



# IRC

## A baseline of the strength of the WASH system in India

January 2018

Supporting water sanitation  
and hygiene services for life



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## Acronyms and abbreviations

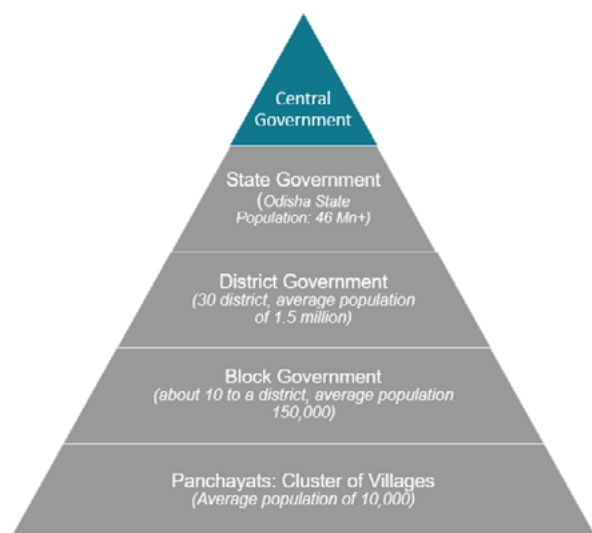
<b>IMIS</b>	Integrated Management Information System
<b>JMP</b>	WHO/UNICEF Joint Monitoring Programme
<b>PHEO</b>	Public Health Engineering Organization
<b>RWSS</b>	Rural Water Supply and Sanitation
<b>SBM</b>	Swachh Bharat Mission
<b>SDM</b>	Service Delivery Model
<b>SDG6</b>	Sustainable Development Goal, Target 6
<b>SLB</b>	Service Level Benchmark

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## Executive summary

This baseline study for India investigated the national, state and district level information and data on drinking water, sanitation and hygiene. The block/district selected for the IRC's intervention is Chatrapur block in Ganjam district of Odisha state. The objective of this exercise was to understand the existing information/data for drinking water, sanitation and hygiene from a system's approach perspective at the different levels of administration.



**Figure:** Administrative setup in India (Source:IRC).

Chatrapur block was selected as it is in the same district as the Watershed project.

The baseline process involved discussions on the Building Block tools by the India country programme team – Ingeborg Krukkert, Ruchika Shiva and Shiny Saha. The baseline study is based on a review of sector documents, and in-country experience and was validated at a workshop in Bhubaneswar (capital city of Odisha state) where key NGOs are headquartered. The validation workshop included participants from NGOs working in Ganjam district – Gram Vikas and Gram Utthan – and a retired senior official from the water and sanitation sector.

In the validation workshop, stakeholders mapped service delivery models, identifying service authorities, service providers, regulations (legislations, policies, standards, bylaws) for water, sanitation and water resources in urban and rural areas. Participants shared existing monitoring mechanisms and learning and adaptation platforms at the different levels (national, state and district).

India, made up of 29 states and seven union territories, has a federal structure, whereby sector are distributed between the union and the states. Water and sanitation are a state's responsibility. At the union level, there

are two ministries responsible for drinking water supply and sanitation, these ministries are different for rural and urban. The ministries provide policies, guidelines and have a monitoring system. There are also centrally sponsored schemes at the union level like the National Rural Drinking Water Programme and the Swachh Bharat Mission (SBM) (rural and urban). Water quality and social exclusion issues are included in these centrally-sponsored schemes. Responsibility for hygiene is spread across various national ministries or line departments at the state level. Other education and health facilities fall in the domain of the Ministry of Human Resource Development and the Ministry of Health and Family Welfare respectively. Another significant point of service at the village level is the Anganwadi Centres for pregnant women and children up to the age of six. This centre falls under the domain of the Ministry of Women and Child Development.

For rural Odisha, the agency responsible for providing water and sanitation services has been a parastatal body, Rural Water Supply and Sanitation (RWSS). The fourteenth Finance Commission's recommendations shifted the responsibility to the Gram Panchayat with the support of RWSS (Finance Commission, 2014). The RWSS is part of the Department of Panchayati Raj and Drinking Water at the state level. As the Gram Panchayats lack the capacity to provide water and sanitation services, they work closely with the junior engineer assigned to support Gram Panchayats and the junior engineers from RWSS in their respective areas. The focus still is mostly on coverage (78%) and the creating of new infrastructures. Little/no resources (time and investment) are made available towards issues of water quality, quantity and reliability (IMIS). For sanitation, the Swachh Bharat Mission has created momentum for higher toilet coverage at all levels. It is the Gram Panchayat that identifies households that do not have toilets and provides this list to the junior engineer for processing. The toilet coverage is still on the lower side (46%) due to issues of space, water availability for sanitation and the need to work with the communities on behaviour change for sanitation (Swachh Bharat Mission dashboard). Efforts to address this are being taken up by the local administration. In addition, there is no discussion around emptying, treatment, disposal, etc.

For urban Odisha, the responsibility of water supply and sanitation rests with the Odisha Water Supply and Sewerage Board and the Public Health Engineering Organisation (PHEO). Both these agencies fall under the Department of Housing and Urban Development of the state government.

The Odisha Water Supply and Sewerage Board is the development authority for urban areas in the state. It develops the major water and sanitation infrastructure and then hands it over to PHEO which provides services in urban areas and operates and maintains the infrastructure. PHEO is responsible for sanitation where the city has a sewer system. There is no responsibility assigned specifically for onsite sanitation.

Summary of national and district level on the building blocks												
Country: India	District: Odisha, Ganjam											
	Institutional	Legislation	Finance	Planning	Infrastructure development	Infrastructure management	Monitoring	Regulation	Learning and adaptation	Water resources management	Total score	Max score
Water Sector - National	7	6	6	7	5	1	4	3	2	4	45	84
Water Sector - District	4	5	2	4	-	2	4	3	1	1	26	74
Sanitation Sector - National	6	5	5	5	4	2	5	3	2	2	39	82
Sanitation Sector - District	4	2	0	5	-	0	5	1	1	0	18	72
Hygiene Sector - National	0	0	0	0	-	-	0	-	0	-	0	52
Hygiene Sector - District	0	-	0	0	-	-	0	-	0	-	0	44
Extra household settings - National	0	0	0	0	0	0	0	0	0	-	0	76
Extra household settings - District	0	-	0	0	-	0	0	-	0	-	0	54

The Urban Local Body (municipal cooperation/ municipality/notified area council) is responsible for solid waste management, which involves door-to-door waste collection, street cleaning, drain cleaning, etc. With the Swachh Bharat, these Urban Local Bodies are also responsible for toilet construction. In terms of general performance, urban dwellers receive a better service level. Sanitation for smaller cities means essentially on site systems. This will be studied in more detail in 2018.

Overall, the departments, both rural and urban, work in silos/isolation, without much coordination with other departments providing related services. There are no specific parameters whereby the performance of these agencies is checked other than coverage of services. The Swachh Bharat Mission, with the political backing of the Prime Minister, is pushing to reach the sanitation goal of being Open Defecation Free by Oct 2019. This push can be felt at all levels of administration.

#### The status with respect to the Sustainable Development Goals (SDGs) for water and sanitation in India

National water supply coverage was 80.3% (75.7% - rural and 90% - urban) a decade back in 2008 (JMP India, District Level and Health Survey, 2008). The sanitation coverage was at 41.1% (26.4% - rural and 74.4% - urban). The India Country Report on Millennium Development Goals in 2015, found that water coverage had increased to 87.8% (86.9% - rural and 90.1% - urban) (MDG India Country Report, 2015). At the same time, there have been studies highlighting the issue of slippage (when infrastructure becomes dysfunctional), estimating a national average of 30% slippage of schemes (Ratna

Reddy et. al., 2010). The same report found that sanitation coverage increased to 56.6% (40.6% - rural and 91.2% - urban).

The recent Joint Monitoring Programme (JMP) report found that the coverage of improved water supply is at 89.9% (89.3% - rural and 91.1% - urban) and coverage of improved sanitation coverage is at 48.4% (44.2% - rural and 93.2% - urban). This data, however, does not capture the increased coverage in sanitation with the efforts of the Swachh Bharat Mission. While there is an increase in water and sanitation coverage, the issues of quality and availability of adequate water throughout the year remain.

Similarly, while sanitation coverage has drastically improved over the decade, the issues of use, filling up of pits, emptying and disposal are to be still addressed. The SDGs are presently not being actively tracked. The indicators presently tracked in the national monitoring mechanism are on coverage. The safety aspects as required for the SDGs are not yet collected. The NITI Aayog, the government agency responsible for SDG reporting, has drafted indicators aligned to the SDGs which have yet to be approved and rolled out.

The building blocks were scored keeping in mind the national and state level systems that exist for the national level sheets. The country/state scored well in terms of existing policies, guidelines, standards, prescribed budget distribution and source security for water and sanitation. The key areas of improvement are asset management, learning and adaptation and water resource management. While these may be taken up in an ad-hoc manner at different levels, they need to be institutionalised and be used for better planning and implementation. The challenge often relates to operationalising promises made in documents, implementing these on the ground and having the human resource capacity to do this, both in terms of numbers and training.

There is no assigned ministry/agency for hygiene. It is a component within different ministries. The Ministry of Drinking Water and Sanitation in its information, education and communications promotes hygiene messaging at the community level. The Ministry of Human Resource Development, as part of the Swachh Bharat Mission, promotes hygiene messaging in schools. The Ministry of Health and Family Welfare looks at hygiene in health facilities. The Ministry of Women and Children Development, through the Anganwadis of the Integrated Child Development Scheme, promote hygiene messages to young girls, pregnant women and children up to the age of six. The health data to some extent captures hand washing practices. This can be seen in the National Family Health Survey (2015-16).

Overall, the coverage of water and sanitation services has been increasing at the national, state and district levels. This may not imply an increase in service levels for water and sanitation service/ongoing services but would surely imply that there are an increased number

of communities that have better/improved water and sanitation services. This community experience coupled with the devolution of responsibilities for basic service to the Gram Panchayat creates an environment where better services are demanded and received by communities. However, it is crucial to build the capacities of the Gram Panchayats to provide them with a better service delivery mechanism for improved (ongoing) services.

The IRC India country programme will be looking into finance processes with our partner to further understand the functioning of urban water and sanitation service, health facilities and school WASH services.

# 1 Introduction

This document provides the results of the assessment of the strength of the WASH system in India and forms the basic guide for IRC's India country programme.

IRC's strategy is guided by a long-term theory of change (Figure 1) that provides guidance to the programmes on achieving our goals at the district, national and global levels. The term district is used here as reference for the governance level where usually the function of the service authority is placed. In the case of India this is the block or district level.

A key lesson learned that guides the theory of change is that a presence at the national level must be matched with a presence at the district level. If it is not, it is difficult to ensure that high-level interventions in policy and learning are leading to real improvements in services. It also makes it difficult to fully test the effectiveness of interventions along the entire service delivery chain.

IRC has expanded its decentralisation strategy from the national to the district level: we will adopt partner districts within focus countries and commit to partnering with those districts until they achieve universal access to WASH services.

We will work in long-term partnerships in districts, led by local government and involving other district partners, and help them to achieve and maintain their vision of universal access. We will take the lessons learned from these districts and bring them to the national level - helping to create the environment needed to enable replication and sustainability.

We will use district-level progress as a proof of concept (that universal access can be achieved) to promote a move towards universal access at the national level and encourage replication and adoption in other districts. We will then take what we have learned from the districts in our focus countries into the global development forum.

and achieve impact. Initially, IRC championed service delivery as a competing narrative to the infrastructure-based paradigm of the Millennium Development Goals. Today, IRC emphasises the need for strong WASH systems to deliver lasting WASH services and meet the Sustainable Development Goals<sup>1</sup> (Huston et al, 2018).

The purpose of the baseline of IRC's country programmes is to provide a solid ground for collective sector action. The baseline is the result of a thorough analysis of the WASH system by IRC and key partners in both the partner districts and at the national level. It guides the strategic planning and actions and is the reference for monitoring WASH systems strengthening.

## Structure of the document

After the introduction, section 2 provides a summary of the conceptual and methodological frameworks for monitoring IRC's theory of change. Section 3 provides the assessment of the strength of the WASH system. This starts with a description of the WASH sector, the institutional set-up and the service levels for water, sanitation, hygiene and extra-household settings. The second part of this section provides an assessment of the strength of the nine building blocks of the WASH system. Section 4 describes the scoring related to the behaviour of the actors in the WASH sector. Section 5 provides the main conclusions based on the different assessments.

Figure 1: Change logic of IRC's Theory of Change 2017-2030



Figure 1 shows how IRC seeks to act as a change hub to strengthen WASH systems to improve service levels

<sup>1</sup> For a more detailed theory of change, please see IRC Strategy Framework 2017-2030. Available at: [www.ircwash.org/sites/default/files/084-201706strategy\\_doc\\_v1.0defprint.pdf](http://www.ircwash.org/sites/default/files/084-201706strategy_doc_v1.0defprint.pdf)



## 2 Concepts

This section presents the main concepts used in the study and describes how they are used within the scope of the baseline study.

### 2.1 Theory of change and theory of action

The 14-year (2017-2030) strategy and theory of change that maps out IRC's intended contribution to achieving the Sustainable Development Goals (SDGs) has at its heart a commitment to supporting partner districts in our focus countries to achieve universal access with (at least) basic water, sanitation and hygiene services. Success at district level will be used to provide the necessary proof of concept for adoption and replication of lessons learned at the national and global levels.

### 2.2 Results framework

The results framework maps out the outcomes (changes) that we think are most critical for the sector to deliver WASH services and IRC's contributions to those outcomes. The sector outcomes are formulated generically and are designed to measure the development of the WASH system at the district and national levels. The IRC programmes formulate and plan, as part of their strategies and annual plans, context specific outcomes and outputs that contribute to these generic WASH system outcomes. Given the understanding that sector strengthening requires collective action by multiple WASH actors, and IRC's desire to play a role in supporting the partnerships that will deliver this collective action, much of IRC's impact will be in the form of contribution to shared outcomes. As a consequence, directly attributing outcome level change to IRC activities is difficult and is often counter-productive.



**Figure 2:** WASH sector theory of change and IRC's theory of action

IRC's theory of change is based on the understanding that providing universal and sustainable access to WASH services requires strong national and local WASH systems. It is equally based on the understanding that building strong WASH systems requires collective action by all those involved. IRC's priority actions are, therefore, designed to support partnerships for collective action for WASH systems strengthening, while also contributing directly to systems strengthening where IRC has specific technical competencies (IRC, 2017).

At country level, IRC's theory of change is basically a WASH sector theory of change (Figure 2). The theories of action of the IRC programmes are presented in five-year strategic plans and annual plans. The five-year strategies are renewed every 2.5-3 years because a five-year time horizon is still quite long for a realistic planning perspective.

At a high level, the main logic that underpins IRC's approach is set out in Figure 3. IRC's entire theory of change is underpinned by the understanding that building strong WASH systems requires collective action by all the key actors within the system. As such, building and supporting strong, government-led alignment of partners dedicated to change is at the heart of the theory of change. WASH sector stakeholders who identify, agree, support and enable each other's change and strengthen each other's roles are the basis for strong national WASH systems that ensure sustainable services to all. In the three outcome levels monitored by IRC's results framework, we assume (as a given) that WASH service for everyone positively affects health, livelihood and development (= impact) in many ways and is therefore, in itself, not a focus of the framework.

IRC's theory of change (see diagram Annex 1) identifies five principal WASH outcomes for our partner districts, five outcomes for the national WASH sector in our focus countries and three for the global level.



Figure 3: Outcome levels of IRC's results framework

## 2.3 Monitoring WASH sector change

### 2.3.1 Monitoring the alignment of actors with systems approaches: measuring behaviour change

Crucial for achieving the outcomes of the theory of change is that the actors are able and willing to perform the required activities in all building blocks of the WASH system. For both the district and the national levels, IRC's theory of change identifies four key behaviour change outcomes achieved by adoption of WASH systems approaches, which together contribute to the fifth outcome of building strong systems needed to deliver services (see next section). The four behaviour change outcomes are: strong political and financial commitment; strong partnerships for change; strong service delivery models; and strong capacity of the key actors.

IRC contributes to each of these outcomes associated groups of related activities. A crucial set of activities and one where IRC believes it has a unique set of skills relates to be hub for sector change – that is, an organisation that supports others in change focused partnerships.

The four outcomes are measured using Qualitative Information System (QIS) ladders and are scored separately for each WASH sub-sector at the national level. For the (partner) district level, the scoring is done for the WASH sector as a whole, because at this level it is mostly the same group of actors who are collaboratively responsible for the different WASH sub-sectors.

### 2.3.2 Monitoring the strength of national and district WASH systems

The fifth outcome of the IRC theory of change is the overall strength of the WASH system. The building blocks are a way of breaking down the complexity of the entire WASH systems into more manageable chunks that make intuitive sense to sector practitioners. Within each building block the WASH actors interact with each other and work together to become a strong building block or element of the WASH system. IRC has defined a set of building blocks based on its experience with local and national WASH systems.



Figure 4: Building blocks of the WASH system

For the water and sanitation WASH sub-sectors, each building block is evaluated and scored separately at the district and the national levels. For the WASH sub-sectors hygiene and extra-household settings, the scoring uses only five building blocks.

For the scoring of the water and sanitation building blocks, four to six 'scoring statements' have been defined for each building block. The WASH sub-sectors hygiene and extra-household settings use only one assessment statement per building block.

### 2.3.3 WASH services monitoring

For monitoring WASH service delivery, the IRC programme aims to follow the SDG 6 indicators with the more detailed definitions and ladders of the JMP. Ideally, national and local actors through country-led monitoring do the data collection and monitoring of the quality of service delivery. But in practice, country monitoring systems don't yet collect data using JMP indicators, or often even their own on a regular basis. For the national level, the available national surveys are translated by the JMP. In our partner districts, the same translation methodology cannot be used because often only facility-based data exists and there is no (or limited) household-level data available. In 2018, IRC in collaboration with the local authorities started translating locally available data into values for the JMP indicators. In the coming year, we will also start analysing the financial gaps in the partner districts and develop financial strategies for realising the district master plans.

## 2.4 Political economy and country characteristics

The WASH system (and IRC's theory of change) is influenced by a broad set of factors and relations which are not directly part of the WASH system. In the sector this is often referred to as the enabling environment. We choose the term political economy to put the focus on how the WASH system is influenced instead of a more neutral description of the environment. The factors of the political economy surrounding the sector are potentially very large. We therefore focus primarily on three which we have identified as priorities, but countries may add other if they find them more relevant.

1. Decentralisation. This refers to the extent to which the responsibility for public service delivery in general is decentralised to the local level and the powers that are vested in the decentralised level. In addition, it refers to the extent to which there is a fiscal decentralisation, i.e. the capacity of local authorities to raise their own revenue or dependence on transfers from the national level.
2. Public financial management. This refers to the relative size of the tax base of the country and the way in which this tax revenue is prioritised for different sectors including WASH. It also refers to the extent to which a country obtains finance for investments, for example by the issuing of bonds.

3. Aid dependence. This relates to the relative size of aid as a percentage of GDP, whether this comes in the form of grants or loans and the sectors to which this aid is directed.

The above factors depend, in turn, on a number of key characteristics of the country. For this study, we focus on:

1. Demographics. This refers to the relative size of the urban population in a country and the main trends in growth of the population of this segment.
2. Economy. The analysis of the economy focusses on the per capita GDP, changes therein and expectations for the future.
3. Poverty. The analysis of this is focussed on the degree of poverty, particularly in urban areas and trends therein.
4. Geography. The main geographical factor of interest to this study is the availability of water resources and the degree of water scarcity.

Both the political economy factors and country characteristics are analysed in a qualitative manner based on secondary data. There is no scoring attached to these analyses.

## 2.5 WASH sub-sectors

The acronym WASH, adopted in the early 2000s to replace the more prosaic WatSan, unites the three linked aspects of health and water-related social services. This conveys the message that achieving health benefits depends on three mutually reinforcing aspects: clean water, safe sanitation and changed hygiene behaviours. In reality, however, the WASH system involves actors working in separate silos. Particularly in rural areas, drinking water and sanitation have often followed quite different development paths, to the extent that they are hardly linked at all. This is most visible in service delivery models that take a communal approach for water but a household approach for sanitation (Huston et al., 2018).

In IRC's theory of change and assessment of strength of the WASH system, we have in most cases separated WASH into four sub-sectors: water, sanitation, hygiene and extra-household settings, following the JMP WASH sub-sector categories for the SDG service ladder indicators. For monitoring, like JMP, the extra-household settings sub-sector is split between WASH in schools and WASH in health care facilities.



## 2.6 Service delivery models

The actual delivery of services takes place through different service delivery models (SDMs) including different types of utility models and direct provision by local government or community management for water services. For sanitation, different models are household managed, private or local government (public toilets) or utility models for sewerage systems. Hygiene and extra-household services we understand conceptually as a sub-sector with one service delivery model. The performance of these service delivery models depends in the first instance on several internal factors within the operations of each provider but also depends strongly on the behaviour of all actors including the service authority and the users of the services. In section 3.3 the most relevant SDMs for the India baseline study are discussed.

The assessment of the SDMs consists of providing a narrative description of the types of service delivery models that are present in the country for the different WASH sub-sectors and the main variants in use. It provides statistics on the use of these SDMs and also provides and comments on the statistics of the performance of the different service providers, as far as these statistics are available from different secondary sources. The analysis doesn't include primary performance data collection.

## 3 Assessment of the strength of the WASH system

### 3.1 Data collection

Data collection is undertaken by:

- Desk study of relevant sector reports and documents including:
  - National Rural Drinking Water Programme Guidelines
  - Swachh Bharat Mission Guidelines (rural and urban)
  - Public Health Engineering Organisation Manual
  - National Faecal Sludge and Septage Management Policy
  - Odisha Public Services Delivery Act-2012
  - Procurement documents on the state website
  - State guidelines and policies for urban service delivery mechanisms
  - Millennium Development Goals India Country Report, 2015
  - National Education Policy, 1992
  - Right to Education Act, 2009
  - Swachh Vidyalaya Guidelines
  - National Policy on Health, 2017
  - National Accreditation Board for Hospital Guidelines for Community Health Centres, Primary Health Centres and Sub-Centres
  - Odisha at a glance, 2017
  - Odisha Economic Survey, 2014-15
  - Ganjam district profile
  - State's Water Resources: An Overview
- Review of databases including:
  - Integrated Management Information System (IMIS) dashboard
  - Swachh Bharat Mission dashboard
  - Swachh Vidyalaya dashboard
  - Census of India, 2011
  - Swachta Survekshan, 2017
- Semi-structured interviews with key stakeholders that make up the WASH system. The list of organisations and individuals interviewed is presented in Annex 3.
- Validation workshop in the Ganjam District capital to further map service delivery models and identify gaps in the sector.

### 3.2 Country and WASH sector context

#### 3.2.1 Demography

According to the 2011 census, the population of India is 1.21 billion and the population of the state of Odisha is 42 million. The rural and urban population distribution in Odisha is 83.3% and 16.7% respectively. The decadal growth rate of the state is 14% (11.8% in rural areas and 26.9% in urban areas). There has been an increase of

1.7% in the urban growth in the last decade. Odisha has 30 districts, 314 blocks, 2 municipal corporations, 34 municipalities and 538,845 villages<sup>2</sup>.

Ganjam district has a population of 3.5 million which is 8.4% of the state population. It has the largest rural population in the state. This district also has the largest population of scheduled castes in the state – 688,235 which is 19.50% of the district population. The scheduled castes and scheduled tribes are officially designated groups of historically disadvantaged people in India. The terms are recognised in the constitution. Ganjam also has the largest male and female rural literate population in the state – 2,210,050 which is 62.6% of the population.

The district is divided into three sub-divisions: Berhampur, Bhanjanagar and Chatrapur. It has 22 blocks, 475 Gram Panchayats, 3,250 villages, one municipality and 17 Notified Area Councils.

#### 3.2.2 Economy

According to International Monetary Fund (October 2017), India's GDP is estimated to be US\$2.439 trillion (nominal; 2017), US\$9.446 trillion (purchasing power parity; 2017) (IMF, 2017). The per capita GDP is estimated at US\$1,852 (nominal est.; 2017) and US\$7,173 (purchasing power parity; 2017). The key economic drivers are the agriculture sector, industry and the service sector.

The GDP for Odisha is estimated at US\$65 billion, with a per capita GDP of US\$820 (Wikipedia). The economic drivers are the service sector followed by industry and agriculture. The state economy is essentially service led.

The agriculture sector includes farming, animal husbandry, fisheries and forestry (Odisha Economic Report, 2016-2017). Sixty-two percent of the working population is engaged in agriculture, contributing approximately 19.91% to the gross state domestic product (Census, 2011). The major crop grown in Odisha is rice. The agriculture sector suffers from frequent natural shocks like cyclones, droughts and flash floods affecting the growth trend.

The industry sector includes manufacturing; mining and quarrying; electricity, gas and water supply; and construction. This sector contributes 36.56% of the state's GDP. Being a mineral rich state, there are large industries in steel, iron and aluminium. Mining makes up 7.8% of the state's GDP. Medium and small enterprises are focussed around repairs and providing services.

<sup>2</sup> As per India's census categories: a municipal corporation is for a population greater than 1 million, and a municipality between 50,000 to 100,000.

The service sector includes services like banking and insurance, real estate, public administration, trade, hotels and restaurants, transport, storage, communications and other services. This sector contributes the most to the state's economy – more than 43.53% of the state's GDP.

### 3.2.3 Poverty

According to World Bank estimates in 2011, 21.2% of Indians live on less than US\$1.90 a day and 58% live on less than US\$3.10 a day. The Gini coefficient for India is 33.9 (2013), and for the state is 0.31 (2009-10), suggesting low income inequality but high rates of poverty.

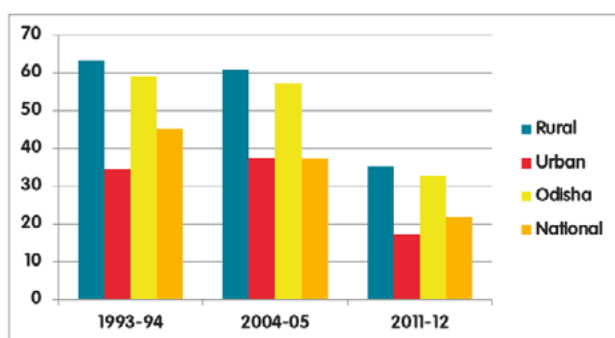


Figure 5: Percentage of population below the poverty line, 2013

Poverty remains a huge concern for this state, though in the last decade there has been a reduction in the number of people living below the poverty line as a result of various central and state level initiatives. Poverty in Odisha declined by 24.6 percentage points from 57.2% in 2004-05 to 32.6% in 2011-12. (Odisha Economic Survey 2014 -15)

Similarly, according to the Odisha Economic Survey (2016-17), the real per capita income of Odisha has increased by 30% from US\$915 in 2011-12 to US\$ 1,185 in 2016-17 (at 2011-12 prices). National per capita income grew 6.5% from US\$1489 to US\$1572.

### 3.2.4 Geography

Odisha is divided in four topographical zones – the Odisha coastal plain in the east, the middle mountainous and highlands region, the central plateaus and the western rolling uplands and the major flood plains. The state water supply suffers from high iron, chloride, fluoride and salinity together with contamination from faecal coliforms.

The state receives about 78% of the total annual rainfall from June to September and the remaining 22% from October to May. Ground water is recharged through percolation from land after rain events. The state frequently suffers from flooding, cyclones and droughts in summer. The most recent was Category 5 Cyclone Phailin which made landfall at Gopalpur in October 2013 (BBC, 2013).

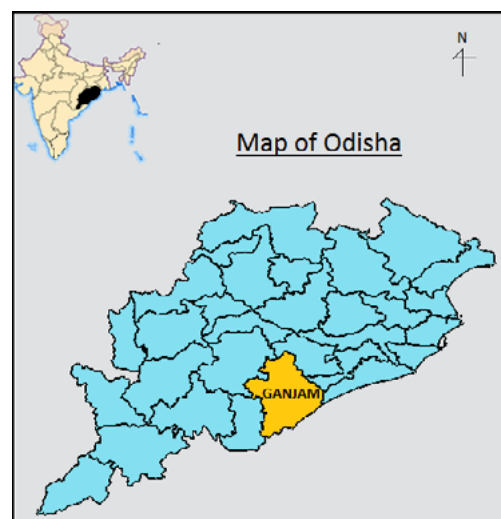


Figure 6: Map of Ganjam district in Odisha state (Tourist Spots)

### 3.2.5 Aid dependence

India is not heavily dependent on aid for social development. For state subjects/responsibilities, the centre still provides support through centrally sponsored schemes. Water and sanitation are state responsibilities and have been supported through centrally sponsored schemes, which require the state to also contribute.

In 2012-13, NGOs in the state received US\$19.66 million worth of foreign aid (Odisha Economic Report, 2014-15) for projects in education, health, livelihood initiatives, water and sanitation.

### 3.2.6 Decentralisation

Every five years a Finance Commission is appointed by the President to determine the financial distribution as well as facilitate the intergovernmental transfer of resources between the national and the state governments. One of the key recommendations of the latest commission, the fourteenth Finance Commission in 2015, was the transfer of 42% of the divisible pool of central taxes to the states. This was a 10% increase from earlier transfers. This increased devolution of funds from the central government to the states allows the latter greater autonomy in financing and designing schemes that suit their needs and requirements, giving more power to states to determine how they spend this money.

The devolution of funds also implies a change in composition of tied and untied funds provided by the central government to the states. Tied funds are those linked to specific central government programmes/schemes (such as the Swachh Bharat Mission) and untied funds are free to be used for any purpose that the state deems fit. The fourteenth Finance Commission has led to higher revenue and more untied funds being transferred to the states. At the same time, however, there has been a cut in the allocation of certain tied funds. The risk here is for poorer states, where the state government can choose to use untied funds for large infrastructure projects, instead of social development programmes.



With the heavy emphasis on devolution of funds in the fourteenth Finance Commission, it will be interesting to see how this changes processes in decision making at the state, district and the Gram Panchayat level (Shiva, 2016). One such example of the difference is where a state clearly specifies the use of untied funds for the Gram Panchayats. The untied funds are meant to be allocated by a local government body, not a higher authority. The state may intervene due to the under spending of funds, which may be due to lack of capacities of local government and/or their fear of spending on something which may not be within its scope and hence being reprimanded.

### 3.3 Institutional set-up of the WASH sector

A number of key characteristics that affect the WASH sector in India are described below. According to the 2011 census, an urban area consists of statutory towns, census towns and outgrowths:

- **Statutory towns** are those which have municipality, corporation, cantonment board or notified town area committee. Towns with population above a population of 100,000 are called a city.
- **Census towns** are those with a minimum population of 5,000; at least 75% of the male main workers engaged in non-agricultural pursuits; and a population density of at least 400 per square kilometre.
- **Outgrowths** are viable units such as a village or a hamlet or an enumeration block made up of a village or hamlet and clearly identifiable in terms of boundaries and location. Some of the examples are railway colonies, university campuses, port areas or military camps which have come up near a statutory town, outside its statutory limits but within the revenue limits of a village or villages contiguous to the town.

All areas which are not categorised as urban are considered rural. The basic unit for a rural area is a revenue village.

For rural Odisha, the agency responsible for providing water and sanitation services has been a parastatal body, the Rural Water Supply and Sanitation (RWSS). The fourteenth Finance Commission has shifted the responsibility to the Gram Panchayat with the support of RWSS. The RWSS is part of the Department of Panchayati Raj and Drinking Water at the state level. While the Gram Panchayats have been responsible for the provision of basic water services, they have lacked the capacity to provide this and work closely with the junior engineer assigned to support Gram Panchayats and the junior engineer from RWSS in their respective areas. The focus still is mostly on coverage (78%) and the creating of new infrastructures.

Little or no resources (time and investment) are made available for issues of water quality, quantity and reliability (IMIS). For sanitation, the Swachh Bharat Mission has created momentum for higher toilet coverage at all levels. It is the Gram Panchayat that identifies households that do not have toilets and provides this list to the junior engineer for processing. The toilet coverage is still on the lower side (46%) due to issues of space, water availability for sanitation and the need to work with the communities more on behaviour change for sanitation (SBM dashboard). Efforts to address this are being taken up by the local administration. In addition, there is no discussion around emptying, treatment and disposal.

For urban Odisha, the responsibility of water supply and sanitation rests with the Odisha Water Supply and Sewerage Board and the Public Health Engineering Organization (PHEO). Both these agencies fall under the Department of Housing and Urban Development of the state government. The Odisha Water Supply and Sewerage Board is the development authority for urban areas in the state. It develops the major water and sanitation infrastructure and then hands it over to PHEO which is then responsible for providing services in urban areas. Therefore, it is also responsible for operating and maintaining the infrastructure. PHEO is responsible for sanitation where the city has a sewer system. There is no responsibility assigned specifically for onsite sanitation. The Urban Local Body (municipal cooperation/municipality/notified area council) is responsible for solid waste management, which involves door-to-door waste collection, street cleaning and drain cleaning. Now, with the Swachh Bharat, these ULBs are also responsible for toilet construction. In terms of general performance, urban water supplied by PHEO is at a better service level. Sanitation for smaller cities consists essentially of onsite systems. This will be studied in more detail in 2018.

There is no assigned ministry or agency for hygiene. Hygiene is a component within different ministries. For example, hygiene lessons for children in schools are the responsibility of the Ministry of Human Resource Development and hygiene messaging and management in health facilities are the responsibility of the Ministry of Health and Family Welfare. Water and sanitation facilities in schools are the responsibility of the state education department, which reports to the Ministry of Human Resource Development. Health facilities in the state are the responsibility of the Ministry of Health and Family Welfare, which gets support from RWSS for their WASH facilities

### 3.3.1 Service delivery models for WASH

The following are the main service delivery mechanism for water and sanitation services in rural and urban Odisha.

#### Rural water

The main service delivery model in rural Odisha is through direct local government. Under this model, a government agency for water is responsible for the development and maintenance of water schemes. The community is not organised enough to lead the water management itself. There are private wells that qualify as self supply.

In villages where NGOs are active, the service delivery model is that of community management through water associations, which are commonly known as Village Water and Sanitation Committees (VWSC). This is also a model favoured by the fourteenth Finance Commission which leans towards devolution of power and finance and for the Gram Panchayat to be responsible for the planning and implementation of water services. This however is not the current model due to the lack of capacity at the Gram Panchayat/ village level.

#### Urban water

The official service delivery model is that of utility managed services. This is applicable for urban areas that qualify as municipalities. In smaller urban areas, it is the parastatal bodies that play the role of service provider. As a Notified Area Council, the parastatal (Public Health Engineering Organization) bodies are responsible for water supply in Chatrapur.

Often lower income communities are left out of this service due to issues of land tenure. In such circumstances it is the (unregulated) private sector players that provide water services.

#### Rural sanitation

Rural areas have onsite sanitation systems. In rural areas, the responsibility of the Rural Water Supply and Sanitation programme for sanitation services is limited to construction of the toilets and containment structures. These are “household private toilets, with or without disposal”.

#### Urban sanitation

The ULB along with PHEO are responsible for delivering sanitation services in urban areas including the construction of toilets and containment structures or linking the toilets to a network system for transportation, treatment and disposal through a sewage treatment plant. The official service delivery model is that of a utility/municipality managed sewer system. This is applicable for urban areas that qualify to be municipalities and have sewerage network systems.

In smaller urban areas, the sanitation systems are onsite. Urban Local Bodies (ULB) or private sector players provide emptying and transportation services. Chatrapur, being a Notified Area Council, has the ULB responsible for sanitation coverage, facilitating the SBM toilet subsidy and ensuring full coverage in their authorised area. In urban areas, there are public and community toilets which are managed by the ULB or by a private player tendered by the ULB.

The performance of service providers is assessed in the Service Level Benchmarking for urban service providers. However, this is not collected for any urban area in Ganjam district.

## 3.4 Service delivery indicators

The status of water and sanitation services at the national level was taken from the national guidelines, the relevant ministries monitoring dashboards and the 2011 census. For rural water, the detailed status was available through the ministry monitoring mechanisms, however, it is not readily accessible for urban water and sanitation. However, it is only collected and reported as and when it is required by the ministry and isn't regularly updated. The information on sanitation, both urban and rural, is limited to coverage of toilets. The number and capacity of urban water/wastewater treatment facilities was not investigated for this baseline report.

Data on urban water and sanitation services available is limited to service level benchmarks. This is collected only for cities receiving large infrastructure development programmes (like the Atal Mission for Rejuvenation and Urban Transformation) from the centre/union's urban ministry.

The data on the financing of water and sanitation is available in a fragmented manner, as funds for water and sanitation flow from the centre/union. There are also state funds allocated, these are from multiple sources. At the district level, there are funds from Members of Parliament or/and Members of Legislative Assembly, especially for rural water.

Data on hygiene is not available, as it is not seen as a separate sector/domain and is attached to other domains. Further, monitoring of hygiene within these domains is limited.

For schools and health facilities, there are guidelines from their respective ministries – the Ministry of Human Development and the Ministry of Health and Family Welfare. These ministries have their own monitoring mechanisms of facilities. For monitoring education, there is the District Information System for Education (schoolreportcards.in), which covers 1.5 million schools imparting elementary and secondary education in India annually. This covers all government schools and about 7.2 million teachers. For health, there is the District

Level Health Survey (DLHS) of which there have been four rounds: DLHS-1 in 1998-99, DLHS-2 in 2002-04, DLHS-3 in 2007-08 and DLHS-4 in 2012-2013.

The available data mostly focuses on coverage, which is the availability of infrastructure, not necessarily at the service level.

The data for water and sanitation services is available with the JMP country datasets, the national ministry monitoring dashboards and department sources at the state level. The JMP uses various government datasets which are collected regularly (census, NSSO) and others like the National Family Health Surveys, which are not collected at predetermined intervals. The latest JMP report has the data from the National Family Health Survey 4 (2015-16).

### 3.4.1 Service delivery indicators at the national level

According to the JMP report, the proportion of the population using basic drinking water services is estimated to be at 87.6% (85% rural and 92.8% urban); 4.1% (5% rural and 2.2% urban) of the population use limited drinking water services; and 8.3% (10% rural and 4.9% urban) use drinking water from unimproved sources. For sanitation, the proportion of the population using basic sanitation services is 44.2% (33.8% rural and 65.4% urban); 12.2% (7.2% rural and 22.6% urban) have limited sanitation services; 3.8% (3.4% rural and 4.6% urban) have unimproved sanitation services; and 39.8% of the population have no sanitation services and practice open defecation (55.6% rural and 7.4% urban). This data does not capture the effects of the Swachh Bharat Mission of the government of India, which has increased sanitation services to a larger population (both urban and rural).

The SBM's 2014 initiative for schools was to provide all government schools with separate toilets for girls and boys within one year. It achieved this goal and reported that by 15 August 2015, 100% of government schools had separate toilets for boys and girls. There are issues around the functionality, use and water for sanitation that still need to be resolved but this was an important effort nonetheless.

According to the Ministry for Rural Drinking Water and Sanitation, the coverage of improved water supply services is 88% in Odisha for a basic service, where households have access to 40 liters/capita/day (IMIS). It does not provide information about the quality of water (free from faecal contamination) or the time taken to source water.

With respect to sanitation, the SBM dashboard reports that 45.68% of the population is using basic sanitation services. This covers households that have toilets with a containment structure. The data on emptying, transportation, treatment and disposal doesn't exist for rural sanitation, because twin leach pits have been promoted for the purpose of containment of the waste

from toilets. This requires the pits to be alternately in use. While one is used the passage to the other is closed. When one pit fills up, the passage to the other is opened, the faecal sludge in the filled pit decomposes over a period of time, is emptied and is used as manure. It is difficult to further distill the data and compare with the new JMP ladders as all the same information is not available.

In terms of performance in sanitation, Ganjam is ranked 59 out of 65 districts (SBM dashboard ranking).

### 3.4.2 Service delivery indicators at the district level

The data for service delivery indicators for Ganjam is taken from the Ministry of Drinking Water and Sanitation's monitoring systems. The JMP estimates that 77.93% of the rural population has basic drinking water services (access to a fully covered, improved source); 21.99% of the rural population has limited drinking water services (access to a partially covered, improved source); and 0.09% population uses drinking water from unimproved sources (IMIS). 75.15% of the schools in rural areas of the district have access to drinking water within school premises

The corresponding data for urban areas in the district cannot be found. In our work in 2019 we will be working with district officials and will have a better idea of the available data for urban areas, or the lack of data. We will be carrying out a rapid assessment of water and sanitation for Chatrapur town, which will also give us a fair idea of the urban water and sanitation services and corresponding data.

## 3.5 Assessment of the strength of the building blocks

This section assesses the strength of the WASH system, as expressed by the score of the building blocks. It does so by providing:

- The score per building block for each sub-sector (water, sanitation, hygiene and extra-household settings – split between WASH in schools and WASH in health centres)
- The score per building block for each of the service delivery models

In Annex 3, the scoring methodology and the underlying statements that are used to assess the building block are described.

The final section provides a reflection on the overall strength of the WASH system.



### 3.5.1 Policy and legislation

The right to water is not enshrined as a fundamental right in India's constitution. However, courts at both the state and federal level have interpreted Article 21 of the constitution, the right to life, as encompassing the right to safe, and adequate supplies of, water and sanitation. The rest of the legal framework is mostly about water quality from a water resource perspective or for an urban setting. There is a national level strategic plan and a guideline for rural water, sanitation (rural and urban) and state specific legislation on water (urban). These guidelines lay out the standards of services to be provided.

At the state level, Odisha has a Service Delivery Act for basic services, which covers the repair of hand pumps and tubewells. However, it is yet to include support for piped water supply. The act stipulates that services are fixed within an estimated down time. For example, the down time for the repair of a hand pump or tubewell is seven days for minor repairs, 14 days for major repairs and 28 days for replacement. The awareness in communities and amongst Gram Panchayats about this provision is yet to be ascertained.

In the urban space, there are Public Health Engineering Organisation manuals that provide details for water and sanitation infrastructure, technology and material which are easily available on the Ministry of Urban Development website. There is scope for capacity building around these manuals for Urban Local Bodies to improve their capacities around planning, implementation and monitoring of water and sanitation services.

There are no policy or legislative provisions for hygiene. In the school guidelines for sanitation, provision for menstrual hygiene management in schools is mentioned.

For schools and health facilities, the ministries have their respective guidelines and standard specifications for WASH provision. For schools, there is the Right to Education Act that requires all schools to have water and sanitation facilities. SBM placed emphasis on separate toilets for girls and boys. There are issues around funds (and the service delivery model) for regular cleaning and maintenance of school toilets. For health facilities, there are guidelines for the different types of health care facilities. Further enquiries are needed to better understand the implementation of these standards.

### 3.5.2 Planning

	Planning
Water Sector - National	7
Water Sector - District	4
Sanitation Sector - National	5
Sanitation Sector - District	5
Hygiene Sector - National	0
Hygiene Sector - District	0
Extra household settings - National	0
Extra household settings - District	0

Figure 7: Results for planning building block

The planning process starts from the Gram Panchayat level, then is aggregated at the various administrative levels : block, district, state and national. Budgets are requested on the basis of these annual plans. However, budgets are often allocated reversed, trickling down through the various administrative levels, in many cases creating a gap between proposed budget based on annual plans and allocation of actual budget.

There are three key planning documents: a strategic plan for rural water, the SBM for rural and urban sanitation, and the city sanitation policy for urban sanitation. In the urban space, there is also the Faecal Sludge and Septage Management Policy by the Ministry of Urban Development, which was approved in February 2017 and will take time to be rolled out. These plans have national targets, which are then decided at the state level. The role of other donors and civil society is limited as the funding for water and sanitation is provided primarily by the government (centre and state), with little or no dependence on external funding. Certain UN bodies and bilaterals do play a role in internal discussions at times. .

Presently, the SBM has encouraged the contribution from corporates in the Swachh Bharat Kosh, there is a legislation for mandatory Corporate Social Responsibility spending. Public sector enterprises have contributed towards sanitation in schools while funding from institutional donors is put towards capacity building initiatives.

School development plans for government schools must include water and sanitation under the Right to Education Act. However the extent to which these are followed in Chatrapur is unknown.

### 3.5.3 Institutional

The institutional roles and responsibilities are clear at the national, state and district level. Institutional positions are assumed to be filled as per the requirement of the High Court ruling of Odisha state of ensure all positions for basic services. The district agency (RWSS) gets support from the state department (Department of Panchayati Raj and Drinking Water) and when required from the national ministry.

	Institutional
<b>Water Sector - National</b>	7
<b>Water Sector - District</b>	4
<b>Sanitation Sector - National</b>	6
<b>Sanitation Sector - District</b>	4
<b>Hygiene Sector - National</b>	0
<b>Hygiene Sector - District</b>	0
<b>Extra household settings - National</b>	0
<b>Extra household settings - District</b>	0

Main SDMs	Variants	Institutional
<b>Water</b>		
<b>Utility managed</b>	Private	1
	Public	3
<b>Community management</b>	Water user association	2
<b>Direct local government</b>	Commune	2
<b>Self Supply</b>		0
<b>Sanitation</b>		
<b>Utility/municipal managed sewer</b>		0
<b>HH private toilet on-site</b>	Without formal disposal	0
	With formal disposal	0
<b>Public toilets</b>	Local government managed	1
	Privately managed	2

**Figure 8:** Institutional, per sub-sector and service delivery model, building block

Similarly, the institutional roles and responsibilities for sanitation are clear. The capacity of human resources in rural and urban areas is mostly short in number and skills of what is required, especially since sanitation is more of a behaviour change problem than an infrastructure issue in India. However, the institutional efforts and investments are presently restricted to capture and containment for onsite systems.

There are components within the water, sanitation, health and education sector programmes that touch upon hygiene. These are not really monitored

The relevant education and health ministry at the national level, and departments at the state level, are responsible for WASH services at their respective facilities. The staff requirements and profiles are also defined. WASH is an additional responsibility for certain positions.

There are national and state level programmes in rural water which have a capacity building component. In addition, there is backstopping support for urban and rural water for government-led service delivery models. The support is to be provided by the RWSS at the district or state level, depending on the need. Due to the issues around capacities of Gram Panchayats to manage rural water, this is often the responsibility of the RWSS.

There are still gaps in the quality of service delivered. The key decision maker across all sectors at the District level is the District Collector, who is the bureaucrat whose interest and motivation can often influence the kind and quality of services delivered. There is also a knowledge gap within communities about what services they are entitled to.

For sanitation, there is support available, if it is paid for, by the private players managing public toilets. In the case of local government managed toilets, the support of the ULB is available.

### 3.5.4 Financing

The life-cycle cost components are mentioned in the national rural water guidelines and in the rural water supply operation and maintenance manual. There is a separate allocated fund for marginalised communities. In terms of the actual budgeting process, the budgets show a lump sum amount for the programme. In 2018-19, we will be working on separating the information into the life-cycle components at the state and district level.

For sanitation, the costs of capital (toilet subsidy) and direct costs are covered until the SBM programme ends in 2019. The sanitation service chain – emptying, transportation, treatment and disposal – are not covered in rural sanitation, as the technology advocated is the twin leach pit where the compost from the pits is expected to be used as manure. In urban sanitation, the responsibility and budgets for the toilet subsidy (and sometimes emptying services) are with the ULB and the network system with the parastatal or utility. This is not applicable in the case of Chatrapur, as there is no ULB with a sewerage network system in that block.

For the different service delivery models, urban water and sanitation (where there is a network) have tariffs attached which cover the operation and maintenance costs. For private service providers, the tariffs issued rarely cover all the costs of operation and maintenance and service. Presently, none of the service providers follow safety practices and if these costs were included, current tariffs would not cover full cost of service. As these private providers function mostly in unregulated areas, there is financing available to some extent for their capital expenditure, otherwise the source of financing is mostly from the informal sector. For rural and urban utilities and RWSS/Gram Panchayat led service models, government funds are available in the form of centrally sponsored schemes, state programmes and untied funds. In addition, there is a toilet subsidy for households in un/under-served communities and for public toilets, separate for rural and urban.

We will understand more about the finance-related gaps following our work with the Centre for Budget and Governance Accountability in the coming year.

	Finance
<b>Water Sector - National</b>	6
<b>Water Sector - District</b>	2
<b>Sanitation Sector - National</b>	5
<b>Sanitation Sector - District</b>	0
<b>Hygiene Sector - National</b>	0
<b>Hygiene Sector - District</b>	0
<b>Extra household settings - National</b>	0
<b>Extra household settings - District</b>	0

Main SDMs	Variants	Finance
<b>Water</b>		
<b>Utility managed</b>	Private	2
	Public	2
<b>Community management</b>	Water user association	2
<b>Direct local government</b>	Commune	1
<b>Self Supply</b>		0
<b>Sanitation</b>		
<b>Utility/municipal managed sewer</b>		0
<b>HH private toilet on-site</b>	Without formal disposal	2
	With formal disposal	2
<b>Public toilets</b>	Local government managed	1
	Privately managed	0

**Figure 9:** Finance, per sub-sector and service delivery model, building block

In terms of justifying budgets and expenditure in the parliament/state assembly, the focus for both water and sanitation are coverage and water quality.

### 3.5.5 Infrastructure development and management

There is a procurement procedure which was developed at the national level by the Ministry of Finance and then adapted by the finance departments in the states. In Odisha, there is a separate department for procurements (Ministry of Finance, 2017). Though the mechanism for procurement is in place, the capacity of the staff along the administrative structure to the Gram Panchayat level is not known.

For any infrastructure development, there is a detailed project report prepared detailing what works and what materials are needed. It provides details that are used for monitoring the progress of the infrastructure development process. In urban water and sanitation, the ownership of the assets is clearly defined. This is also defined for rural water but the capacities of community level institutions need to be strengthened further for them to take responsibility for the assets. As a finance audit requirement, there are some main/large assets maintained in a registry, though this is more relevant for urban areas. This is not systematic and does not take into consideration the status/functionality of the assets. This is expected to be similar for school and health WASH facilities.

For rural water, in both the direct local government and community managed models, the assets belong to the community. That is how assets are managed in the community management models. In the direct local government models, on paper the assets belong to the Gram Panchayat, but in reality it is the RWSS that does the maintenance. The assets are managed as and when the community files complaints. There is some level of asset inventory maintained by the RWSS officials for their respective areas. The planning and budgeting for new and replacement water assets for communities are based on requests put forward by communities and not by the life cycle of the systems. For sanitation, the owners of private toilets are clearly the households and asset management is done by the household itself.

In urban areas, the large water and sanitation infrastructure belong to the utility/ULB/parastatal agencies until the point of connection at the households, at which point they take over ownership. For assets that belong to the parastatal agencies, there is some level of inventory that is maintained by the junior engineers of that agency. For public and community toilets, the ownership is with the ULB.

These are rarely maintained. With SBM, the inventory of sanitation facilities at the town/city level for reporting are starting to be maintained. This, however, is with the purpose of upward reporting and not maintenance. The planning for new water and sanitation assets or the replacement of old ones is mostly based on new projects of the central government and not on the life cycle of the assets. There is no specific issue around the availability of spare parts in the district/state.

In the case of private sector players, assets such as water treatment plants, water cans, pit emptying suction motors, tractors/vehicles, tanks, belong to them.

In school and health centres, the ownership of the assets is of their respective line departments.

	Infrastructure development	Infrastructure management
<b>Water Sector - National</b>	5	1
<b>Water Sector - District</b>		2
<b>Sanitation Sector - National</b>	4	2
<b>Sanitation Sector - District</b>		0
<b>Hygiene Sector - National</b>		
<b>Hygiene Sector - District</b>		
<b>Extra household settings - National</b>	0	0
<b>Extra household settings - District</b>		

Main SDMs	Variants	Infrastructure Management
<b>Water</b>		
<b>Utility managed</b>	Private	4
	Public	5
<b>Community management</b>	Water user association	4
<b>Direct local government</b>	Commune	4
<b>Self Supply</b>		2
<b>Sanitation</b>		
<b>Utility/municipal managed sewer</b>		0
<b>HH private toilet on-site</b>	Without formal disposal	4
	With formal disposal	4
<b>Public toilets</b>	Local government managed	2
	Privately managed	3

**Figure 10:** Infrastructure development and management, per sub-sector and service delivery model, building block

### 3.5.6 Regulation

The regulatory body at the state level for rural water and sanitation is the State Water and Sanitation Mission. It is responsible for ensuring services, monitoring and the setting of tariffs. In practice, the functionality of this mission needs to be better understood. For urban water and sanitation (networked), it is the Odisha Water Supply and Sewerage Board that plays the role of developer and the Department of Housing and Urban Development the service authority.

In sanitation, especially for cities that have sewage treatment plants, the State Pollution Control Board plays a key role in ensuring these facilities do their job. In reality this a huge challenge, as proper capital maintenance funds for sewage treatment plants are not available, the tender contracts are not well monitored, meaning the huge investments are wasted in many cities.

For education and health facilities, it would be the respective departments at the state level playing the role of service authority.

	Regulation
<b>Water Sector - National</b>	3
<b>Water Sector - District</b>	3
<b>Sanitation Sector - National</b>	3
<b>Sanitation Sector - District</b>	1
<b>Hygiene Sector - National</b>	
<b>Hygiene Sector - District</b>	
<b>Extra household settings - National</b>	0
<b>Extra household settings - District</b>	

**Figure 11:** Results for the regulation building block

### 3.5.7 Monitoring

For rural water, the Integrated Management Information System (IMIS) monitors water coverage (physical and financial), the functionality of systems and quality. In terms of coverage, IMIS also monitors access by scheduled castes and tribes. This information is expected to be updated on a regular basis at the block/district level, however this is mostly done when an order is passed by a senior authority.

For rural water supply, in the direct local government model the water quality is supposed to be tested twice a year. However, in practice, this is done as and when orders to do so are sent. In community managed models, the capacity of water associations (VWSC) to test water on their own on an annual basis is built up. Furthermore, the data on slippage and functionality is monitored, the data with respect to these parameters is not regularly updated.



Though community members can ask the Gram Panchayat, or the junior engineer attached to the Gram Panchayat, about services and performance, this rarely happens. It is the responsibility of the state and district level water and sanitation missions to decide on tariffs. Water tariffs are rarely collected in direct local government models, unless the village is getting piped water supply. For community managed models, the water associations collect tariffs.

For rural and urban sanitation, household and public toilet coverage is regularly monitored by the department at the state level and by the ministry at the national level. For large cities, the Ministry of Urban Development has developed mobile applications for locating and monitoring toilets and for user feedback. The dashboard is public. For water tariffs, state level decisions on tariff slabs/boxes are made. In large cities with sewer networks, a sewerage tariff is included in the water bill. The unregulated private players are not monitored.

For schools, there is a dashboard for toilets after the launch of SBM (which has a specific website: [www.schoolreportcards.in](http://www.schoolreportcards.in)). District and state level data is captured in the District Information System for Education (DISE) for each government school. However, the functionality of the facilities is not captured. The District Level Household Survey is limited to capturing the availability of water supply. These are all separate monitoring systems that do not talk to each other. To encourage the SBM uptake in rural areas, the states have made a commitment to prioritise villages that are Open Defecation Free for piped water supply schemes.

For urban areas, the SLBs do capture the performance of the ULBs in providing the services. There is no mechanism to monitor the private sector players where performance would be assessed by the complaints received, the amount of down time and the number of consumers who move to another service provider.

	Monitoring
<b>Water Sector - National</b>	4
<b>Water Sector - District</b>	4
<b>Sanitation Sector - National</b>	5
<b>Sanitation Sector - District</b>	5
<b>Hygiene Sector - National</b>	0
<b>Hygiene Sector - District</b>	0
<b>Extra household settings - National</b>	0
<b>Extra household settings - District</b>	0

Main SDMs	Variants	Monitoring and regulation
<b>Water</b>		
<b>Utility managed</b>	Private	1
	Public	3
<b>Community management</b>	Water user association	3
<b>Direct local government</b>	Commune	3
<b>Self Supply</b>		0
<b>Sanitation</b>		
<b>Utility/municipal managed sewer</b>		0
<b>HH private toilet on-site</b>	Without formal disposal	1
	With formal disposal	1
<b>Public toilets</b>	Local government managed	1
	Privately managed	3

**Figure 12:** Monitoring per sub-sector and service delivery model building block

### 3.5.8 Water resource management

The Water Resources Ministry is responsible for water resources and is tasked with issues of water security and integrated water resource management. The Water (Prevention and Control of Pollution) Act was enacted in 1974 to provide for the prevention and control of water pollution and to maintain or restore the wholesomeness of water in the country.

The Water Resources Ministry at the centre and the department at the state work separately from the Ministry of Drinking Water and Sanitation. While the national guidelines on drinking water mention source sustainability, there is no coordination or planning to align to the larger water security goal. No information from the water and sanitation sector professionals could be sought on the Water Resource Management questions. We will further explore this question in the coming year.

	Water resources management
Water Sector - National	4
Water Sector - District	1
Sanitation Sector - National	2
Sanitation Sector - District	0
Hygiene Sector - National	
Hygiene Sector - District	
Extra household settings - National	
Extra household settings - District	

Main SDMs	Variants	Monitoring and regulation
<b>Water</b>		
Utility managed	Private	0
	Public	0
Community management	Water user association	0
Direct local government	Commune	0
Self Supply		0
<b>Sanitation</b>		
Utility/municipal managed sewer		0
HH private toilet on-site	Without formal disposal	0
	With formal disposal	0
Public toilets	Local government managed	0
	Privately managed	0

Figure 13: Water resources management, per sub-sector and service delivery model building block

### 3.5.9 Learning and adaptation

The learning platforms are mostly donor led. Recently, the Swachh Bharat Mission Rapid Action Learning Units (SBM RALU), supported by the Water Supply and Sanitation Collaborative Council, were launched, with the intention of getting quick learning from the sanitation sector back to the state and national level.

The other learning platforms are mostly web-based. They include: India water portal, India sanitation portal and water quality driven networks like FANSA (Freshwater Action Network South Asia). These are mostly national though there are some at the state level. There is limited participation and sharing from NGOs at the grassroots level.

There are other internal mechanisms for sharing and learning at the Block Resource Centre, in the district and upward, though these are mostly restricted to government officials working in this sector. The NGO networks for education and health are much stronger and have more decentralised ways of including learning, both top down and bottom up.

	Learning and adaptation
Water Sector - National	2
Water Sector - District	1
Sanitation Sector - National	2
Sanitation Sector - District	1
Hygiene Sector - National	0
Hygiene Sector - District	0
Extra household settings - National	0
Extra household settings - District	0

Figure 14: Learning and adaptation building block

### 3.5.10 Overall strength of the WASH system building blocks

Summary of national and district level on the building blocks												
Country: India	District: Odisha, Ganjam											
	Institutional	Legislation	Finance	Planning	Infrastructure development	Infrastructure management	Monitoring	Regulation	Learning and adaptation	Water resources management	Total score	Max score
Water Sector - National	7	6	6	7	5	1	4	3	2	4	45	84
Water Sector - District	4	5	2	4	-	2	4	3	1	1	26	74
Sanitation Sector - National	6	5	5	5	4	2	5	3	2	2	39	82
Sanitation Sector - District	4	2	0	5	-	0	5	1	1	0	18	72
Hygiene Sector - National	0	0	0	0	-	-	0	-	0	-	0	52
Hygiene Sector - District	0	-	0	0	-	-	0	-	0	-	0	44
Extra household settings - National	0	0	0	0	0	0	0	0	0	-	0	76
Extra household settings - District	0	-	0	0	-	0	0	-	0	-	0	54

Figure 15: Overall strength of the WASH system building blocks

There are three key layers of administration: union/centre, state and district. They make decisions about plans, budgets and implementation. The levels below – the block and Gram Panchayat – are implementing mechanisms that also have a role in providing inputs for plans based on the needs of the area/community. As mentioned in earlier sections, the Gram Panchayats now have a more important role with untied funds available to them (Fourteenth Finance Commission, 2014).

Broadly speaking, at the national level, the water and sanitation sector has addressed the building blocks in varying degrees. However, the scores to these building blocks recede as we assess the building blocks at lower administrative levels. There are issues around sustainability, for example, the maintenance/management of assets can be further strengthened. Also, efforts towards learning have been made through the introduction of Rapid Action Learning Units (RALUs) for sanitation. This needs to be further strengthened by bringing in civil society.

## 4 Scoring of behaviour change WASH actors

At the national level there are programmes to ensure water and sanitation services for all for urban and rural areas.

The National Rural Drinking Water Programme provides all rural settlements with 50 litres/capita/day of safe drinking water. According to the strategic plan of the Ministry of Drinking Water and Sanitation, by 2022, every rural person will have access to 70 litres/capita/day within their home or at a horizontal or vertical distance of not more than 50 metres away, without barriers of social or financial discrimination (Ministry of Rural Development, 2011). For sanitation, the Swachh Bharat Mission aims to reach each household and public place, in urban and rural areas, with sanitation facilities.

In the urban domain, there are large infrastructure development programmes for large water schemes and sewerage networks and sewage treatment plants like AMRUT (previously known as JNNURM) and Smart Cities. The service level benchmarks of the Ministry of Housing and Urban Affairs have indicators and corresponding benchmarks for sewers, piped water supply, solid waste management and storm water drainage (Ministry of Urban Development, 2010). Each ULB is expected to report on these on an annual basis. In reality, these are a reporting requirement for cities that are availing the AMRUT-like large funding mechanisms of the central government. The lack of capacity at most ULBs often makes this data unreliable. Furthermore, at least 47% of urban households depend on onsite sanitation facilities (Census, 2011). The Central Pollution Control Board estimates that only 64% of the sewage treatment plants are functioning in the cities which have a sewerage network. This means that faecal sludge management indicators should be included in the SLBs.

While these programmes have a goal to provide improved water and sanitation services to all, they do not meet the level of safety that the SGD requires. Presently, the sector is focussed on the national programme goals, more specifically the SBM to make India open defecation free by 2019. In this environment, the discussion around SDGs is fairly new and not a priority of most in the sector or for government or non-government organisations.

Our work going forward in India will include working with the networks at the national level and those involved in discussions with the relevant governments about SDG reporting and states' capacities.

Given the nascent stage of IRC's work at the state level and the sector familiarity with SDGs, we would take up this tool in a year (2019).

## 5 Conclusions

Reflecting on the building blocks, we can see that the institution building block is the strongest at both the national and state level. There is clear understanding of the roles with the ministry at the national level and the department at the state level. There are serious gaps in the human resources available for the scale of the implementation. While evidence is limited to demonstrate the gap in human resources, the development sector is making small efforts/assessments towards bringing this up as an issue.

Infrastructure management, learning and adaptation and water resource management are building blocks that require significant work. The focus has been on infrastructure development, and now there is a need to focus on managing this infrastructure to ensure sustainable service delivery, especially in water provision. This requires intervention at the state level to provide technical assistance to the departments in planning and budgeting for services.

Learning and adaptation initiatives are heavily donor driven and will collapse when the funding runs out as these learning platforms are not institutionalised in the government mechanisms. For NGOs working on WASH at the state level, there have been challenges in organising them due to competition and vested interests.

The water resource management building block is weak due to limited coordination between responsible departments.

The state is the crucial administrative level where influence needs to be exerted as water and sanitation are state responsibilities. Each state has flexibility in policy making, planning, budgeting and regulating for water and sanitation services for its jurisdiction. There are national guidelines and frameworks that provide direction but they can be adapted and modified. In addition to centrally sponsored schemes, the state has its own financial resources to reach its water and sanitation targets. This nudging/influencing at the state level can translate into changes that will ensure that the systems are geared to reach everyone with ongoing water and sanitation services.



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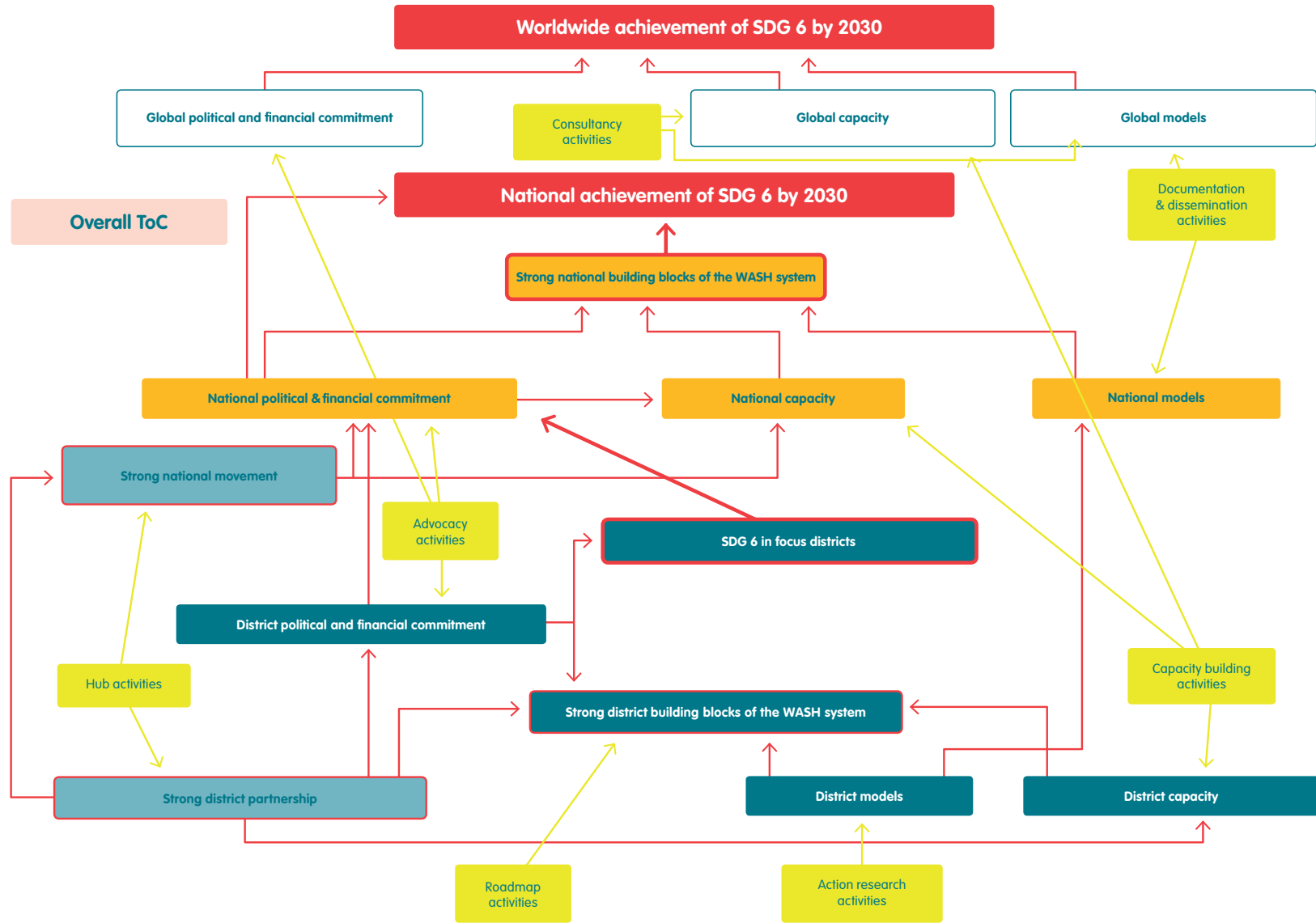
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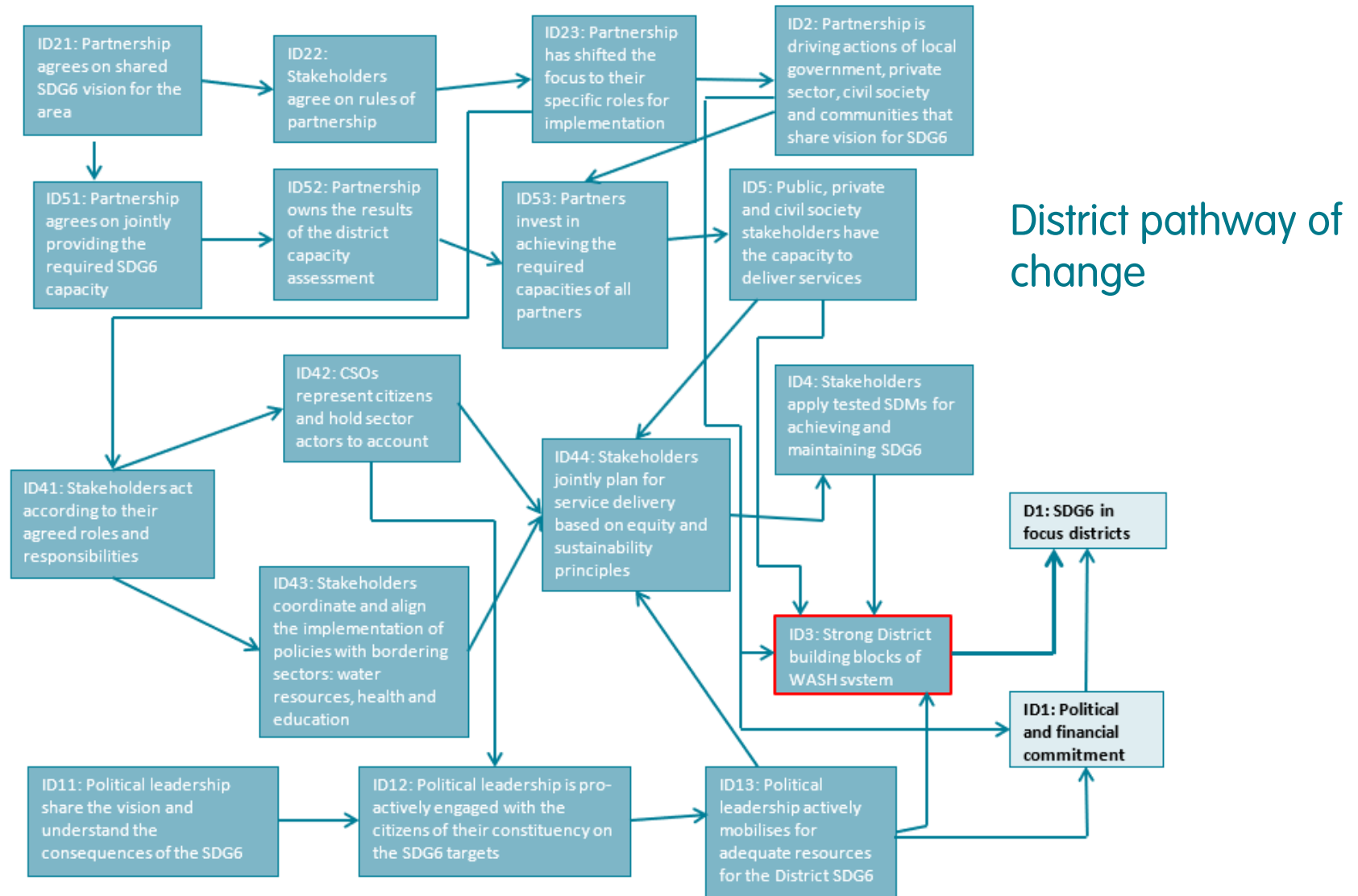
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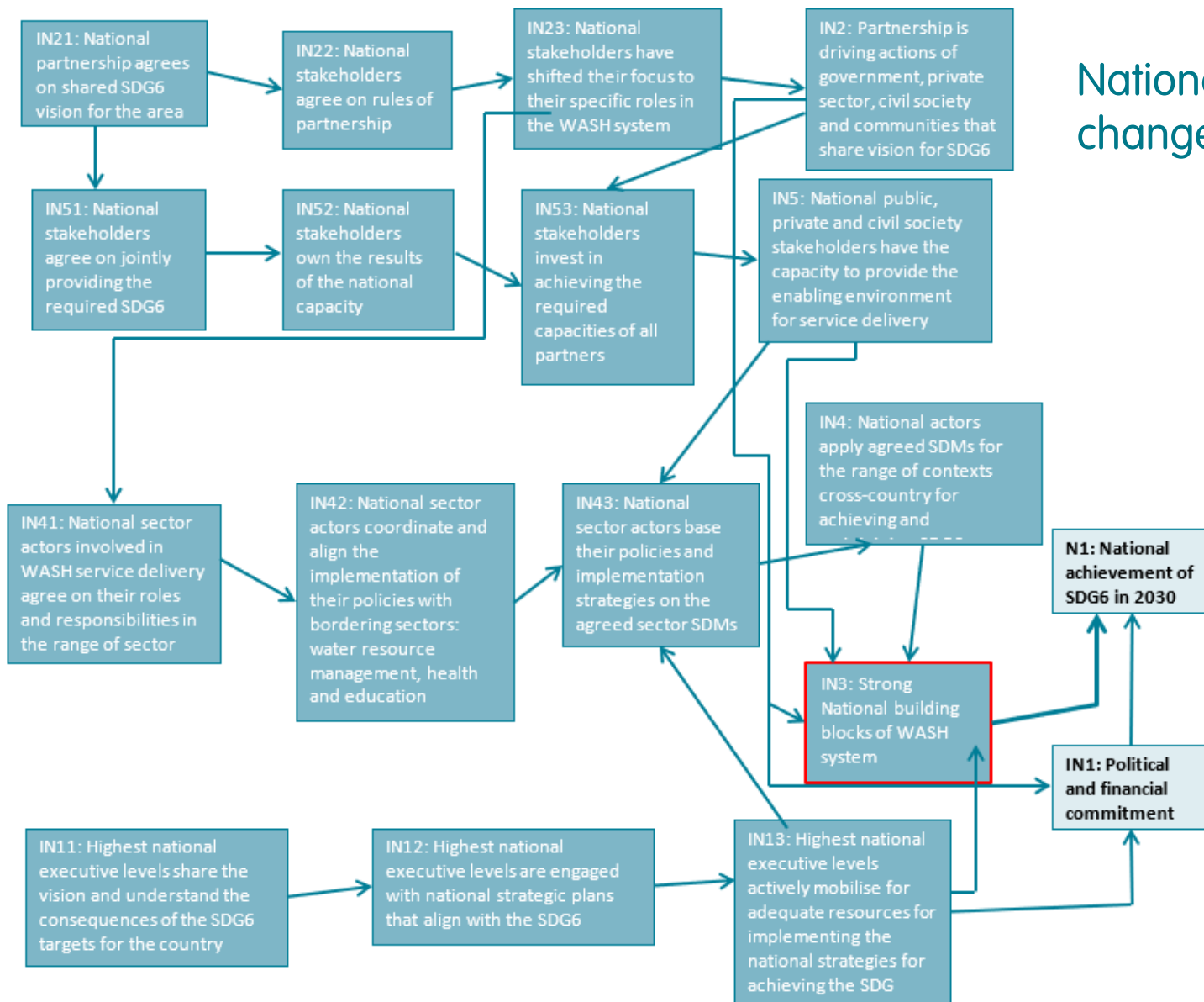
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# Annex 1: Theory of Change



## Annex 2 Pathways of change country programmes





## National pathway of change



## Annex 3: List of stakeholders interviewed

1. Mr. Sojan Thomas, Programme Director, Gram Vikas
2. Mr. Santosh Kumar Mishra, Project Director
3. Mr. Suresh Chandra Parida, Project team member
4. Mr. Bibekananda Mohapatra, Retired RWSS/PHEO official

## Annex 4: Service Delivery Models building block scoring

Service delivery models by building block								
Country: India								
	Variants	Institutional	Finance	Infrastructure management	Monitoring & regulation	Water resources management	Total score	Max score
<b>Water</b>								
<b>Utility managed</b>	Private	1	2	4	1	0	8	40
	Public	3	2	5	3	0	13	40
<b>Community management</b>	Water user association	2	2	4	3	0	11	40
<b>Direct local government</b>	Commune	2	1	4	3	0	10	40
<b>Self-supply</b>		0	0	2	0	0	2	26
<b>Sanitation</b>								
<b>Utility/municipal managed sewer</b>		0	0	0	0	0	0	14
<b>HH private toilet on-site</b>	Without formal disposal	0	2	4	1	0	7	20
	With formal disposal	0	2	4	1	0	7	18
<b>Public toilets</b>	Local government managed	1	1	2	1	0	5	32
	Private managed	2	0	3	3	0	8	34

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