



## CHAPTER-1

# Introduction

Water has always played a major role in human societies. It is a source of life and prosperity and a cause of death and devastation. Because of this close relationship between water and man, water resources management has been viewed as a crucial vehicle for socio-economic development. Due to its topography, river networks, sub-tropical littoral location, the State is prone to heavy floods, tropical cyclone forced rainfall and storm surges. The state has 11 river basins (Fig.1.1) and the basin details are given in Table 1.1. Its densely populated coastal plains are the alluvial deposits of its river systems. The rivers in these areas with heavy load of silt have very little carrying capacity, resulting in frequent floods, only to be compounded by breached embankments. The state is ranked as the 5th most flood prone state of the country after UP, Bihar, Assam and West Bengal with a flood prone area of 33400 km<sup>2</sup>. The south-west monsoon brings rains to the state from June to September every year. The state receives an average annual rainfall of 1500 mm and more than 80% of it occurs during monsoon period only. The coastal districts of the state are more vulnerable to frequent low pressure, cyclonic storms, depression and deep depression.

At the initial stages, in Odisha, major & medium irrigation project works were under Public Works Department & minor (flow) irrigation works were under the control of Revenue Department. In the year 1962, a separate Department called Irrigation and Power (I&P) was set up to expedite the construction work of major and medium irrigation projects. Minor irrigation works were transferred to Rural Engineering Organization

(REO) formed under Planning & Co-ordination Department. In 1980, the R.E.O was abolished and Minor Irrigation activities were transferred to the Irrigation and Power Department. The year 1990 witnessed major changes in Secretariat Administration, resulting in the reorganization of departments and creation of several new departments. A new department called Rural Development Department was created and Irrigation & Power Department was split into Department of Irrigation and Department of Energy. Major and Medium Irrigation remained with the Department of Irrigation, power generation went to the Department of Energy; Minor irrigation works were transferred to R.D. Department.

In the meantime, other sectoral demands of water such as domestic and urban agglomeration, industrial have been increased considerably which warranted an integrated water resources development and management approach. To face the challenge, first National Water Policy was framed in 1987. Following the principles of National Water Policy, the State Water Policy was framed in 1994, which underscores the need of a coordinated approach to the state's water resources development. Administrative initiatives were taken to bring all water-related subjects under one umbrella, and in the year 1994, Irrigation Department was restructured as Water Resources Department, which became the nodal department with regard to all matters concerning the State's water resources. Following the decision, in the year 1996, the Minor irrigation works dealt by R.D



Table - 1.1  
Basin Details of Odisha

Name of the Basin	Total Catchment Area (in Sq. Km)	Catchment Area within Odisha (in Sq. Km)	Catchment Area Outside Odisha (in Sq. Km)	Major Tributaries
Mahanadi	141134	65628	75506	Ib, Jeera, Ong, Tel, Brutang, Manjore Karandijore, Hariharjore, Surubalijore
Brahmani	39269	22516	16753	Sankh, Koel, Gohira, Tikira, Samakoi, Ramiala
Baitarani	14218	13482	736	Deo, Kanjhari, Kusei, Salandi
Burhabalanga	4838	4838	0	Sunei, Kalo, Katra, Sana N.
Subernarekha	19277	2983	16294	Kharkhai R.
Rushikulya	8963	8963	0	Badanadi, Dhanei, Ghodahado, Padma, Baghua
Vansadhara	11377	8960	2417	Badanalla, Harbhangi Mahendratanya, Sananadi.
Nagavali	9275	4500	4775	Jhanjabati, Sananadi, Barha Nadi, Situguda N.
Indravati	41700	7400	34300	Kapur, Muran, Telengiri, Joura, Turi, Bhaskel
Kolab	20427	10300	10127	Karandi N., Potteru R., Sileru R., Machhkund R.
Bahuda	1118	890	228	Poichandia, Boginadi, Batrudanalla

Department and Command Area Development works dealt by Agriculture Department were transferred to the Water Resources Department. As per the Odisha Government Rules of Business, the mandate of this department is given below.

1. Administration of various Navigation, Embankment and Drainage Act and Rules made thereunder.
2. Water for irrigation and navigation canal, drainage embankments and water storage and all works connected therewith.
3. Maintenance of Indian Waterways.
4. Construction and maintenance of building required solely for the administration of canals and embankments of Major and Medium Irrigation.
5. Flood control and River Taming Works.
6. All matters relating to civil construction and maintenance of Dam projects except Upper Indravati Hydro-electric Project upto the point of generation in coordination with Energy Deptt.
7. All matters relating to land acquisition, land reclamation and resettlement in connection with the projects pertaining to the Department.
8. Command Area Development.
9. Excavation, execution and maintenance of Minor Irrigation as defined by Govt. of India from time to time and Tank Projects.
10. Lift Irrigation Corporation.
11. Odisha Pani Panchayats.



## Organization

The Department of Water Resources is headed by Principal Secretary. The Department has different wings namely; Major & Medium irrigation, Minor Irrigation (flow & Lift), Rehabilitation and Resettlement, Land Acquisition, Finance, CAD&WM & Monitoring. Each wing is headed by an Officer. To achieve various objectives, the Department is assisted by seven organizations. The activities of these organizations are enumerated below.

### Major & Medium

This organization deals with following works.

- Formulation of State Water Plan & State Water Policy.
- Implementation of Major & Medium Irrigation Projects and their operation & maintenance.
- Involving farmers in irrigation system operation & maintenance activities relating to Major & Medium irrigation projects.
- Interstate matters relating to rivers common to neighbouring States.
- Flood control and Drainage works.
- Industrial water supply & collection of industrial water rate.

### Minor (flow)

This organization looks after following works.

- Implementation of Minor irrigation Projects (flow) above CCA 40 ha and their operation and maintenance.
- Pani Panchayat (Participatory Irrigation Management) works of Minor (flow) Irrigation Projects.

## Ground Water Survey & Investigation

Deals with exploration and regulation of ground water including creating mass awareness for artificial recharge in view of depletion of resources.

### Command Area Development

Deals with construction of field channels, field drains & other multi-disciplinary activities of irrigated agriculture in selected command areas below the outlet.

### Odisha Lift Irrigation Corporation Ltd.

This Corporation was established in 1973 and is presently involved in construction of Community Lift Irrigation Projects of command area below 40 hectares, Deep Borewells, Shallow Tubewells and Micro River Lift Projects .

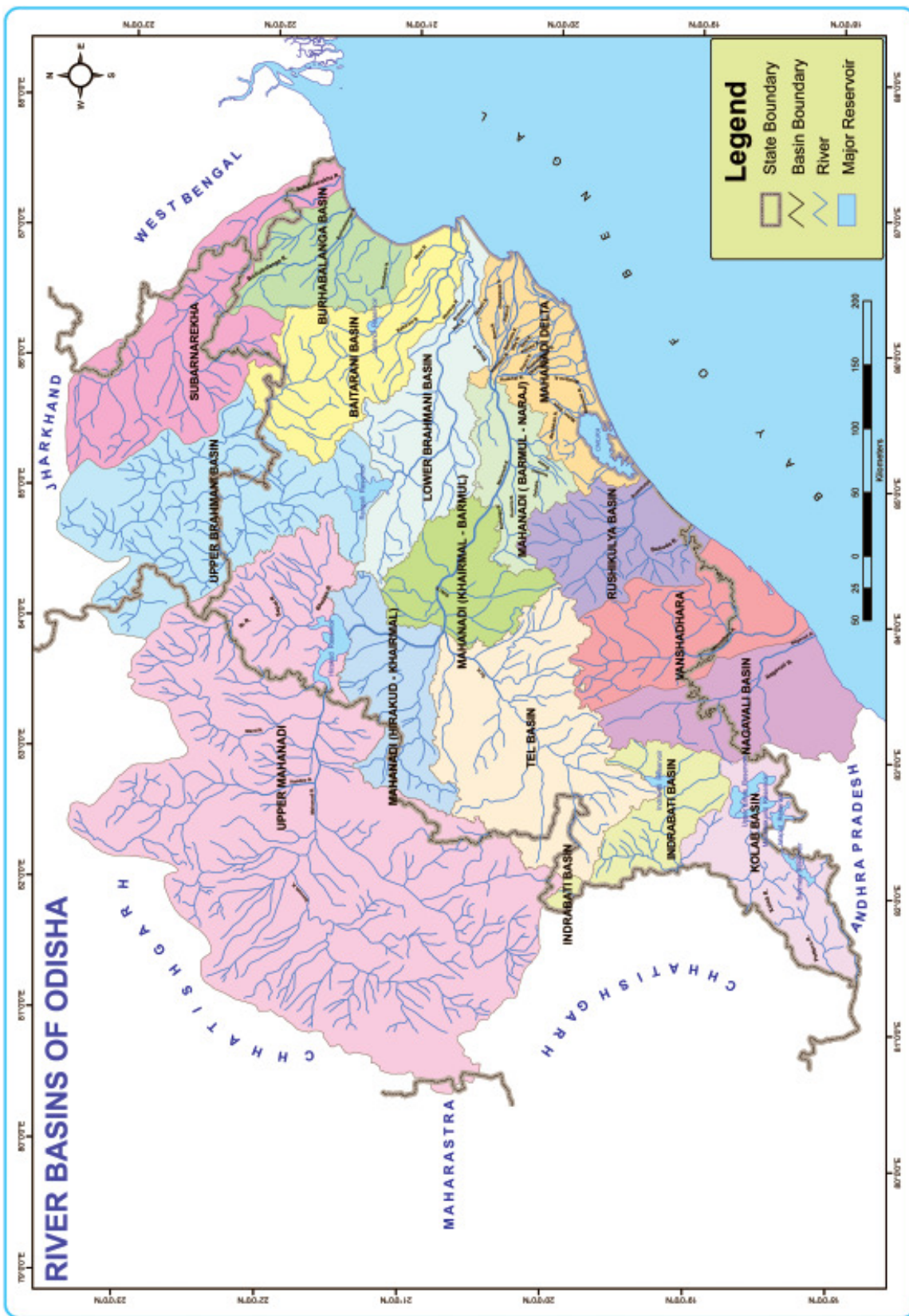
### Water & Land Management Institute

This autonomous organization was set up in 1996 to impart advanced training to officers and farmers associated with irrigated agriculture activities. Besides, this organization is also involved in research and consultancy activities pertaining to land, water and crop management.

### Odisha Construction Corporation Ltd. (OCC)

The Corporation was established in the year 1962, under the Companies Act, 1956, as a wholly owned Government of Odisha enterprise to undertake construction activities mostly related to hydraulic structures viz. Dams, Barrages, Canals, etc . Later, the activities of this Corporation are extended to the field of construction consultancy and IT services.

For sustainable development and management of water resources in the state, the Department of Water Resources has taken a number of initiatives. This Annual Report presents an account of activities undertaken by the Department during the year 2016-17.



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