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Enabling Environment for Water Security: Mapping the National and State Government Institutions in India

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DISCLAIMER

This document is a work in progress, based on responses received to an e-survey and secondary research. If you have more information, kindly write to Shiny Saha (shiny@ircwash.org) and Trisha Agarwala (trisha14@gmail.com).

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TABLE OF CONTENT

Abbreviations	3
Figures & Tables	3
Introduction	4
Overview	5
Institutions	6
Coordination Mechanisms at the Centre and State level	7
Key Government Programmes and Schemes in Water Security	8
Challenges in Planning and Implementation of Water Security	9
Monitoring Mechanisms	
Tables & Figures	

Table 1: Institutions at the Central government level

Table 2: Institutions at the state government level- Bihar

Table 3: Institutions at the state government level- Odisha

Table 4.1: Government Commissions/Boards at the Central government level

Table 4.2: Government Schemes at the Central government level

Table 5: Government programmes and schemes in Bihar

Table 6: Government programmes and schemes in Odisha

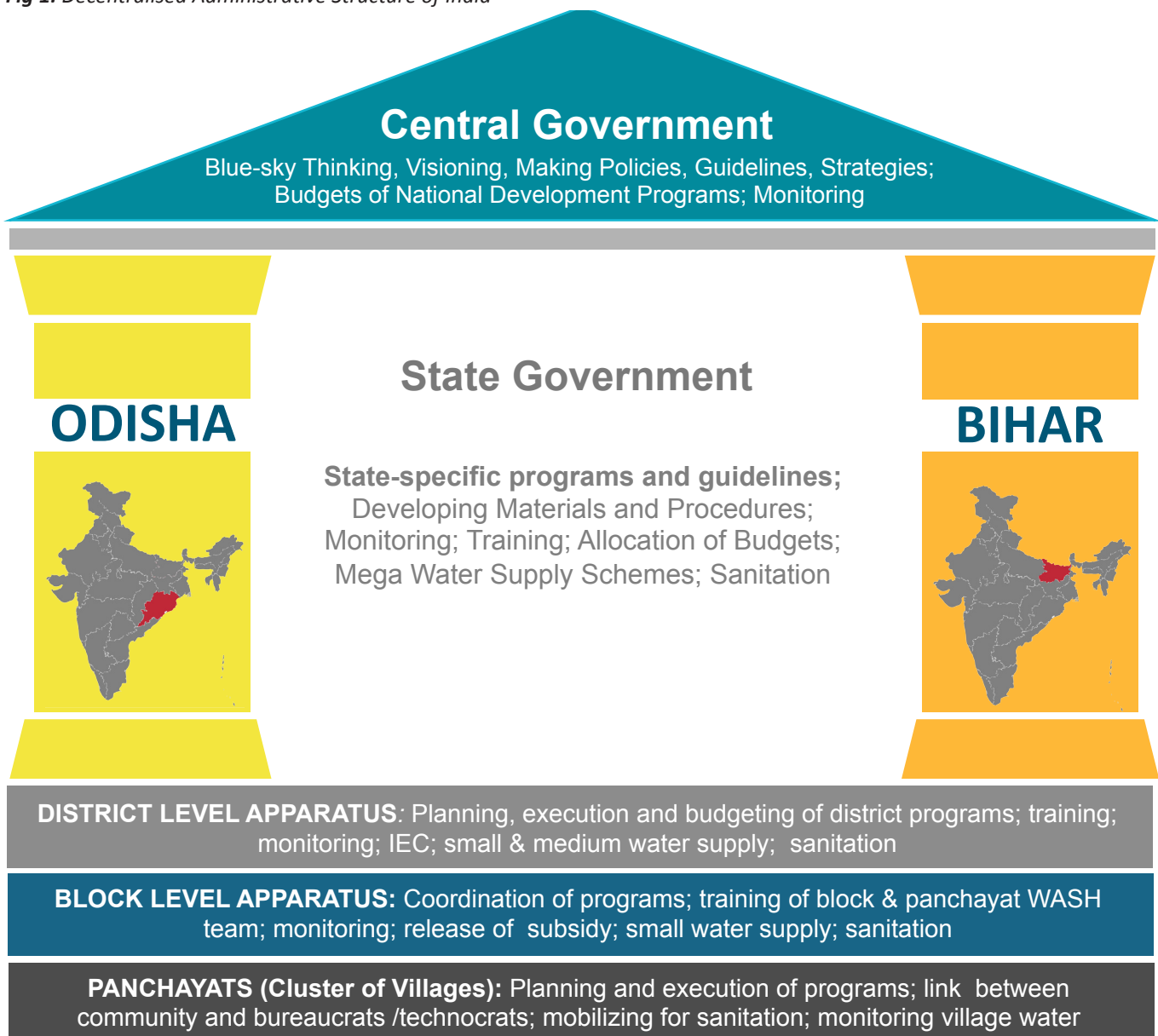
Fig 1: Decentralised administrative structure of India

Enabling Environment for Water Security: Mapping the National and State Government Institutions in India

INTRODUCTION

This document provides an overview of the national and state level institutions engaging with water supply and resources, with a particular focus on rural. It is an attempt to provide possible entry points for water security, especially on source sustainability of water supply for drinking and domestic purposes. The document is based on secondary research and inputs received from experts in the field of water resources (specializing in ground water, wetlands, etc.)¹.

Fig 1: Decentralised Administrative Structure of India²



Water security can be defined as sustainable access to adequate quantities of acceptable quality water for sustaining livelihoods, human well-being, and socio-economic development, for ensuring protection against water-borne pollution and water-related disasters, and for preserving ecosystems in a climate of peace and political stability (UN-Water, 2013 in Wetlands International, 2017).





Simply put, for WASH sector practitioners, Water Security implies sustainability of fresh water source for communities to be ensured with various sectors from wetlands, forests, groundwater, irrigation, etc. As water is a multi-sectoral issue and has multiple uses such as domestic, agricultural and industrial, it would be useful to assess the various budgetary sources both at the Central as well as state government level that go into funding the many schemes and programmes around it. Based on experts from different sectors, this document intends to capture a bird’s eye view of the key institutions, policies, programmes, coordination mechanisms and key challenges in the area of water security at the national level and at the state level (Bihar and Odisha).

In India, water is a state subject. It falls in the ambit of the state to initiate and implement policies and programmes as well as provide budgets to manage and secure water resources. The centre provides policies, guidelines and budgets for Centrally Sponsored Schemes to support the state initiatives in the provision of water to all, for different uses. (Fig.1)

Institutions

The formal institutional arrangements at the national and state level, focussing on Bihar and Odisha states, are presented below. We have also looked into the coordination mechanisms amongst the organisations. The

Table 1: Key Institutions and their respective roles at the Central government level

	<p>Ministry of Agriculture and Farmers’ Welfare (http://agriculture.gov.in/) This ministry is the apex body for formulation and administration of the rules and regulations and laws related to agriculture in India. Its three broad areas of engagement include – promotion of agriculture, food processing and co-operation.</p>
	<p>Ministry of Environment, Forest and Climate Change (http://moef.gov.in/) The ministry is the nodal agency in the administrative structure of the Central Government for planning, promotion, co-ordination and overseeing the implementation of India's environmental and forestry policies and programmes.</p>
	<p>Ministry of Jal Shakti (http://mowr.gov.in/) Ministry of Jal Shakti, a ministry under the Government of India, is the apex body for formulation and administration of rules and regulations relating to the development and regulation of the water resources, water supply and sanitation in India. It was formed in May 2019 by merging two erstwhile ministries: the Ministry of Water Resources, River Development & Ganga Rejuvenation and the Ministry of Drinking Water and Sanitation.</p>
	<p>Ministry of Rural Development (https://rural.nic.in/) The Ministry of Rural Development is the nodal ministry for most development and welfare activities pertaining to rural India. Its objective is to achieve sustainable and inclusive growth of rural India with a focus on eradication of poverty through livelihood generation, infrastructure development (including enhancement of rural connectivity and provision of basic housing), provision of social assistance (to the elderly, widow and disabled persons), restoration of land productivity, and more.</p>

Source: Websites of various Union government ministries, Govt. of India

institutions at the Central and state government level were arrived at through their respective budgetary allocations in the various departments that would potentially lead to water security (Table 1).

The institutions at the state government level were arrived at through their respective budgetary allocations in the various departments that would potentially lead to water security (Table 2 & 3).

Table 2. Key Institutions and their respective roles at Bihar state government level³

<p>Department of Agriculture (http://krishi.bih.nic.in/) The department focuses on increasing productivity of major crops.</p>	<p>Public Health Engineering Department (http://www.phed.bih.nic.in/) The objective of the department is to provide pure drinking water facilities and maintain them. It is responsible for water quality, sanitation facilities and services critical to enhance public health and improve human development outcomes, especially for rural households.</p>
<p>Building Construction Department (http://bcd.bih.nic.in/) The basic objective of the department is construction, renovation, upgradation and maintenance of residential and non-residential government buildings of different departments.</p>	<p>Department of Revenue and Land Reforms (http://lrc.bih.nic.in/) The department is engaged in collection of land revenue, maintenance of land records, acquisition of land for public works, survey and demarcation of land, conservation, lease and transfer of government lands, and management and control of natural resources.</p>
<p>Disaster Management Department (http://disastermgmt.bih.nic.in/) It is the nodal agency for information and gap analysis for the people of Bihar during the natural and human emergencies. The department facilitates prevention and recovery from disasters, such as floods and droughts.</p>	<p>Rural Development Department (http://rdd.bih.nic.in/) The department implements the following schemes: Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), Pradhan Mantri Awaas Yojana Gramin (PMAY-G), Deendayal Antyodaya Yojana – National Rural Livelihood Mission (DAY-NRLM), Lohiya Swachh Bihar Abhiyan (LSBA), National Rurban Mission (NRuM). Of these flagship schemes, MGNREGS and LSBA have direct bearing on water resource management. MGNREGS entails undertaking public works pertaining to natural resource management. LSBA, taking the mandate of Swachh Bharat Mission (SBM) forward, aims to make rural Bihar open defecation free.</p>
<p>Department of Environment, Forest and Climate Change (http://forest.bih.nic.in/) The objectives of the department are to maintain environmental stability and ecological balance, conservation of natural heritage and endowments, increase substantially forest/tree cover, meet the requirements of the growing population, and encourage efficient utilization of wood and to maximize wood substitution.</p>	<p>Water Resources Department (http://wrd.bih.nic.in/) The department protects the right of the state in sharing water of interstate rivers/basins. The field of operations of the department are construction, maintenance and regulation of major and medium irrigation projects, flood control and drainage works. The department was earlier known as the Irrigation Department.</p>
<p>Minor Water Resources Department (http://minorirrigation.bihar.gov.in/) This department looks into minor irrigation projects i.e. surface water and ground water having culturable command area (CCA) up to 2000 hectares.</p>	
<p>Panchayati Raj Department (http://www.biharprd.bih.nic.in/Home.aspx) The Panchayati Raj Department ascertains that the powers assigned to Panchayats are not misused and they become partners in overall development of villages. In addition to appropriate devolution of funds received from the central and state government for development purposes, the department keeps a close watch on regular maintenance of accounts of Panchayats and audit thereof as well as due disposal of audit objections.</p>	

Table 3. Key Institutions and their respective roles at Odisha state government level

<p>Department of Agriculture and Farmers' Empowerment (https://agriodisha.nic.in/) The department is responsible for agriculture, horticulture, soil conservation and watershed mission.</p>	<p>Rural Development Department (http://rdodisha.gov.in/) The function of the department is to provide connectivity to unconnected rural habitations in rural areas and maintain the rural roads and government buildings in rural areas. Earlier the department was responsible for rural water and sanitation, which in 2017 was transferred to the Panchayati Raj department.</p>
<p>Department of Forests and Environment (https://forest.odisha.gov.in/) The department undertakes different activities for protection, regeneration and extension of forest and tree cover in the state in participatory mode with involvement of local people for ameliorating the micro-climate as well as environmental management and conservation.</p>	<p>Department of Steel and Mines (https://www.odishaminerals.gov.in/) The department works for the development of the mineral resources of the state. It also encourages and provides support for value addition and end-use of minerals in the state. Thereby creating facilities for employment, socio-economic development and fetching more revenue for the state.</p>
<p>Panchayati Raj and Drinking Water Department (https://odishapanchayat.gov.in/English/index.html) The thrust of policies and programmes of the department is on all round economic development and social justice through empowerment. The activities of the department centre around rural development, including implementation of drinking water programmes [such as Jal Jeevan Mission (JJM) and Buxi Jagabandhu Assured Water Supply to Habitations (BASUDHA)], MGNREGS, National Rural Livelihood Mission and Gopabandhu Gramin Yojana.</p>	<p>Department of Water Resources (http://www.dowrodisha.gov.in/) The department deals with formulation of state water plans and policies, implementation of major, medium and minor irrigation projects and their operation and maintenance. It is also involved in exploration and regulation of ground water, construction of field channels, construction of hydraulic structures (dams, barrages, canals, etc.), construction of community lift irrigation projects, deep borewells, shallow tubewells, micro river lift projects. Further, the department engages in research and provision of training on land, water and crop management.</p>
<p>Revenue and Disaster Management Department (http://revenueodisha.gov.in/) The department's functions are two fold – it solves problems related to land, such as providing land to the landless and protecting government land. And, it provides immediate relief to the people affected by various calamities (such as floods, droughts, cyclones, hailstorms, earthquakes, fire accidents, etc.) and initiates relief, rescue, rehabilitation and restoration work.</p>	

Source: State budget documents & websites of various departments, Govt. of Odisha

The above departments/institutions selected for the two states-Bihar and Odisha- have been based on their obvious and traditional role in providing access to drinking water - such as Departments of Panchayati Raj and Drinking Water, Public Health Engineering , Rural Development and others such as Department of Minor Water Resources, Rural works, Agriculture & Farmers Empowerment and Forests and Environment which could potentially contribute to water security.

Coordination Mechanisms at the Centre and state level

The complex nature of water security and its interlinkages with other agencies require coordination mechanisms and structures for its multiple actors. At the Central level, the ministries have different roles and responsibilities through which they support each other. Further, Steering Groups and Joint Committees are also partly involved in coordination.

At the state government level, in this case - Odisha & Bihar - coordination takes place through Steering Committees, Joint Working Groups. Other processes such as interdepartmental meetings for projects are conducted by interdepartmental committees.

Key government programs & schemes directly or indirectly touching upon Water Security

The government introduces schemes and programmes for development and protection of different sections of the society and the natural resources of the country and the states. The schemes/Commissions/Boards could be either Central, state specific or a joint collaboration between the Centre and the states. The budgetary allocations towards the Schemes/Commissions/Boards at the Central and state government level which would potentially lead to water security were used as a basis for selection (Table 4.1, 4.2, 5 & 6).

Table 4.1 Government Commissions/Boards at the Central Government Level

Concerned Ministry	Commission/ Board
Ministry of Jal Shakti	Bansagar Control Board
Ministry of Jal Shakti	Central Ground Water Board
Ministry of Jal Shakti	Central Water Commission
Ministry of Jal Shakti	Sardar Sarovar Construction Advisory Committee
Ministry of Jal Shakti	Upper Yamuna River Board

Source: Union Budget documents & websites of various Ministries, Govt. Of India

Table 4.2 Government Schemes at the Central Government Level¹¹

Concerned Ministry	Commission/ Board
Ministry of Jal Shakti	Atal Bhujal Yojana
Ministry of Environment, Forest and Climate Change	Conservation of Natural Resources and Ecosystems
Ministry of Environment, Forest and Climate Change	Decision Support System for Environmental Awareness Policy Planning & Outcome Evaluation
Ministry of Jal Shakti	Flood Management Programme
Ministry of Rural Development	Integrated Watershed Development Program
Ministry of Jal Shakti	Jal Jeevan Mission (JJM)
Ministry of Rural Development	Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS)
Ministry of Agriculture and Farmers' Welfare	National Horticulture Mission (sub scheme of Mission for Integrated Development of Horticulture)
Ministry of Jal Shakti	National Mission for Clean Ganga
Ministry of Environment, Forest and Climate Change	National River Conservation Plan
Ministry of Jal Shakti	National Water Mission
Ministry of Agriculture and Farmers' Welfare	Pradhan Mantri Krishi Sinchayee Yojana
Ministry of Jal Shakti	River Basin Management
Ministry of Jal Shakti	River Management Activities and Works related to Border Areas
Ministry of Jal Shakti	Sutlej-Yamuna Link Canal

Source: Union Budget documents & websites of various Ministries, Govt. Of India

Table 5. Government programmes and schemes in Bihar

Bihar
Forest Conservation Programme
Jal Jeevan Hariyali Abhiyan
Mukhyamantri Saat Nishchay Yojana
Neer Nirmal Pariyojana
Wetlands Restoration Programme

Table 6. Government programmes and schemes in Odisha

Odisha
Buxi Jagabandhu Assured Water Supply to Habitations (BASUDHA)
Forest Conservation Programme
Jalanidhi
Wetlands Restoration Programme

Source: Websites of various Departments, Govt. of Bihar & Odisha

Challenges in planning and implementation of water security related schemes

Planning and implementation of water security related schemes face several challenges due to its complex nature and involvement of a diverse set of institutes and stakeholders. Some of the challenges, as identified by our group of experts, are given below:

- The lack of role clarity, competing priorities, inadequate staffing in various departments implementing water security schemes all prove to be a hindrance. Further, deficiencies in internal coordination and coordination with other relevant ministries/departments create confusion. Additionally, there is inadequate understanding of water security as a concept amongst the implementing agencies.
- The poor understanding on multiple uses of water and multiple sources of water required to meet water needs also prove to be a challenge. The scope of water security related schemes is usually not confined to one department. However, departments usually function in silos, such that the schemes are implemented by a single department. This, in many cases, causes the larger goal of water security to be unmet.
- The lack of regulation on ground water usage is another serious impediment on planning and implementation of water security schemes. In the absence of any regulation, there is over exploitation of ground water reserves, with most of the population being dependent on it for domestic needs as well as for agricultural and industrial purposes.
- The scarcity of river basin institutions in the country is another impediment to water security. The importance of appropriately creating and disseminating scientific data pertaining to the river system, the need for state level governance bodies for integrated river basin management, and the necessity to address coordination issues throughout project planning and implementation cannot be undermined. There is therefore a critical need to strengthen river basin institutions.
- Knowledge on implementing technically sustainable WASH programmes is weak. This is especially so in the rural water sector, which has suffered so far from a lack of continuous institutionalized support and a programme for strengthening capacity. By focusing on a project mode of delivery, focus in rural water has been limited to infrastructure planning and implementation, and not on building capacities to manage the same. There is a need to clearly define the role and responsibilities of the various stakeholders – the concerned institutions, line departments, PRIs and the community – as well as invest in building their capacities to manage the same.

Monitoring Mechanism

Monitoring is the basis for the information feedback loops that ensure effectiveness and allow adaptive change. At the national level the two key monitoring systems are – the Integrated Management Information System (IMIS) and the Program Management Information System (PMIS). IMIS of the Jal Jeevan Mission is a comprehensive database for rural water, based on annual monitoring of drinking water coverage, water quality and other related aspects. The PMIS of the Ministry of Electronics and Information Technology is a web-based, centralized tool for monitoring and evaluation of the physical, financial and outcome parameters of the Mission Mode Projects. Further, the Development Monitoring and Evaluation Office of the NITI Aayog, has the mandate to monitor progress and efficacy of strategic and long term policy and programme frameworks and initiatives. It also monitors and evaluates the implementation of programmes and initiatives, including the identification of the needed resources so as to strengthen the probability of success and scope of delivery. Some states, in addition, have their own project monitoring units, however data on water security is not available.

References

1. Wetlands International, 2017. WASH and Water Security. Integration and the role of civil society. Wetlands International, The Netherlands

Endnotes

1. The document contains the findings of an e-survey conducted by IRC-CBGA in November 2019.
2. The scope of this document is limited to mapping of institutions and schemes at the central and state level.
3. The information collected via the e-survey on Bihar was validated in meetings with officials in the state as well as through secondary research in the context of the ongoing Bihar government mission - Jal Jeevan Hariyali Abhiyaan (launched on 2nd October 2019). The purpose of the mission is management of water resources, with an aim to renovate existing water bodies and conservation of water.
4. Under Jal Jeevan Hariyali, public water bodies with surface area of more than 2 hectares are renovated by the Minor Water Resources Department or Department of Agriculture, depending on their location. Also see endnote number 5.
5. Under Jal Jeevan Hariyali, renovation of wells is to be carried out by the PHED, or Panchayati Raj department, or Minor Water Resources department, depending on their location.
6. Under Jal Jeevan Hariyali, Rural Development Department is engaged in the renovation of public water bodies in the rural areas. Public water bodies with surface area of up to 2 hectares are renovated under the Mahatma Gandhi National Rural Employment Guarantee (MGNREGA). (In urban areas the task is being carried out by the Urban Development and Housing Department).
7. Refer to endnote number 4.
8. Refer to endnote number 5.
9. In Jal Jeevan Hariyali, the department of Revenue and Land Reforms is involved in identification of all public water bodies.
10. Under Jal Jeevan Hariyali, the Building Construction department is engaged in construction of necessary structures for rainwater harvesting in government buildings. Similarly, the departments of Education and Health are engaged in building such structures in government schools and hospitals.
11. Many of the following may not be schemes but could also be committees, departments, or even themes. Hence, subject to interpretation.
12. MGNREGS has an indirect bearing on water security for which a separate briefing note will be made available.
13. www.ksndmc.org
14. www.bengaluru.urbanwaters.in