1292400	126800	3061	-	3061	2344	22455	80641	10436	118937
	Sub Total	**1292400**	**126800**	**3061**	**0**	**3061**	**2344**	**22455**	**80641**	**10436**	**118937**
	ORISSA										
1	**Sambalpur**	1751600	361200	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	**Sundergarh**	971200	561200	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	**Keonjhar**	830300	830300	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4	**Mayurbhanj**	1041800	290000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
5	**Balasore**	631100	159000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
6	**Cuttack**	1114200	361400	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
7	**Dhenkanal**	1082700	771700	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	**7422900**	**3334800**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	Grand Total	**11885900**	**4986900**	**3061**	**0**	**3061**	**2344**	**22455**	**80641**	**10436**	**118937**

Contd./…

Table 16 : Net area iIrrigated by sources by river basin and State

(Area in hectares)

Sl. No.	State/District	District Area	Basin Area	Canals		Total Canals	Tanks	Wells		Other Sources	Grand Total
				Government	Private			Tubewells	Other Wells		
1	2	3	4	5	6	7	8	9	10	11	12
IV	**Rushikulya, Vamsadhra, Sarada and Nagavali**										
	<----- Not Available Data ----->										
V	**GODAVARI**										
i)	**ANDHRA PRADESH**										
1	**Visakhapatnam**	1116100	370400	28386	-	28386	28612	7638	4882	21839	91357
2	**East Godavari**	1080700	154900	175135	-	175135	22759	57389	509	10488	266280
3	**West Godavari**	774200	151000	192008	-	192008	23402	133619	7399	364374	370151
4	**Rangareddy**	749300	34200	911	-	911	1225	47068	9963	1748	60915
5	**Medak**	969900	835500	3069	-	3069	14008	95295	6291	1355	120018
6	**Nizamabad**	795600	795600	10353	-	10353	19094	119698	5012	4189	158346
7	**Adilabad**	1610500	1610500	19434	-	19434	18301	29343	17595	3158	87831
8	**Karimnagar**	1182300	1178700	81024	-	81024	44797	31510	159656	352	317339
9	**Warangal**	1284600	724200	2999	-	2999	74470	67860	174568	5193	325090
10	**Khammam**	1602900	1616200	49627	-	49627	51892	26870	39290	21407	189086
	Sub Total	**11166100**	**7471200**	**562946**	**0**	**562946**	**298560**	**616290**	**425165**	**434103**	**1986413**
ii)	**KARNATAKA**										
	Bidar	544800	448700	619	-	619	850	13462	23989	1110	40030
	Sub Total	**544800**	**448700**	**619**	**0**	**619**	**850**	**13462**	**23989**	**1110**	**40030**
iii)	**MADHYA PRADESH**										
1	**Betul**	1004300	224300	13392	-	13392	105	11647	70195	11824	107163
2	**Mandla**	1326900	82400	15349	-	15349	42		2732	1723	19846
3	**Chhindwara**	1181500	896100	9790	-	9790	2672	22967	70611	4854	110894
4	**Seoni**	875800	654000	55979	52	56031	7706	2895	30492	13388	110512
5	**Balaghat**	922900	701400	74662	-	74662	25945	37	16938	5236	122818
6	**Rajnandgaon**	1112700	259000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
7	**Raipur**	2125800	10600	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
8	**Bastar**	3911400	3689300	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	**12461300**	**6517100**	**169172**	**52**	**169224**	**36470**	**37546**	**190968**	**37025**	**471233**

Contd./…

Table 16 : Net area iIrrigated by sources by river basin and State

(Area in hectares)

Sl. No.	State/District	District Area	Basin Area	Canals		Total Canals	Tanks	Wells		Other Sources	Grand Total
				Government	Private			Tubewells	Other Wells		
1	2	3	4	5	6	7	8	9	10	11	12
iv)	**MAHARASHTRA**										
1	**Nashik**	1553000	736100	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	**Jalgaon**	1176500	6000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	**Ahmadnagar**	1704800	1089100	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4	**Pune**	1564300	14000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
5	**Solapur**	1489500	11900	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
6	**Aurangabad**	1010700	899100	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
7	**Jalana**	771800	771800	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
8	**Parbhani**	1104100	1104100	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
9	**Bid**	1069300	946900	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
10	**Nanded**	1052800	1052800	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
11	**Osmanabad**	756900	226400	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
12	**Latur**	715700	715700	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
13	**Buldghana**	966100	384600	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
14	**Akola**	1057400	374500	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
15	**Amravati**	1221000	419600	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
16	**Yavatmal**	1358200	1358200	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
17	**Wardha**	630900	630900	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
18	**Nagpur**	989200	989200	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
19	**Bhandara**	932100	932100	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
20	**Chandrapur**	1144300	1115700	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
21	**Gadchiroli**	1441200	1441200	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	**23709800**	**15219900**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
v)	**ORISSA**										
1	**Kalahandi**	1177200	145300	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	**Koraput**	2696100	1629900	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	**3873300**	**1775200**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	Grand Total	**51755300**	**31432100**	**732737**	**52**	**732789**	**335880**	**667298**	**640122**	**472238**	**2497676**

Contd./…

Table 16 : Net area iIrrigated by sources by river basin and State

(Area in hectares)

Sl. No.	State/District	District Area	Basin Area	Canals		Total Canals	Tanks	Wells		Other Sources	Grand Total
				Government	Private			Tubewells	Other Wells		
1	2	3	4	5	6	7	8	9	10	11	12
VI	**Basin : Krishna**										
i)	**ANDHRA PRADESH**										
1	**Krishna**	872700	385400	218297	-	218297	26792	35384	8083	13837	302393
2	**Anantapur**	1913000	451400	28645	-	28645	7467	72425	13844	1705	124086
3	**Guntoor + Prakasam +**	5975100	1567700	284279	-	284279	5092	47737	3907	17104	358119
4	**Nellore+ Kurnool**			68665	-	68665	30073	63043	9864	22877	194522
5				79780	-	79780	81252	62504	24674	7895	256105
6				79375	-	79375	13853	61895	28452	9149	192724
7	**Mehbubnagar**	1843200	1843200	20812	-	20812	11119	110674	18264	5737	166606
8	**Rangareddy**	749300	715100	911	-	911	1225	47068	9963	1748	60915
9	**Hyderabad**	21700	21700	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
10	**Medak**	969900	134400	3069	-	3069	14008	95295	6291	1355	120018
11	**Karimnagar**	1182300	3600	81024	-	81024	44797	31510	159656	352	317339
12	**Warangal**	1284600	560400	2999	-	2999	74470	67860	174568	5193	325090
13	**East Godavari**	1080700	-	175135	-	175135	22759	57389	509	10488	266280
14	**Khammam**	2683600	518300	49627	-	49627	51892	26870	39290	21407	189086
15	**Nalgonda**	1424000	1424000	75193	-	75193	18949	92946	45497	9959	242544
	Sub Total	**20000100**	**7625200**	**1167811**	**0**	**1167811**	**403748**	**872600**	**542862**	**128806**	**3115827**
ii)	**KARNATAKA**										
1	**Belgaum**	1341500	1244900	62477	-	62477	2357	97697	111084	125404	399019
2	**Bellary**	988500	988500	80391	-	80391	2358	56268	10712	23986	173715
3	**Bidar**	544800	96100	619	-	619	850	13462	23989	1110	40030
4	**Bijapur**	1706900	1706900	83892	-	83892	3342	58091	54877	26522	226724
5	**Chikmaglur**	720100	620800	5205	-	5205	10904	9601	511	7984	34205
6	**Chitradurga**	1085200	1085200	5819	-	5819	1357	70226	-	-	77402
7	**Dharwad**	1373800	1188000	30651	-	30651	267	11547	-	434	42899
8	**Gulbarga**	1622400	1622400	131728	-	131728	4084	13764	25897	7402	182875
9	**Hassan**	681400	131800	33359	-	33359	25797	34387	910	1150	95603
10	**Raichur**	1401700	1401700	131205	-	131205	2645	15941	17127	6275	173193
11	**Shimoga**	1055300	783500	47970	-	47970	53327	16495	6546	11659	135997
12	**Tumkur**	1059800	393700	4633	-	4633	23652	126558	2034	-	156877
13	**Uttar Kannada**	1029100	63700	94	-	94	4754	2090	7302	11197	25437
	Sub Total	**14610500**	**11327200**	**618043**	**0**	**618043**	**135694**	**526127**	**260989**	**223123**	**1763976**

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Table 16 : Net area iIrrigated by sources by river basin and State

(Area in hectares)

Sl. No.	State/District	District Area	Basin Area	Canals		Total Canals	Tanks	Wells		Other Sources	Grand Total
				Government	Private			Tubewells	Other Wells		
1	2	3	4	5	6	7	8	9	10	11	12
iii)	**MAHARASHTRA**										
1	**Ratnagiri**	820800	11700	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	**Ahmadnagar**	1704800	618000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	**Pune**	1564300	1548300	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4	**Satara**	1048000	1048000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
5	**Sangli**	857200	857200	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
6	**Solapur**	1489500	1488400	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
7	**Kolhapur**	768500	758600	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
8	**Bid**	1069300	156700	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
9	**Osmanabad+**	1472600	455600	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
10	**Latur**			N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	**10795000**	**6942500**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	Grand Total	**45405600**	**25894900**	**1785854**	**0**	**1785854**	**539442**	**1398727**	**803851**	**351929**	**4879803**

Source : Directorate of Economics and Statistics, Ministry of Agriculture (Through NET)

Note : 1. Totals may not tally due to rounding off.

2. N.A. = Not Available

VII Basin : Cauvery

i)	**KARNATAKA**										
1	**Bangalore Rural**	219000	171500	6089	-	6089	3638	60047	3757	1478	75009
2	**Bangalore Urban**	581500	395500	-	-	-	2369	10814	581	-	13764
3	**Chikmagalur**	720100	84800	5205	-	5205	10904	9601	511	7984	34205
4	**Hassan**	681400	489600	33359	-	33359	25797	34387	910	1150	95603
5	**Kodagu (Coorg)**	410200	217200	2865	-	2865	100	701	50	2080	5796
6	**Mandya**	496100	496100	90597	-	90597	10854	9792	9014	2133	122390
7	**Mysore**	1195400	1195400	110500	-	110500	12183	5624	15721	282	144310
8	**Tumkur**	1059800	445300	4633	-	4633	23652	126558	2034		156877
	Sub Total	**5363500**	**3495400**	**253248**	**0**	**253248**	**89497**	**257524**	**32578**	**15107**	**647954**
ii)	**KERALA**										
1	**Kannur**	296600	65000	1244	958	2202	1788	8	7937	7580	19515
2	**Wynad**	213100	-	856	664	1520	137	162	71	8445	10335
3	**Kozhikode**	447500	120000	1246	24	1270	209	452	1434	2078	5443
4	**Palakkad**	448000	57500	41332	991	42323	4106	987	14854	14728	76998
5	**Idukki**	501900	40000	2508	698	3206	5566	40	2295	5987	17094
	Sub Total	**1907100**	**282500**	**47186**	**3335**	**50521**	**11806**	**1649**	**26591**	**38818**	**129385**

Contd./…

Table 16 : Net area iIrrigated by sources by river basin and State

(Area in hectares)

Sl. No.	State/District	District Area	Basin Area	Canals		Total Canals	Tanks	Wells		Other Sources	Grand Total
				Government	Private			Tubewells	Other Wells		
1	2	3	4	5	6	7	8	9	10	11	12
iii)	**TAMIL NADU**										
1	**Dharmapuri+**	1827100	1042100	6844	-	6844	6482	2056	51301	7	66690
2	**Salem**			2100	-	2100	1708	7830	86335	-	97973
3	**South Arcot**	1089500	62500		-						
4	**Coimbatore+Periyar**	1567800	1323800	53431	560	53991	555	19608	96397	-	170511
5	**Nilgiri**	254900	209900	7	-	7			504	239	750
6	**Madurai+**	1262300	445300	36986	-	36986	18306	634	36319	-	92245
7	**Dindugul**			7901	-	7901	3603	2368	89847	953	104672
8	**Pudukottai+**	1574700	1117200	10679	-	10679	71764	18902	8482	-	109827
9	**Tiruchirapalli**			32399	-	32399	8791	10981	57883	-	110054
10	**Thanjavur**	828000	543000	147564	-	147564				147564	165362
	Sub Total	**8404300**	**4743800**	**297911**	**560**	**298471**	**111209**	**62379**	**427068**	**148763**	**918084**
iv)	**PONDICHERY**										
	Karaikal	49200	16000	5988	-	5988	-	80	-	13	6081
	Sub Total	**49200**	**16000**	**5988**	**0**	**5988**	**0**	**80**	**0**	**13**	**6081**
	Grand Total	**15724100**	**8537700**	**604333**	**3895**	**608228**	**212512**	**321632**	**486237**	**202701**	**1701504**
VIII	**Basin : East Folowing Rivers from Mahanadi to Kanyakumari**										
i)	**ANDHRA PRADESH**										
1	**Srikakulam**	2353700	1983300	97599	-	97599	45685	5275	6440	1742	156741
2	**Vizianagaram**			30951	-	30951	63085	10796	9943	2539	117314
3	**Vishakhapatnam**			28386	-	28386	28612	7638	4882	21839	91357
4	**East Godavari**	1854900	619300	175135	-	175135	22759	57389	509	10488	266280
5	**West Godavari**			192008	-	192008	23402	133619	7399	7946	364374
6	**Krishna**	872700	487300	218297	-	218297	26792	35384	8083	13837	302393
7	**Guntur+**	5975100	2997800	284279	-	284279	5092	47737	3907	17104	358119
8	**Prakasam+**			68665	-	68665	30073	63043	9864	22877	194522
9	**Nellore+**			79780	-	79780	81252	62504	24674	7895	256105
10	**Kunoor**			N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
11	**Khammam**	1602900	549100	49627	-	49627	51892	26870	39290	21407	189086
12	**kurnool**			79375	-	79375	13853	61895	28452	9149	192724
13	**Chittoor**	1515200	1030000	1702	-	1702	45736	75416	35800	152	158806
	Sub Total	**14174500**	**7666800**	**1305804**	**0**	**1305804**	**438233**	**587566**	**179243**	**136975**	**2647821**

Contd./…

Table 16 : Net area iIrrigated by sources by river basin and State

(Area in hectares)

Sl. No.	State/District	District Area	Basin Area	Canals		Total Canals	Tanks	Wells		Other Sources	Grand Total
				Government	Private			Tubewells	Other Wells		
1	2	3	4	5	6	7	8	9	10	11	12
ii)	**KARNATAKA**										
1	**Bangalore**	**219000**	**47500**	**-**	**-**	**-**	**2369**	**10814**	**581**	**-**	**13764**
2	**Bangalore R.**	**581500**	**142500**	**6089**	**-**	**6089**	**3638**	**60047**	**3757**	**1478**	**75009**
											Contd./…
3	**Kolar**	**822300**	**465700**	**-**	**-**	**-**	**6390**	**73729**	**-**	**-**	**80119**
	Sub Total	**1622800**	**655700**	**6089**	**0**	**6089**	**12397**	**144590**	**4338**	**1478**	**168892**
iii)	**KERALA**										
	Thiruvanatrum	219200	300	2471	210	2681	359	1	544	487	4072
	Sub Total	**219200**	**300**	**2471**	**210**	**2681**	**359**	**1**	**544**	**487**	**4072**
iv)	**ORISSA**										
1	**Phulbani**	1111900	204400	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	**Kalahandi**	1177200	50000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	**Koraput**	2696100	868500	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4	**Ganjam**	1253100	1253100	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
5	**Puri**	1018200	412100	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	**7256500**	**2788100**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
v)	**TAMIL NADU**										
1	**Madras**	17400	17400	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	**Chengai-Anna**	785700	785700	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	**North Arcot**	607700	607700	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4	**Dharmapuri+**	1827100	785000	6844	-	6844	6482	2056	51301	7	66690
5	**Salem**			2100	-	2100	1708	7830	86335	-	97973
6	**Tiruvannamalaai**	619100	619100	3121	-	3121	50325	857	106336	-	160639
7	**South Arcot**	1089500	1027000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
8	**Dindugul +**	1262300	817000	7901	-	7901	3603	2368	89847	953	104672
9	**Madurai**			36986	-	36986	18306	634	36319	-	92245
10	**Thanjavur**	828000	285000	134634	-	134634	498	30034	513	-	165679
11	**Pudukottai**	465100	465100	10679	-	10679	71764	18902	8482	-	109827
12	**PMT+Kamarajar+**	1260100	1260100	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
13	**Ramanathapuram+**			-	-	-	57034	443	11070	-	68547
14	**Chidambaranar+**	1143100	1143100	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
15	**Tirunelveli**			17556	-	17556	46980	971	45376	249	111132
16	**Kanyakumari**	168400	168400	15913	-	15913	9782	522	1239	238	27694
	Sub Total	**10073500**	**7980600**	**235734**	**0**	**235734**	**266482**	**64617**	**436818**	**1447**	**1005098**
vi)	**PONDICHERY**										
	Pondicherry	49200	29300	-	-	-	-	11508	-	-	11508
	Sub Total	**49200**	**29300**	**0**	**0**	**0**	**0**	**11508**	**0**	**0**	**11508**
	Total	**33395700**	**19120800**	**1550098**	**210**	**1550308**	**717471**	**808282**	**620943**	**140387**	**3837391**

Contd./…

Table 16 : Net area iIrrigated by sources by river basin and State

(Area in hectares)

Sl. No.	State/District	District Area	Basin Area	Canals		Total Canals	Tanks	Wells		Other Sources	Grand Total
				Government	Private			Tubewells	Other Wells		
1	2	3	4	5	6	7	8	9	10	11	12
	Basin : Penner										
i)	**ANDHRA PRADESH**										
1	**Kurnool**	1765800	1409600	79375	-	79375	13853	61895	28452	9149	192724
2	**Cuddapah**	1535900	1535900	23978	-	23978	13963	95855	6055	1856	141707
3	**Anantapur**	1913000	1461600	28645	-	28645	7467	72425	13844	1705	124086
4	**Prakasam+**	5724500	485200	284279	-	284279	5092	47737	3907	17104	358119
5	**Guntur+**			68665	-	68665	30073	63043	9864	22877	194522
6	**Nellor+**			79780	-	79780	81252	62504	24674	7895	256105
7	**Chittor**			1702	-	1702	45736	75416	35800	152	158806
	Sub Total	**10939200**	**4892300**	**564722**	**0**	**564722**	**151700**	**403459**	**86796**	**60586**	**1267263**
ii)	**KARNATAKA**										
1	**Bangalore R.**	581500	43500	6089	-	6089	3638	60047	3757	1478	75009
2	**Kolar**	822300	356600	-	-	-	6390	73729	-	-	80119
3	**Tumkur**	1059800	220800	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	**2463600**	**620900**								
	Total	**13402800**	**5513200**	**564722**	**0**	**564722**	**151700**	**403459**	**86796**	**60586**	**1267263**
	Grand Total	**46798500**	**24634000**	**2114820**	**210**	**2115030**	**869171**	**1211741**	**707739**	**200973**	**5104654**
IX	**Basin : West Flowing Rivers from Kanyakumari to Tapi**										
	DADRA & NAGAR HAVELI										
1	**Daman & Diu**	11200	7200	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	**Dadra & Nagar Haveli**	49100	49100	2635	-	2635	-	174	1663	2936	7408
	Sub Total	**60300**	**56300**	**2635**	**0**	**2635**	**0**	**174**	**1663**	**2936**	
	Goa	370200	370200	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	**370200**	**370200**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	GUJARAT										
1	**Surat**	765700	282700	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	**Valsad**	524400	524400	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	**Dangs**	176400	176400	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	**1466500**	**983500**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	KARNATAKA										
1	**Belgaum**	1341500	96600	62477	-	62477	2357	97697	111084	125404	399019
2	**Dharwad**	1373800	185800	30651	-	30651	267	11547	-	434	42899
3	**U. Kannada**	1029100	845400	94	-	94	4754	2090	7302	11197	25437
4	**Chikmaglur**	720100	14500	5205	-	5205	10904	9601	511	7984	34205

Contd./…

Table 16 : Net area iIrrigated by sources by river basin and State

(Area in hectares)

Sl. No.	State/District	District Area	Basin Area	Canals		Total Canals	Tanks	Wells		Other Sources	Grand Total
				Government	Private			Tubewells	Other Wells		
1	2	3	4	5	6	7	8	9	10	11	12
5	**Dak. Kannada**	844100	844100	-	-	-	-	9121	45038	17893	72052
6	**Hassan**	681400	60000	33359	-	33359	25797	34387	910	1150	95603
7	**Kodagu**	410200	193000	2865	-	2865	100	701	50	2080	5796
8	**Shimoga**	1055300	271800	47970	-	47970	53327	16495	6546	11659	135997
9	**Utt. Kannada**	1029100	120000	94	-	94	4754	2090	7302	11197	25437
	Sub Total	**8484600**	**2631200**	**182715**	**0**	**182715**	**102268**	**183738**	**178753**	**188998**	**836445**
	KERALA										
1	**Kasargod**	199200	199200	82	467	549	11285	174	22362	11457	45827
2	**Kannur**	296600	231600	1244	958	2202	1788	8	7937	7580	19515
3	**Kozhikode**	447500	327500	1246	24	1270	209	452	1434	2078	5443
4	**Mallapuram**	355000	355000	824	539	1363	2662	5238	5508	8953	23724
5	**Palakkad**	448000	390500	41332	991	42323	4106	987	14854	14728	76998
6	**Thrissur**	303200	303200	24849	84	24933	7427	3223	37195	14984	87762
7	**Ernakulam**	240700	240700	20569	41	20610	2642	285	10713	9387	43637
8	**Idukki**	501900	461900	2508	698	3206	5566	40	2295	5987	17094
9	**Kottayam**	220300	220300	745	23	768	89	1	862	12927	14647
10	**Alappuzha**	141400	141400	5347	141	5488	8443	3653	3183	22890	43657
11	**Pathaamthitta**	264200	264200	1620	29	1649	109	1	1890	2470	6119
12	**Kollam**	249100	249100	413	80	493	184	2	1534	407	2620
13	**Thiruvantrum**	219200	218900	2471	210	2681	359	1	544	487	4072
	Sub Total	**3886300**	**3603500**	**103250**	**4285**	**107535**	**44869**	**14065**	**110311**	**114335**	**391115**
	MAHARASHTRA										
1	**Bombay**	60300	60300	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	**Thane**	955800	955800	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	**Raigarh**	715200	715200	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4	**Sindhudurg**	1341500	1329800	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
5	**Nasik**	1553000	420600	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
6	**Dhule**	1315000	7500	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
7	**Kolhapur**	768500	9900	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	**6709300**	**3499100**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	TAMIL NADU										
1	**Nilgiri**	254900	45000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	**Coimbatore**	746900	244000	53431	560	53991	555	19608	96357	-	170511
	Sub Total	**1001800**	**289000**	**53431**	**560**	**53991**	**555**	**19608**	**96357**	**0**	**170511**

Contd./…

Table 16 : Net area iIrrigated by sources by river basin and State

(Area in hectares)

Sl. No.	State/District	District Area	Basin Area	Canals		Total Canals	Tanks	Wells		Other Sources	Grand Total
				Government	Private			Tubewells	Other Wells		
1	2	3	4	5	6	7	8	9	10	11	12
	PONDICHERY										
1	**Yanam**	3000	3000	325	-	325	-	-	-	-	325
2	**Mahe**	900	900	-	-	-	-	-	-	40	40
	Sub Total	**3900**	**3900**	**325**	**0**	**325**	**0**	**0**	**0**	**40**	**365**
	Grand Total	**21982900**	**11436700**	**342356**	**4845**	**347201**	**147692**	**217585**	**387084**	**306309**	**1398436**
X	**Basin : Tapi**										
	<----- Not Available Data ----->										
XI	**Basin : Narmada**										
i)	**GUJARAT**										
1	**Vadodara**	779400	396000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	**Bharuch**	903800	468000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	**Surat**	765700	18000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	**2448900**	**882000**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
ii)	**MADHYA PRADESH**										
1	**Sagar**	1025200	171600	4825	-	4825	2564	39852	116959	72435	236635
2	**Damoh**	730600	65100	10435	-	10435	482	28707	26526	45453	111603
3	**Dewas**	702000	394400	2360	-	2360	944	74419	49536	11044	138303
4	**Jhabua**	678200	335700	9179	-	9179	8725	1779	20892	17023	57598
5	**Dhar**	815300	471400	8557	-	8557	9867	52478	55139	39939	165980
6	**Indore**	389800	97400	12591	-	12591	528	58353	13139	9111	93722
7	**West Nimar**	1345000	1171000	14687	-	14687	810	18528	73893	38065	145983
8	**East Nimar**	1077900	725900	6210	-	6210	1011	16216	77250	13211	113898
9	**Vidisha**	737100	46100	38656	-	38656	4256	100295	39305	60638	243150
10	**Sehore**	657800	225600	39317	-	39317	4583	52448	76710	30507	203565
11	**Raisen**	846600	467800	60515	-	60515	2006	75497	27170	29498	194686
12	**Betul**	1004300	370000	13392	-	13392	105	11647	70195	11824	107163
13	**Hoshangabad**	1003700	1003700	143516	-	143516	884	48686	54453	13483	261022
14	**Jabalpur**	1016000	648300	7854	-	7854	89	59773	27590	13191	108497
15	**Narsimhapur**	513300	513300	1095	-	1095	8	74136	92164	6894	174297
16	**Mandla**	1326900	1139500	15349	-	15349	42	-	2732	1723	19846
17	**Chhindwara**	1181500	285400	9790	-	9790	2672	22967	70611	4854	110894
18	**Seoni**	875800	221800	55979	52	56031	7706	2895	30492	13388	110512

Contd./…

Table 16 : Net area iIrrigated by sources by river basin and State

(Area in hectares)

Sl. No.	State/District	District Area	Basin Area	Canals		Total Canals	Tanks	Wells		Other Sources	Grand Total
				Government	Private			Tubewells	Other Wells		
1	2	3	4	5	6	7	8	9	10	11	12
19	**Balaghat**	922900	221500	74662	-	74662	25945	37	16938	5236	122818
20	**Shahdol**	1402800	77800	4837	-	4837	1776	2598	3789	7984	20984
21	**Rajnandgaon**	1112700	97200	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	**19365400**	**8750500**	**533806**	**52**	**533858**	**75011**	**741320**	**945493**	**445501**	**2741156**
	Dhule	1315000	396000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	**1315000**	**396000**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	Grand Total	**23129300**	**10028500**	**533806**	**52**	**533858**	**75011**	**741320**	**945493**	**445501**	**2741156**
XII	**Basin : Mahai and Sabarmati**										
a)	**Basin : Mahi**										
i)	**GUJARAT**										
1	**Kheda**	719400	105000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	**Panchmahals**	886600	885600	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	**Vadodara**	779400	383400	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4	**Bharuch**	903800	294800	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	**3289200**	**1668800**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
ii)	**MADHYA PRADESH**										
1	**Ratlam**	486100	180700	1392	-	1392	1482	51981	32668	4789	92312
2	**Jhabua**	678200	342500	9179	-	9179	8725	1779	20892	17023	57598
3	**Dhar**	815300	150000	8557	-	8557	9867	52478	55139	39939	165980
4	**Mandsaur**	979100	3300	837	-	837	757	10050	80797	10867	103308
	Sub Total	**2958700**	**676500**	**19965**	**0**	**19965**	**20831**	**116288**	**189496**	**72618**	**419198**
iii)	**RAJASTHAN**										
1	**Udaipur**	1727900	637500	16611	-	16611	15515	5235	57702	2789	97852
2	**Chittorgarh**	1085600	289700	14098	-	14098	4436	101609	109912	1970	232025
3	**Dungarpur**	377000	327000	7242	-	7242	3383	1615	20591	2549	35380
4	**Bansewara**	503700	503700	49249	-	49249	6112	1658	15601	16882	89502
	Sub Total	**3694200**	**1757900**	**87200**	**0**	**87200**	**29446**	**110117**	**203806**	**24190**	**454759**
b)	**Basin: Sabarmati**										
i)	**GUJARAT**										
1	**Surendranagar**	1048900	365000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	**Banaskantha**	1270300	52500	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	**Sabarkantha**	739000	739000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4	**Mahesana**	902700	102000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.

Contd./…

Table 16 : Net area iIrrigated by sources by river basin and State

(Area in hectares)

Sl. No.	State/District	District Area	Basin Area	Canals		Total Canals	Tanks	Wells		Other Sources	Grand Total
				Government	Private			Tubewells	Other Wells		
1	2	3	4	5	6	7	8	9	10	11	12
5	**Gandhinagar**	64900	64900	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
6	**Ahmedabad**	870700	460000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
7	**Kheda**	719400	614400	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	**5615900**	**2397800**	**0**	**0**	**0**	**8**	**9**	**10**	**0**	**0**
ii)	**RAJASTHAN**										
1	**Sirohi**	513600	10000	8914	-	8914	5620	6747	50618	-	71899
2	**Udaipur**	1727900	258900	16611	-	16611	15515	5235	57702	2789	97852
3	**Dungarpur**	377000	50000	7242	-	7242	3383	1615	20591	2549	35380
	Sub Total	**2618500**	**318900**	**32767**	**0**	**32767**	**24518**	**13597**	**128911**	**5338**	**205131**
c)	**Basin : Luni & Others**										
i)	**GUJARAT**										
1	**Jamnagar**	1412500	1412500	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
2	**Rajkot**	1120300	1120300	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
3	**Surendranagar**	1048900	683900	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
4	**Bhavnagar**	1115500	1115500	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
5	**Amreli**	676000	676000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
6	**Junagadh**	1060700	1060700	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
7	**Kachch**	4565200	4565200	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
8	**Banaskantha**	1270300	1217800	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
9	**Mahesana**	902700	800700	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
10	**Ahemdabad**	870700	410700	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	**14042800**	**13063300**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
ii)	**RAJASTHAN**										
1	**Ajmer**	848100	84900	15	-	15	2850	583	62110	1749	67307
2	**Jodhpur**	2285000	685500	93	-	93	-	167022	6918	7	174040
3	**Nagaur**	1771800	708900	-	-	-	-	165722	126844	-	292616
4	**Pali**	1238700	1238700	-	-	-	12553	13768	52367	211	78899
5	**Jalor**	1064000	1064000	3616	-	3616	-	39843	163509	-	206968
6	**Sirohi**	513600	503600	8914	-	8914	5620	6747	50618	-	71899
	Sub Total	**7721200**	**4285600**	**12638**	**0**	**12638**	**21023**	**393685**	**462366**	**1967**	**891729**
iii)	**Daman& Diu**										
	Diu	11200	4000	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	Sub Total	**11200**	**4000**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	Grant Total	**39951700**	**24172800**	**152570**	**0**	**152570**	**95826**	**633696**	**984589**	**104113**	**1970817**

Sources: Directorate of Economics & Statistics , Ministry of Agriculture.

Glossary of Terms

GLOSSARY OF TERMS

Active (usable) storage capacity	The total amount of reservoir capacity normally available for release from a reservoir below the maximum storage level. It is total or reservoir capacity minus inactive storage capacity. More specifically, it is the volume of water between the outlet works and the spillway crest.
Alluvium	Sediments deposited by erosion processes, usually by streams.
Basin boundary	The topographic dividing line around the perimeter of a basin, beyond which overland flow (i.e., runoff) drains away into another basin.
Bed load	Sand, silt, gravel, or soil and rock detritus carried by a stream on or immediately above its bed. The particles of this material have a density or grain size such as to preclude movement far above or for a long distance out of contact with the stream bed under natural conditions of flow.
Bed material	The sediment mixture of which a streambed, lake, pond, reservoir, or estuary bottom is composed.
Biochemical Oxygen Demand (B.O.D.)	The measure of oxygen required for natural oxidation of organic matter with the aid of bacteria. The test is made by taking duplicate samples of water in two completely filled bottles, one of which is sealed and kept stored for 5 days. The dissolved oxygen content of the first sample gives the biochemical oxygen demand, or shortly B.O.D. value. The B.O.D. value of surface waters may be 1 to 10 p.p.m., and for deep well water it would be much less.
Coliform Index	The probable number of coliform organisms present in 100 ml. is known as coliform index. If out of 5 portions be isolated from one sample only, the number of coliforms would be considered to be 1 in 50 ml. or 2 in 100 ml., which would be the coliform index, assuming that the gas formation was due to one coliform only.
dam	Any artificial barrier which impounds or diverts water. A dam is generally considered hydrologically significant if it is (i) One and one quarter feet (0.4 meters) or more in height from the natural bed of the stream and has a storage of at least 15 acre-feet, or (ii) 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.
Discharge	The quantity of water flowing across a section of a channel in a unit time is called the discharge. It is measured in cubic feet or meters per second, briefly called cusecs and cumecs respectively and is equal to the area of section X average velocity. Common units are cubic feet per second (cfs), second-day feet (sdf), and cubic meter per second (cumecs). Two types of discharges are often measured and recorded: (i) instantaneous discharge: the discharge at a particular instant of time. (ii) mean discharge: the arithmetic mean of individual discharges during a period of time. Discharges given are daily observed discharges commencing at 08.00 hrs.
Drainage area	An area around a river and rainfall of which flows into the river. Also known as watershed, catchment area and drainage basin.
Drainage basin	A part of the earth's surface which is occupied by a drainage system which consists of a surface stream with all its tributaries and impounded bodies of water. Also known as watershed, catchment area, and drainage area.
Gross capacity	The maximum volume of water that can be stored in a reservoir.
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. Also termed Phreatic water.

Ground water runoff	That part of the runoff which has passed into the ground, has become ground water, and has been discharged into a stream channel as spring, or seepage water.
Hardness	Hardness of water is generally caused by the presence of salts of calcium and magnesium. Hardness due to the presence of bicarbonates of calcium and magnesium is called temporary hardness. Permanent hardness is caused by the presence of sulphates and chlorides of these metals, and is not removable by boiling. The sum of these two hardness is called total hardness. It is expressed in terms of calcium carbonate. Since one gallon of water weighs 70,000 grains, degrees of hardness can be converted in p.p.m. by multiplying by 14.3. A water having 50 to 100 p.p.m. hardness is called soft water, one with 100 to 200 p.p.m. Moderately hard, and that with 200 to 300 p.p.m. hard. Hardness of 80 to 90 p.p.m. is considered to be the best.
Headwater basin	A basin at the headwaters of a river. All discharge of the river at this point is developed within the basin.
Hydrogen-ion Concentration (pH)	Acidity and Alkalinity determinations is the measures of acid and alkali present, while the H-ion concentration determines the strength of the acid and alkali in water. An ion is an atom or a group of atoms that carries an electric charge. The H-ion concentration is expressed in terms of logarithm of the reciprocal of the H-ion concentration. This term is called the pH value (potential of Hydrogen). Log 1/10-7 = 7, so that pH value 7 denotes neutrality while values above 7, signify alkalinity and those below 7, acidity. The determination of pH value provides information concerning the corrosive character of water. Waters with pH between 7.4 and 8.4 are practically inactive. Waters with pH above 8.6 or 8.8 are likely to cause precipitation of calcium carbonate in the distribution system, while waters over-carbonate with CO2 may dissolve the slight carbonate film on the inside of mains and start active corrosion, depending upon the pH value. When the pH of natural waters is below 7 it may be found necessary to add a small amount of soda ash or lime to the water before admittance to the mains, as otherwise corrosion may be caused.
Hydrologic Cycle	Water is lost to the atmosphere as vapour from the earth, which is then precipitated back in the form of rain, snow, hail, dew, frost, etc. The process of evaporation and precipitation which combines forever and thereby maintaining a balance between the two is called Hydrologic Cycle.
Hydrologic unit	A geographical area representing part or all of a surface drainage basin or distinct hydrologic feature such as a reservoir, lake, etc.
Inactive storage Capacity	The portion of capacity below which the reservoir is not normally drawn, and which is provided for sedimentation, recreation, fish and wildlife, aesthetic reasons, or for the creation of a minimum controlled operational or power head in compliance with operating agreements or restrictions.
Inches of runoff	the volume of water from runoff of a given depth over the entire drainage.
Irrigated area	The gross farm area upon which water is artificially applied for the production of crops, with no reduction for access roads, canals, or farm buildings.
Irrigation efficiency	The percentage of water applied that can be accounted for in soil moisture increase for conjumtive use.
Irrigation requirement	The quantity of water, exclusive of precipitation, that is required for crop production. It includes surface evaporation and other economically unavoidable wastes.

Live capacity	The minimum volume of water required for maintaining flow of water from the Reservoir. 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. Does not include surcharge, or dead storage, but does include inactive storage, active conservation storage and exclusive flood control storage.
Long term storage dams	Reservoirs used for recreational use or storage of irrigation, municipal or industrial water. Because water is impounded on a "permanent" basis, the design of these dams is more complex than for tailings or flood control detention dams. A long term storage dam may include an impermeable core surrounded by shell material; have many types of drains and filters, outlet works, with gates and valves, seepage collection boxes, and possibly several spillways. The capacity of the spillway is dependent upon the downstream hazard potential.
Mean annual rainfall	Mean annual rainfall is usually worked out as a simple average of the total rainfall of various years.
Mean depth	The average depth of water in a stream channel or conduit. It is equal to the cross-sectional area divided by the surface width.
Moisture equivalent	The ratio of (1) the weight of water which the soil, after saturation, will retain against a centrifugal force 1,000 times the force of gravity, to (2) the weight of the soil when dry. The ratio is stated as a percentage.
Net rainfall	The portion of rainfall which reaches a stream channel or the concentration point as direct surface flow.
Normal year	The year during which the precipitation or stream flow approximates the average for a long period of record.
Peak discharge	Rate of discharge of a volume of water passing a given location. (Usually in cubic feet per second.)
Point discharge	Instantaneous rate of discharge, in contrast to the mean rate for an interval of time.
Point precipitation	Precipitation at a particular site, in contrast to the mean precipitation over an area.
River Basin	Drainage area of a river and its tributaries.
River gauge datum	The arbitrary zero datum elevation which all stage measurements are made from.
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 baseflow 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 M.Cum.)/Catchment Area (km2)* 1000 and calculated at the discharge measurement station.
Second-day feet	The volume of water represented by a flow of one cubic foot per second for 24 hours; equal to 84,000 cubic feet. This is used extensively as a unit of runoff volume. Often abbreviated as SDF.
Sediment storage capacity	The volume of a reservoir planned for the deposition of sediment.
Soil moisture	Water contained in the upper regions near the earths surface.

Stage	The level of the water surface above an established "zero" plane or datum at a given location.
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.
Temperature	The in-situ temperature in degree centigrade by thermometer is recorded in terms of water intended use, the treatment to remove impurities and its transport.
Coliform Group	All waters contain bacteria, vast majority of which are perfectly harmless. One organism, bacillus Coli, found in the intestines of men and warm-blooded animals, which in itself is usually quite and may therefore be regarded as danger signal. The group of bacteria of intestinal origin is known as coliform group. The bacilli of this group ferment lactose with gas formation. Since organisms of the coliform group normally live longer in water than other bacteria, absence of such organisms indicates that the water is safe. Also this group is more resistant to treatment than pathogens, their existence or otherwise gives a useful indication of the efficiency of water treatment methods.
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.
Tributary	A stream or river whose water flows into a larger stream or river.
Watershed	The sum total of all the land and smaller bodies of water which drains into a particular stream or river.
Zero R.L. of gauge	The Zero R.L. of a gauge is the datum level fixed for a given site, which is kept 1 or 2 m lower than the lowest water level recorded in a perennial stream. In a no perennial stream, it is kept 1 or 2 m lower than the lowest bed level of the stream.