# An Evaluative Study on "Water & Sanitation Services" In KBK Region of Orissa



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On Behalf of
Govt. of Orissa

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#### **Abbreviations and Acronyms**

GP Gram Panchayat

AWW Anganwadi Workers WATSAN Water and Sanitation

SHG Self Help Group

NGO Non - Government Organization
CBOs Community Based Organizations

YC Youth Club

ICDS Integrated Child Development Scheme

RWSS Rural Water Supply and Sanitation

AWC Anganwadi Centre
AWC Anganwadi Centre

TBA Traditional Birth Attendant

NSS National Social Service

NCC National Cadet Corps

W & CD Women & Child Development

MIS Management of Information System

SC Schedule Caste
ST Schedule Tribe

OBC Other Backward Class

GEN. General

RTI Reproductive Tract Infection

ORS Oral Rehydration solution

SSS Salt Sugar Solution

IFA Iron Folic Acid

UPS Upper Primary School

M.E Middle Education

UPME Upper Primary Middle Education

UC Under Construction

TW Tube Well
OW Open Well
SW Saline Water
NA Not Applicable

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#### **EXECUTIVE SUMMARY**

Water supply and sanitation was added to the national agenda during the first five-year planning period (1951-1956), and increasing investments have been made in subsequent plans. A new National Water Policy was adopted in 2002, according primacy to drinking water, as in the earlier policy. Some states such as Karnataka, Madhya Pradesh, Orissa, Rajasthan and Tamil Nadu have already drafted state policies based on the new national policy. Governments at Centre and States are found to be very serious in achieving the MDG goal of universal access to safe drinking water and sanitation services.

As a result, it has been possible to ensure round the year availability of safe drinking water in Orissa including the most backward districts. Effective implementation of Revised Long Term Action Programme (RLTAP) in the KBK region has supplemented the mainstream efforts in bridging gaps as regards to basic needs like drinking water. The creditable performance has been achieved due to sincere and synergistic work by government agencies and resource support available under different schemes.

Proper water and sanitation facilities are crucial and preconditions for promoting quality of life of communities. Towards this end, with the support of government of India and the state government, a number of initiatives have been undertaken in the KBK region of Orissa. In commissioning this study, Planning and Coordination Department, Govt. of Orissa seeks to assess the impact of such initiatives.

Although evaluation studies and reviews were conducted on the overall performance of the Revised Long Term Action Programme (RLTAP) meant for integrated development of the KBK region, there is no study exclusively devoted to the Water and Sanitation Sector. Such a study was necessary to determine the impact of the interventions, the successes and weaknesses which can provide useful lessons as the state government moves into a new approach to programming with greater emphasis on sustainability and a gender balanced approach.

The principal objective of the study was to learn from the current practice in rural water supply and sanitation sector and suggest action points for improvement at the level of programme design and implementation involving all stakeholders.

All 8 districts of KBK region are included in the study. The respondents' were taken from rural areas, covering four blocks from larger and 2 from smaller districts. Based on Water and Sanitation performance indicators, (one most successful Gram Panchayat and one least successful gram Panchayat in each block), considering - distance from district headquarter, programme coverage, demographic and socio-economic factors – like population density, social categories i.e. SC /ST, was taken for household level consultations.

The sample size and questionnaires were finalized in consultation with the Planning and Coordination Department, Government of Orissa. It was agreed to physically verify 30 % of tube wells in each of the 24 sample blocks and prepare a status report on location, distance covered to collect water, condition of chandini, soak pit, O& M arrangement etc. A printed checklist was prepared to facilitate the inspection process. The stakeholder consultations and interviews were conducted covering key respondents belonging to Line Departments, Panchayatiraj Institutions, Community Based Organizations, Self Help Groups, Community leaders and Household representatives.

#### Following instruments were used during the study:

- Structured questionnaire
- Participatory Focus group discussion (FDGs)
- Observation and physical verification of assets on its actual site
- > Dialogue with different service providers from district to hamlets.
- Photographs / Observations
- Record Review

#### Limitations

The study did have some limitations as it was based on a sample and subject to availability of records. Hence, the findings have to be looked at keeping the limitations as reference. These include:

- About 30 % tube wells have been physically verified in the sample blocks. Total coverage was not possible due to time and resource constraints. Diverse contextual realities might have affected the representative character of the sample.
- ➤ Only 24 Blocks were covered as sample for the entire KBK region
- ➤ Secondary data on fund flow, utilization and detail list of assets created was difficult find in respect of 2000-01, 2001-02, 2002-03 and 2003-04 for want of computerization.
- Key functionaries like JE and senior officials of RWSS had difficulty to share records due to new posting and multiple engagements
- One JE managing more than one Block also caused problem in getting adequate information in time
- Block office or the Gram Panchayat too did not have data on coverage under water and sanitation schemes
- In some blocks, tube well records were not maintained with unique ID number and source of fund.
- Transfer of O & M responsibility to Gram Panchayat caused some confusion about role of RWSS Vis-à-vis Self Employed Mechanics (SEMs)
- > There has been no major allocation from RLTAP to rural sanitation sector.
- Senior officials at district except RWSS and DWSM did not have sufficient awareness on water and sanitation issues in the district
- > The Databases of various line departments available on website are not updated at periodical intervals causing problem in accessing information.

#### **Key Findings:**

#### Findings based on physical inspection of Tube Well

- 1. The revised norms for SC and ST habitations has come as a boon for KBK districts making it possible to provide safe drinking water through tube wee even in smaller habitations with less than one hundred population.
- 2. Resource is no more a constraint for rural water supply and sanitation activities as adequate amount of funds are available to meet household and institutional needs.
- The KBK districts have done much better than some of the coastal districts as most of the habitations are getting fully covered. The number of habitations in partially covered and not covered category is negligible.
- 4. The progress is more visible in rural water supply sector compared to sanitation coverage achieved across the villages.
- 5. The region as a whole has least problem with regard to water quality as reported in the National Habitation Survey findings 2003.
- 6. 24 sample blocks together in 8 districts of KBK region have 21,329 tube wells. Out of this 80 % (17070) tube wells are located in villages, 15 % (3151) tube wells are in schools, 3 % (648) in Anganwadi centers and 2 % (460) in other institutions.
- 7. Out of 5105 habitations located in 24 sample blocks 33.19 % (1694) have population less than 150 whereas 66.81% (3411) habitations have population above 150.
- 8. Out of 1694 habitations with less than 150 population 97.46 % are fully covered, 0.41 % partially covered and 2.13 are in the not covered category under drinking water supply.
- Out of 3411 habitations with more than 150 population 88.77 % are fully covered, 11.14 % partially covered and 0.09 % are in the not covered category under drinking water supply.
- 10. Out of this 7467 tube wells verified during the study, 81.62 % are located in villages, 14.52% are in schools, 2.81 % in Anganwadi centers and 1.86 % in other institutions.
- 11. Out of this 7467 tube wells verified during the study, 95.27 % are found functional and rest 4.73 % defunct.
- 12. Out of 7467 tube wells, 95 % have platform. 67.53 % platforms are found good, 27.77 % partly damaged and 4.69% in fully damaged condition.
- 13. Out of 7467 tube wells, 44 % have soak pit. 53.91 % soak pits are found good, 35.00 % partly damaged and 11.09 % in fully damaged condition.
- 14. As per community view, out of 7467 tube wells, 91.40 % yield good quality water, 5.17 yield poor quality whereas 1.37 yield very poor quality.
- 15. As per community view, out of 7467 tube wells, 56.14% are repaired in a day or two, 35.84% are repaired within a week and 6.16% are repaired in more than a week.
- 16. As observed by the research team, 83.75 % of the beneficiaries are getting drinking water from tube well located within 100m radius from their house, 8.96 between 101-200m, 3.44 % between 201-300m and only 1.38 % get it from a distance beyond 300m.

#### Findings based on Household Survey

- 1. Total 2328 households were interviewed during the study. Of them, 10.48 % were covered by piped water supply, 89 % by tube wells and 0.52 % by other sources.
- 2. With regard to ownership, 99. 53% were dependent on public water supply whereas only 0.47% met the need from own source.
- 3. With regard to quality, 99. 57% reported no problem whereas only 0.43% found the quality as poor.
- 4. With regard to storage of drinking water, 65.64% reported that the vessel was kept covered whereas only 34.36% said put no cover.
- 5. With regard to cleaning of vessel, 95.92% reported regular cleaning whereas only 4.08% said once in a while.
- 6. With regard to method of drawing water from the vessel, 26.20% reported slanting, 69.07 reported dipping and only 4.73 reported use of a device for the purpose.
- 7. With regard to household sanitation facility, 71.74% reported in negative. Only 28.26 % households had toilets.
- 8. Among those who had toilets 21.73% had sanitary toilets whereas 78.27 % has Barpali type. Most of the Barpalis were in defunct condition.
- 9. All the toilets were constructed with the help of government assistance.
- 10. As high as 98.88% respondents reported the practice of hand washing after toilet use. But 93 % used soil for hand washing and only 6 % used soap.
- 11. Only 45.70 % respondents reported use of foot wear while going for defecation whereas 54.30 % went barefoot.
- 12. Only 6.83 % respondents reported safe disposal of child excreta whereas 93.17 % threw it in open spaces/ road side.
- 13. 4.77 % respondents discharges waster to soak pit, 7.04% to kitchen garden whereas 88.19% left it uncared.
- 14. 22.85 % respondents put household garbage in compost pit, 5.58 % deposited in special pits whereas 71.56% threw in open spaces/ road side/ drain.
- 15. 46.31 % households did not have cowshed. 29.25 % have cowsheds attached to house whereas 24.44 % have it at a distance.

#### Findings based on views of PRI representatives

- 1. As regards awareness about RLTAP, 29.3% of PRI representatives are highly aware, 46.3 % are aware, 22 % are not aware. 2.4 % of them did not respond.
- 2. As regards awareness about rural water supply and sanitation component in RLTAP, 26.2 % of PRI representatives are highly aware, 42.1 % are aware, 23.2 % are not aware. 8.5 % of them did not respond.
- 3. As regards awareness about funds allotted to rural water supply and sanitation component in RLTAP, 22.6 % of PRI representatives are highly aware, 43.3 % are aware, 30.5 % are not aware. 3.7 % of them did not respond.
- 4. As regards awareness about DWSM activities, 26.2 % of PRI representatives are highly aware, 39 % are aware, 25 % are not aware. 9.1 % of them did not respond.

- As regards awareness about formation of village water and sanitation committees, 26.2
   of PRI representatives are highly aware, 46.3 % are aware, 20.1 % are not aware. 6.7
   of them did not respond.
- 6. As regards working of village water and sanitation committees, 33.5 % of PRI representatives find it very satisfactory, 54.3 % find it satisfactory and 9.8 % find it not satisfactory. 1.8 % of them did not respond.
- 7. As regards meeting officials to discuss water and sanitation issues, 16.5 % of PRI representatives reported frequent meeting, 69.5 % said occasional, 10.4 % did not meet at all. 3.7 % of them did not respond.
- 8. As regards provision of safe drinking water, 14 % of PRI representatives find it very satisfactory, 66.5 % find it satisfactory and 16.5 % find it not satisfactory. 3 % of them did not respond.
- 9. As regards round the year availability of safe drinking water, only 8.15% of PRI representatives reported difficulty in summer.
- 10. As regards opinion of PRI representatives on drinking water quality, 25.6 % said adequate, 52.4% said average and 12.8 % said poor. 9.8 % of them did not respond.
- 11. As regards opinion of PRI representatives on distance of drinking water source, 29.9 % said very near, 61 % said near and 9.1 % said distant. The reported distance is mainly due to households located in isolated places not forming a part of any recognized habitation.
- 12. As regards opinion of PRI representatives on holding of IEC activities on water and sanitation, 21.3 % said regular, 57.9% said occasional and 15.2 % said rare. 4.9 % of them did not respond.
- 13. As regards repair and maintenance of tube wells, 23.2 % of PRI representatives find it very satisfactory, 64 % find it satisfactory and 10.4 % find it not satisfactory. 2.4 % of them did not respond.
- 14. As regards awareness about Total Sanitation Campaign, 18.9 % of PRI representatives are highly aware, 34.1 % are aware, 42.7 % are not aware. 4.3 % of them did not respond.
- 15. As regards awareness about Nirmal Gram Panchayat Campaign, 14 % of PRI representatives are highly aware, 31.1 % are aware, 48.2 % are not aware. 7.3 % of them did not respond.
- 16. As regards awareness about financial incentives under TSC for household toilets, 43.3% of PRI representatives are highly aware, 48.8 % are aware, 7.3 % are not aware. 0.6 % of them did not respond.
- 17. As regards awareness about financial incentives under TSC for school sanitation, 32.9% of PRI representatives are highly aware, 56.1 % are aware, 9.1 % are not aware. 1.8 % of them did not respond.
- 18. As regards awareness about financial incentives under TSC for Anganwadi sanitation, 30.5% of PRI representatives are highly aware, 57.9 % are aware, 9.8 % are not aware. 1.8 % of them did not respond.

- 19. As regards awareness about financial incentives under Swajaldhara, 19.5% of PRI representatives are highly aware, 37.2 % are aware, 40.2 % are not aware. 3 % of them did not respond.
- 20. As regards quality of toilets constructed under, 22.6% of PRI representatives say good, 43.3 % say average and 30.5 % consider those as poor. 3.7 % of them did not respond.
- 21. As regards holding meetings to advance TSC, 15.9 % of PRI representatives reported frequent meeting, 39.0 % said occasional, 39.6 % did not meet at all. 5.5 % of them did not respond.
- 22. As regards slow progress of TSC, 22% of PRI representatives put blame on faulty subsidy policy, 37.2 % blame ignorance and 40.9 % blame habit of open air defecation.
- 23. As regards suggestions to advance TSC, 37.2% of PRI representatives put emphasis on free toilet to all poor irrespective of BPL card, 40.9 % emphasize IEC/ awareness generation and 21.3 % advocate strong inter-sectoral coordination. 0.6 % of them did not respond.

#### Findings based on views of Officials

- 1. As regards possibility of ensuring universal access to safe drinking water and sanitation, 24.2 % of government officials think certainly possible, 68.3 % say may be possible whereas 7.5 % say not possible.
- 2. As regards priority attached to safe drinking water and sanitation under RLTAP, 19.5 % of government officials agree strongly, 73.4 % just agree, 7.2 % do not agree.
- 3. As regards timeframe to achieve Nirmal Gram Panchayat goal, 61.4 % of government officials say possible in next three years, 22.9 % say next five years, 10.2 % say may take 7 years but 5.5 % say it may not be possible at all.
- 4. As regards progress made to achieve Nirmal Gram Panchayat goal , 29 % of government officials find it very satisfactory, 62.5 % find it satisfactory and 8.5 % find it not satisfactory.
- 5. As regards progress towards inter-sectoral coordination , 19.8 % of government officials find it very satisfactory, 73 % find it satisfactory and 7.2 % find it not satisfactory.
- 6. As regards cooperation from PRIs in implementing TSC, 18.4 % of government officials find it very satisfactory, 75.8 % find it satisfactory and 5.8 % find it not satisfactory.
- As regards cooperation from SHGs/CBOs/NGOs in implementing TSC, 17.1 % of government officials find it very satisfactory, 7.2 % find it satisfactory and 75.8 % find it not satisfactory.
- 8. As regards adequacy of resources in implementing TSC, 9.2 % of government officials find it highly adequate, 70.6 % find it adequate and 8.2 % find it not adequate.
- 9. As regards timely release of funds for water and sanitation activities under various schemes, 64.8 % of government officials say release in time, 20.1 % say delayed sometimes and 15 % say get delayed always.
- 10. As regards planning for water and sanitation activities at various levels, 15 % of government officials say very effective, 64.8 % say effective and 20.1 % say not very effective.

- 11. As regards participation in the micro planning for water and sanitation activities at various levels, 15.7 % of government officials say frequent, 63.5 % say occasional and 20.8 % say rare.
- 12. As regards participation in the demand generation drives at various levels, 14.7 % of government officials say frequent, 45.4 % say occasional and 39.9 % say rare.
- 13. As regards slow progress of TSC, 13% of government officials put blame on faulty subsidy policy, 44 % blame ignorance and 43 % blame habit of open air defecation.
- 14. As regards suggestions to advance TSC, 12.6% of government officials put emphasis on free toilet to all poor irrespective of BPL card, 38.6 % emphasize IEC/ awareness generation and 37.2 % advocate strong inter-sectoral coordination. 11.6 % of them did not respond.

#### **CONCLUSION & RECOMMENDATIONS**

Safe drinking water and proper sanitation and hygiene practices are critical for survival in all stages of an emergency. In many emergencies, people are very susceptible to illness and death from waterborne diseases. Women and children are particularly at risk because they are usually the largest percentage of the poorest of the poor and comprise the majority in rural areas, urban slums and displaced populations; in many cultures men have priority in the distribution of limited food and drinking water. Mainstreaming gender concerns in water and sanitation interventions are important for fair and equitable distribution.

The study findings present a mixed picture on rural water and sanitation scenario in KBK districts. Going by coverage statistics performance is commendable in rural water supply sub sector. The imaginative programme design and sincere delivery has addressed the needs of even very small habitations taking advantage of flexibility granted to SC/ ST habitations on application of standard norms on population per tube well.

But the performance in sanitation sector is not that impressive. While open air defecation continues, the Nirmal Gram Panchayat goal is yet to gain strength by means of ownership and participation at the level of key stakeholders. May be the age old habit, traditional world view and selective use of subsidy still create formidable road blocks for total sanitation. Someone needs to look at quality of assets created and usage else the massive investments may not yield desired results. One has to learn lessons from the first generation sanitation programmes and bridge the gaps as well as weakness making TSC a total success.

One of the major concerns remain is the issue of operation and maintenance. It can not be the sole responsibility of RWSS or SEM or even the GP. Water and Sanitation committees should be formed and made fully functional in every village and hamlet to mobilize community participation, community contribution and ownership of O & M responsibilities. This is possible when community, Gram Panchayat and RWSS converge and supplement each other in achieving targets.

#### Recommendations

- 1. Water being a state subject, the states are empowered to enact laws or frame policies related to water. Even then, only some of the states have set up organisations for planning and allocating water for various purposes. Though water policy for the country has been prepared by the MoRD, Gol, Orissa is yet to formulate its own state water policy. As a result, a proper legal framework for regulating withdrawals of groundwater is not in place. Though efforts have been made to check the overexploitation of groundwater through licensing, credit or electricity restrictions, there is no provision to regulate the quantum of water extracted. State should formulate a Water Policy to play its regulatory role effectively.
- 2. The major bottleneck in an effective policy formulation and implementation is the current institutional set-up involving various government agencies. Further, there is a separation of responsibilities based on water quality and quantity. As several agencies are involved in collecting data on the following water-related parameters: quality of surface water, ground water quality, monitoring of drinking water quality, sanitation and drinking water supply; such a fragmentary approach, both at the central and state levels, results in duplication and ambiguity of functions and discourages unitary analysis of this scarce resource. Hence, a single window approach may yield better results.
- 3. Knowledge/information/data gaps also plague the sector. Published data is not readily available. Though groundwater availability maps have been prepared for certain locations, extraction rates have not been defined. Information gaps on water consumption and effluent discharge patterns for industries also exist. A Newsletter may be published by RWSS highlighting progress, best practices and constraints to educate the stakeholders.
- 4. One of the most critical factors and the reason for the centre to adopt sectoral reforms is the overwhelming perception that water supply and sanitation is the responsibility of government, not of communities, households, and individuals. Massive awareness generation campaigns should be organized with the help of PRIs, NGOs and CBOs to mobilize community ownership and participation.
- 5. Other critical factors include water pollution, inter-sectoral imbalances, groundwater depletion, very inadequate price incentives for water conservation and efficient allocation between sectors (and conversely, not much disincentives for inefficiency, waste, etc). This calls for appointment of an expert committee with a mandate to recommend remedial measures.
- 6. Water quality problems, especially iron, fluoride and arsenic too are critical issues. Low levels of literacy and awareness of the health benefits of improved hygiene behaviour are a potential hindrance to the success of the restructured programming. Sustained professional advocacy, IEC and social marketing of filters, water purifiers etc are definitely needed to bring about an attitudinal and behavioural change.
- 7. Another highly critical issue is that water and sanitation programmes operate in isolation from programmes on health and education. This is a reflection of the fact that water and sanitation is not pursued with the aim of reducing disease, improving hygiene, improving educational levels or reducing poverty. Convergence should be a major strategy now.

- 8. Social and economic inequities will continue to remain major factors hindering effective and equitious implementation of programmes. While the ongoing Sector Reform programme places the responsibility of O & M on local institutions and communities, the pace of change has been slow. This is also reflected in the relatively low levels of expenditure under Sector Reforms and the TSC in target districts. More importantly, the reform initiatives need to be seen as a means of encouraging state governments to move ahead with decentralization to PRIs in line with the 73rd Constitutional amendment.
- 9. While the current approaches of Sector Reforms and TSC and the ARWSP and RCRSP draw on the inherent strength of community management, it must also be recognised that community management also has inherent weaknesses and these need to be addressed. Community management requires significant capacity building which requires substantial human resources. This is particularly so where technology is complex or the size of 'project' is large. Communities also need regular support.
- 10. Community management is vulnerable to local and external events and shocks and needs a strong supportive policy environment. It is therefore the role of the government to provide policies, regulations and a legal framework in which the water supply and sanitation sector, private sector, training sector, etc. can operate and which regulates the relations between the owners, implementers and financiers. Community management is heavily reliant on a supportive framework. Many communities lack the capacity to provide necessary support for technical design and supervision, facilitation and management, long-term training, legal issues, auditing, monitoring and evaluation.
- 11. Communities may not have the capacity to manage an increased amount of capital (for major repairs, replacement, or extension) over a long period. They need capacity building and support on managing of financial resources. A number of 'internal' community dynamics can threaten community management; e.g. conflicts, poor leadership, lack of transparency, equity issues, theft. Countering this threat again often calls for the presence of external support.
- 12. Members of all the VWSCs could be brought together at one forum periodically where they can exchange notes and share experiences one-day workshops could be organised at Block levels. Exposure Visits of selected Presidents/ members of VWSCs could also be organised to other SRP/TSC districts and States.
- 13. Each village must have a Community Fund where proceeds from social forestry, fisheries income from other common property resources should be deposited. The fund should supplement the O&M expenditures. Modest user fee also may be collected.
- 14. At the District level, a team of knowledgeable persons comprising of engineers, NGOs, experts, institutions could be constituted by the DWSC to inspect and certify the quality of construction as well as make an assessment of the implementation of the Programme. This independent assessment would enable the VWSC and the DWSC to take corrective measures. This team could be asked to visit all VWSCs at least once in a quarter. A similar arrangement could be put in place at the State level where a 4 member Team visits each SRP/TSC district every quarter and gives its report to the Secretary, RWSS.
- 15. Aspects of sustainability of sources, water conservation, water recharge, water recycling, water quality and hygiene need to be stressed upon. This is presently not being adequately covered in the IEC activities. There is a need for comprehensive integrated IEC activities encompassing both water supply and sanitation need in SRP villages.

#### **Relevant Action Points:**

- 1. Identify safety and security risks for women and girls that are relevant to water and sanitation systems to ensure the location, design, and maintenance programmes maximise safety and security of women and girls.
- 2. Special attention should be paid to the needs of vulnerable groups of women and girls, such as single female-headed households, adolescents, unaccompanied girl children, etc.
- 3. Mobilise women and men to participate in the location, design, and maintenance of water and sanitation facilities.
- 4. Ensure all users, and particularly women and girls, participate in identifying risky hygiene practices and conditions, and that all users share responsibility to measurably reduce these risks.
- 5. Establish water and/or sanitation committees comprised of 50% women. The committees are responsible for the maintenance of water and sanitation facilities.
- Locate water points in areas that are accessible and safe for all, with special attention to the needs of women and children. Discuss the location of the pumps with all members of the community. As a guide, no household should be more than 500 metres from a water point.
- 7. Design or adapt hand pumps and water carrying containers for use by women and children.
- 8. In situations where water is rationed or pumped at given times, plan this in consultation with all users, but especially with women.
- Times should be set which are convenient and safe for women and others who have responsibility for collecting water. All users should be fully informed of when and where water is available.
- 10. Design communal bathing and washing facilities in consultation with women and girls to ensure that users have privacy and maintain dignity.
- 11. Determine numbers, location, design, safety, appropriateness, and convenience of facilities in consultation with the users. Facilities should be central, accessible, and welllit in order to contribute to the safety of users. Bathing facilities should have doors with locks on the inside.
- 12. Design latrines in consultation with women and girls to maximise safety, privacy, and dignity.
- 13. Consider preferences and cultural habits in determining the type of latrines to be constructed. Install latrines with doors that lock from the inside.
- 14. Inform women and men about the maintenance and use of water and sanitation facilities. Women and men should be fully informed of how to repair facilities and how to make/where to find spare parts. Determine timings of information sessions in consultation with the intended users, particularly women, so as not to conflict with their other responsibilities.

- 15. Use/adapt information and promotional materials to ensure they are culturally acceptable and accessible to all groups (e.g. women, illiterate members of the population). Use participatory materials and methods that allow all groups to plan and monitor their own hygiene improvements. As a rough guide, in a camp scenario there should be two hygiene promoters/community mobilisers, one female and one male, per 1,000 members of the population.
- 16. Maintain awareness of involvement of women and men in hygiene promotional activities and ensure continuous sex balance on committees and among hygiene promoters. Ensure that women are not overburdened with the responsibility for hygiene promotional activities or management of water and sanitation facilities. Ensure that women and men have equitable influence in hygiene promotional activities and that any benefits or incentives are distributed equally among women and men.
- 17. School Sanitation and Hygiene Education: Rural School Sanitation has been conceptualized as an entry point for wider acceptance of sanitation by the rural people by providing water and sanitation facilities in the schools/Aganwadis and, promoting the desired behavioural changes by imparting hygiene education, linking the same to home & community.
- 18. Ensure adequate water and sanitation facilities in all schools/Aganwadis so that children from their early childhood can use the facilities and develop consistent habits of using such facilities.
- 19. Promote usage of toilets/urinals among schools/Aganwadis students, hand washing at right times (before and after eating, and after using toilet) and sharing of tasks i.e. of collecting water and cleaning toilets by boys & girls equally.
- 20. Promote behavioral change by hygiene education in schools/Aganwadis & linking the same to home & community.
- 21. Develop a system within the schools/Aganwadis so that the facilities once created are maintained clean and used by the target groups.
- 22. Build the capacities of all stakeholders especially of teachers, PTA, PRI etc. ensuring sustainability of the system.
- 23. Sensitize and involve stakeholders at various levels- Community leaders, PRIs, CBOs, SHGs, NGO, Youth organizations, School children and teachers, Anganwadis, Scouts and guides, Health workers, Social workers/religious and sect leaders, Women workers etc

#### **CHAPTER-I**

### Introduction:

Water supply and sanitation were added to the national agenda during the first five-year planning period (1951-1956), and increasing investments have been made in subsequent plans. A new National Water Policy was adopted in 2002, according primacy to drinking water, as in the earlier policy. Some states such as Karnataka, Madhya Pradesh, Orissa, Rajasthan and Tamil Nadu have already drafted state policies based on the new national policy. Governments at Centre and States are found to be very serious in achieving the MDG goal of universal access to safe drinking water and sanitation services.

The primary responsibility for providing drinking water and sanitation facilities in the country rests with the State Governments. The Centre allocates funds and also ensures that funds are provided in State budgets, and progressively larger allocations have been made for water supply and sanitation in the various Five Year Plans. National policy guiding India's approach to water supply and sanitation in the Eighth, Ninth and the Tenth Plan broadly follow the guiding principles of the New Delhi declaration, adopted by the United Nations General Assembly in December 1990.

While the nodal agencies for rural and urban water supply and sanitation are the Rajiv Gandhi National Drinking Water Mission and the Ministry of Urban Development and Poverty Alleviation respectively, a variety of other institutions play direct or indirect roles. These include various ministries and departments, financial institutions, external support agencies, NGOs, and the private sector. The agriculture sector accounts for between 90 to 95 per cent of surface and ground water in India, while industry and the domestic sector account for the remaining.

Wide regional disparities in water availability also exist. Between 69 to 74 per cent of India's rural population take their drinking water from protected sources, leaving an un-served population of 26 to 31 per cent. Water quality problems include Fluoride (66 million people across 17 states are estimated to be at risk), excess Arsenic in ground water (nearly 13.8 million people in 75 blocks are reported at risk), varying iron levels, presence of nitrates and heavy metals, bacteriological contamination and salinity.

Several important measures are being taken to deal with the above issues. On the water resources management front, the National Water Policy, 2002 recognises the need for well-developed information systems at the national and state levels, places strong emphasis on non-conventional methods for utilization such as inter-basin transfers, artificial recharge, desalination of brackish or sea water, as well as traditional water conservation practices such as rainwater harvesting, etc to increase utilisable water resources.

It also advocates watershed management through extensive soil conservation, catchment area treatment, preservation of forests and increasing forest cover and the construction of check dams. The policy also recognises the potential need to reorganise and reorient institutional arrangements for the sector and emphasises the need to maintain existing infrastructure.

In line with the 73rd Constitutional Amendment and increasing recognition that centralised, government controlled, and supply driven approaches need to be changed to more decentralized, people centric and demand responsive approaches has led to the revamping of the ARWSP, and the inception of the Sector Reforms programme. This major paradigm shift in thinking and policy, launched in 1999, incorporates the following principles:

- (a) Adoption of demand responsive approaches based on empowerment, to ensure full participation in decision making, control, and management by communities
- (b) Shifting the role of governments from direct service delivery to that of planning, policy formulation, monitoring and evaluation, and partial financial support, and
- (c) Partial capital cost sharing, in either cash or kind or both, and 100 per cent responsibility of O & M by users.

Keeping in view the relatively poor sanitation coverage and the past experiences of the central government, the RCRSP that came into being from 1<sup>st</sup> April 1999 advocates shift from a high subsidy to a low subsidy regime, advocates a greater household involvement and demand responsiveness, provides for the promotion of a range of toilet options to promote increased affordability, has strong emphasis on IEC and social marketing, provides for stronger back up systems such as trained masons and building materials through rural sanitary marts and production centres and includes a thrust on school sanitation as an entry point for encouraging wider acceptance of sanitation by rural masses.

The TSC also provides assistance for construction of individual household toilets, sanitary complexes for women, school sanitation, Anganwadi sanitation, construction of drains and garbage pits and alternative delivery systems such as rural sanitary marts. The TSC is being carried out in 27 states/UTs. In addition, recognising that water and sanitation in schools are critical to the formation of proper attitudes and habits for hygiene, sanitation and safe water use and those schools are powerful channels for communicating hygiene messages to households and communities, school sanitation programmes have been given high priority in the Tenth Plan. Likewise, important measures are being undertaken to enhance HRD, to mitigate water quality problems, and to raise awareness levels and improve hygiene behaviour.

A direct relationship exists between water, sanitation, health, nutrition, and human well being. Consumption of contaminated drinking water, improper disposal of human excreta, lack of personal and food hygiene, and improper disposal of solid and liquid waste have been the major causes of many diseases in countries like India. Persisting high infant mortality rate (IMR. National average -- 69) and high levels of malnutrition (national average 41 percent) are also attributed to poor sanitation. More importantly, young children bear a huge part of the burden of disease resulting from the lack of hygiene. India still loses between 0.4 to 0.5 million children below five years of age due to diarrhea annually – a colossal avoidable loss of young lives. Increasingly, sanitation is being seen as a major issue in environmental protection.

Lack of or inadequate sanitation impacts on the local economy, productive and school days lost due to sickness, the overall quality of life for those living in the vicinity including the general aesthetics and tourism. The economic effect on tourism assumes special dimensions in the case of India, with its immense size, pluralistic diversity and almost limitless tourism potential – a vastly improved sanitation scenario implies vastly improved tourist volumes and tourism revenue inflows, robust contribution to increase in employment and opportunities for the private entrepreneurship in the service sector.

Orissa, a state in India with abundant natural resources - forests, minerals, cultivable land and large coastal area which makes it more different to the rest of India. It is one of the poorest and underdeveloped states in India. Due to frequent natural disasters, the state is driven to poverty, unemployment and low per capita income. More than 85 % of state population lives in rural area, engaged in Agriculture, Fishing, Animal husbandry, farm laborer and craftwork. Although sanitation coverage is still a minimal 4 percent in the state, provision of at least one source of safe drinking water to all villages is still a target.

#### **KBK Region in Orissa:**

The KBK districts account for 19.72% population over 30.59% geographical area of the State. 89.89% people of this region still live in villages. Lower population density (152 persons / sq.km) in comparison to 236 for Orissa indicates difficult living conditions and an undeveloped economy. Tribal communities dominate this region. As per 2001 Census, about 38.72% people of these districts belong to the Scheduled Tribes (ST) communities including four primitive tribal groups (PTG), i.e., Bondas, Dadai, Langia Sauras and Dangaria Kandhas. 44 CD blocks are included in Tribal Sub Plan (TSP). In addition, 16.63% population belongs to the Scheduled Castes (SC) communities as per 2001 Census. Literacy rates are also far below the State as well as National averages. Female literacy is only 24.72%.

#### Geographic status:

The old Koraput and Kalahandi districts are portions of Bolangir districts are mainly hilly. Severe droughts and floods also often visit this region and some areas in quick succession. Therefore, backwardness of this region is multi-faceted: (i) tribal backwardness, (ii) hill area backwardness and (iii) backwardness due to severe natural calamities.



Table 1: Geographical and administrative divisions of KBK Districts

SI.		Area		Number					
No	District	(Sq. Km)	Block	TSP	Sub- division	Tehsil	GP	Village	
1.	Koraput	8,807	14	14	2	7	226	2028	
2.	Malkangiri	5,791	7	7	1	3	108	1045	
3.	Nawrangpur	5,291	10	10	1	4	169	901	
4.	Rayagada	7,073	11	11	2	4	171	2,667	
5.	Bolangir	6,575	14	-	3	6	285	1,794	
6.	Sonepur	2,337	6	-	2	4	96	959	
7.	Kalahandi	7,920	13	2	2	7	273	2,236	
8.	Nuapada	3,852	5	-	1	2	109	663	
	Total	47,646	80	44	14	37	1,437	12,293	

Note: TSP-Tribal Sub-Plan Blocks. GP- Gram Panchayats. Sub-div – Sub- divisions

#### Socio Economic Status:

The KBK districts account for 19.80% population over 30.60% geographical area of the State. 89.95% people of this region still live in villages. Lower population density (153 persons / sq. km) in comparison to 236 for Orissa indicates difficult living conditions and an underdeveloped economy. Tribal communities dominate this region. As per 2001 Census, about 38.41% people of these districts belong to the Scheduled Tribes (ST) communities including four primitive tribal groups (PTG), i.e., Bondas, Dadai, Langia, Sauras and Dangaria Kandhas. 44 CD blocks are included in Tribal Sub Plan (TSP).

In addition, 16.25% population belongs to the Scheduled Castes (SC) communities as per 2001 Census. The distribution of villages as per SC and ST population during 2001 is given in Table 2. Literacy rates are also far below the State as well as National averages. Female literacy is only 29.1%. Some demographic and literacy indicators are summarized in Table 3. Table 4 summarizes the number of schools functioning in KBK districts.

Table 2: Distribution of inhabited Villages as per SC & ST Population in KBK districts – 2001

SI.		Inhabited	No. of Village:	No. of Villages with SC & ST Por		
No.	District	Villages	More than 75%	50% to 75%	Less than 50%	
1	Koraput	1,922	1,163(60.51)	382 (19.88)	377 (19.61)	
2	Malkanagiri	979	796 (81.31)	104 (10.62)	79 (8.07)	
3	Nawarangpur	876	475(54.22)	254 (29.00)	147 (16.78)	
4	Rayagada	2,467	1,931 (78.27)	246 (9.97)	290 (11.76)	
5	Bolangir	1,764	280 (15.87)	354 (20.07)	1,130 (64.06)	
6	Sonepur	829	96 (11.58)	97 (11.70)	636 (76.72)	
7	Kalahandi	2,099	924 (44.02)	395 (18.82)	780 (37.16)	
8	Nuapada	648	194 (29.94)	165 (25.46)	289 (44.60)	
Tota	KBK	11,584	5,859 (50.58)	1,997 (17.24)	3,728 (32.18)	

Table 3: Demographic and Literacy indicators in the KBK districts: 2001

District	Population		Population		Literacy Rate			
District	Density		Female	Rural	ST	SC	Total	Female
	Deficity	(000)	(%)	(%)	(%)	(%)	(%)	(%)
Koraput	134	1,181	49.96	83.19	49.6	13.0	35.7	24.3
Malkangiri	87	504	49.92	93.13	57.4	21.4	30.5	20.9
Nawrangpur	194	1,026	49.78	94.22	55.0	14.1	33.9	20.7
Rayagada	118	831	50.69	86.11	55.8	13.9	36.1	24.6
Bolangir	203	1,337	49.60	88.46	20.6	16.9	55.7	39.5
Sonepur	232	542	49.14	92.61	9.8	23.6	62.8	46.2
Kalahandi	169	1,335	50.02	92.50	28.6	17.7	45.9	29.3
Nuapada	138	531	50.18	94.34	34.7	13.6	42.0	25.8
KBK	153	7,287	49.91	89.95	38.41	16.25	43.3	29.1
Orissa	236	36,805	49.30	85.01	22.13	16.53	63.1	50.5

**Table 4: Census of Families below Poverty Line (BPL)** 

SI		HRC	1992	2 BPL Cer	nsus	1997 BPL Census		
No	District	(%)	Total	BPL	(%)	Total	BPL	(%)
		` ,	(lakh fa	amilies)	( /	(lakh fa	milies)	( /
1	Kalahandi	80.19	2.41	2.07	85.77	3.08	1.93	62.71
2	Nuapada	00.10	0.94	0.79	83.64	1.27	0.99	78.31
3	Bolangir	48.89	2.39	1.81	75.82	3.30	2.01	61.06
4	Sonepur	40.09	0.92	0.57	62.29	1.10	0.80	73.02
5	Koraput		1.88	1.63	86.59	2.65	2.22	83.81
6	Malkangiri	92.24	0.80	0.68	84.81	1.09	0.89	81.88
7	Nawrangpur	92.24	1.52	1.38	90.56	2.15	1.59	73.66
8	Rayagada		1.42	1.22	86.04	1.88	1.36	72.03
	Total	87.14	12.28	10.14	82.60	16.52	11.79	71.40

Table 5: Availability of other infrastructure in KBK region

INF	RASTRUCTURE	All Scheduled Commercial Banks (As on March 2001)			
Name of the Districts	No. of Post Offices (2000-01)	% of Village Electrified	No. of Offices/ Branches	Deposit (Rs. In lakh)	Credit (Rs. In lakh)
Bolangir	283	92.56	69	22984	9505
Kalahandi	303	62.96	78	21295	14046
Koraput	249	66.74	60	35076	15135
Malkangiri	84	52.96	19	6142	2664
Nawarangpur	177	85.90	29	8219	6271

Nuapada	111	79.47	28	7651	3736
Rayagada	201	54.23	47	19435	8064
Sonepar	97	87.75	27	6974	3373
KBK	1505	-	357	127776	62794

#### Salient Features of KBK Districts

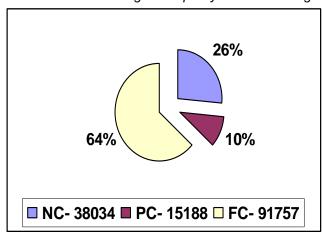
- The KBK districts account for 19.72% population over 30.59% geographical area of the State. Tribal communities (38.72%) dominate this region.
- This region is one of the poorest regions in the country. As per an estimate (based on 1999-2000 NSS data), 87.14% people in Southern Orissa are below poverty line (BPL).
- The literacy rate at 36.58% is much lower than the State average of 63.61%. The female literacy rate 24.72% also compares unfavorably with the State average of 50.97%
- The population suffers from high morbidity on account of under-nutrition as well as endemic malaria and other localized diseases.
- Road connectivity is a major constraint in the region. Missing links pose significant challenges to the people to access market places, educational institutions and health services.
- Rainfall is generally erratic and unevenly distributed. Irrigation facilities (both surface and lift) are inadequate. Thus, the region often experiences problems of moisture stress.
- At present all the eight KBK districts are ecologically disturbed. More than 50% of forests of these districts is degraded. This aggravates the problem of poverty in the region.
- Problems of soil erosion and land degradation are common. Water retention capacity of soils is generally poor. These factors, among others, significantly contribute to low land productivity.
- Per hectare yield of rice in the KBK district is substantially low.
- Employment opportunities in the region are limited. Agriculture, which is the major economic activity, does not generate adequate avenues of employment for the rural poor. As a result, many men and women go out to urban areas both inside and outside the State in search of employment. This leaves the old and infirm in the villages.

Table 6: Coverage Status in Orissa as per National habitation Survey Report 2003

	Break Up of Habitations in number and percentage								
Total Habitations	NC	%	PC	%	FC	%	Quality Affected	%	
1,44,979	38,034	26.23	15,188	10.48	91,757	63.29	7314	5.04	

National Habitation Survey Report 2003 has prepared a comprehensive database indicating coverage and quality of safe drinking water at state, district, block, gram Panchayat and village level. This has contributed a lot in maintaining and up-dating MIS.

Chart no-1: Coverage and quality of safe drinking water at state, district, block, GP and village level.



National Habitation Survey: 2003 Orissa Report					
Habitations:	1, 44, 979				
Fully Covered:	91, 757				
Partially Covered:	15,188				
Not Covered:	38,034				
Quality Affected:	7314				

Table 7: Coverage Status in KBK Districts per RWSS Database: 2006

District	No of Habitations	FC	%	PC	%	NC	%
Balangir	3262	2662	81.61	439	13.46	161	4.94
Kalahandi	4182	3785	90.51	165	3.95	232	5.55
Koraput	4559	4005	87.85	267	5.86	287	6.30
Malkangiri	2383	2078	87.20	172	7.22	133	5.58
Nawrangpur	3151	1873	59.44	1047	33.23	231	7.33
Nuapada	2355	1928	81.87	344	14.61	83	3.52
Rayagada	4410	3043	69.00	677	15.35	690	15.65
Subarnapur	2452	2080	84.83	229	9.34	143	5.83
KBK	26754	21454	80.19	3340	12.48	1960	7.33

The table reveals impressive progress in drinking water sector in one of the most backward, poverty afflicted and tribal dominated regions of the state. The creditable performance has been achieved due to sincere hard work by government agencies and resource support available under schemes including the Long Term Revised Action Plan being implemented in KBK districts.

#### CHAPTER - II

# RATIONALE OF THE STUDY & RESEARCH METHODOLOGY

#### **Study Rationale:**

The Bharat Nirman Programme is a step taken towards building up a strong Rural India by strengthening the infrastructure in six areas viz. Housing, Roads, Electrification, Communication(Telephone), Drinking Water and Irrigation, with the help of a plan to be implemented in four years, from 2005-06 to 2008-09. The primary responsibility of providing drinking water facilities in the country rests with State Governments.

The efforts of State Governments are supplemented by Government of India by providing financial assistance under the Centrally Sponsored Scheme. ARWSP has been under implementation since 1972-73. In 1986, the National Drinking Water Mission, renamed as Rajiv Gandhi National Drinking Water Mission in 1991, was launched and further in 1999, the Department of Drinking Water Supply was created, to provide a renewed focus with mission approach to implement programmes for rural drinking water supply.

#### Norms for Coverage under ARWSP

Under ARWSP, the following norms are being adopted for providing drinking water to rural population in the habitations:

- 40 litres per capita per day (lpcd) of safe drinking water for human beings.
- 30 lpcd additional for cattle in the Desert Development Programme Areas.
- One hand pump or stand post for every 250 persons.
- The water source should exist within 1.6 km in the plains and within 100 metres elevation in the hilly areas.

[Water is defined as safe if it is free from biological contamination (cholera, typhoid, etc.) and chemical contamination (excess arsenic, fluoride, salinity, iron, nitrates, etc.)]

#### **Definition of habitation:**

A 'Habitation' is a locality within a village where a cluster of families reside. The total population should be 100 or more for consideration for coverage under the rural water supply norms laid down by the Department (Section 2). It is generally assumed that around 20 families reside in a habitation. Average number of persons in a family is taken as 5. In case of hilly areas, a habitation may have a population, which is less than 100.

Proper water and sanitation facilities are crucial and preconditions for promoting quality of life of communities. Towards this end, with the support of government of India and the state government, a number of initiatives have been undertaken in the KBK region of Orissa. In commissioning this study, Planning and Coordination Department, Govt. of Orissa seeks to assess the impact of such initiatives.

Although evaluation studies and reviews were conducted on the overall performance of the Revised Long Term Action Programme (RLTAP) meant for integrated development of the KBK region, there is no study exclusively devoted to the Water and Sanitation Sector. Such a study was necessary to determine the impact of the interventions, the successes and weaknesses which can provide useful lessons as the state government moves into a new approach to programming with greater emphasis on sustainability and a gender balanced approach.

This study designed to evaluate the access of potable drinking water, its adequacy, continuity, quality and maintenance of created assets and sanitation facilities i.e. household latrines in rural areas of KBK districts. Apart from this, it aimed to see the genuineness of funds, the approach followed to ensure local participation in planning, management with village level capacity building, streamlining agency functions for integrated service delivery.

#### **Objectives include:**

- (a) To assess the effectiveness of water and sanitation strategy evolved for KBK regions and the gaps thereof.
- (b) To assess the resource inflow from multiple sources and utilization.
- (c) To assess institutional arrangements for programme implementation with special reference to innovations piloted for stakeholder ownership and participation.
- (d) To assess impact in improving coordination and collaboration with other actors in the water and sanitation sub-sectors;
- (e) To assess efficacy and impact of monitoring arrangements put in place for effective and timely implementation of sub-components.
- (f) To assess the impact of IEC, Capacity Building and Awareness Generation Campaigns.
- (g) To assess the impact of Rural Sanitation Programme at the household and community level.
- (h) To assess the impact of School Water Supply and Sanitation activities.
- (i) To assess the status, usage and maintenance of Water and Sanitation Infrastructure facilities provided.

#### **Specific Objective:**

Learn from the current practice and suggest action points for improvement at the level of programme design and implementation involving all stakeholders.

#### Methodology:

This report focuses on the evaluation of Drinking Water and Sanitation services in KBK region in Orissa. During the study, attempts made towards specific focus, visits, and discussions, at local Sampled villages and guided interactions with various stakeholders / service providers to assess the impact of rural drinking water and sanitation programme in the region. Taken in to the wider context of linking with Revised Long Term Action Plan (RLTAP) for KBK region, these projects form an important element in a holistic approach for the development of this area. Multiple tools were used to conduct the study.

#### Evaluation Tools Used:

- Question & answer method through a set of structured questionnaire
- Participatory Focus group discussion (FDG) with Villagers & SHG.
- Observation and physical verification of assets on its actual site
- Dialogue with different service providers
   from district to hamlets.
- Photographs / Observations.
- Reviewing Govt. records.

#### **Type of Respondents:**

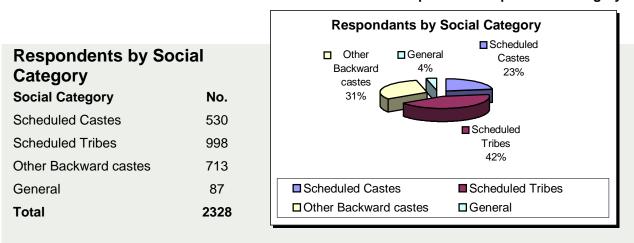
Table no-08: List of respondents

The study includes a variety of respondents / stakeholders who were directly involved either as a beneficiary or as service providers for drinking water and sanitation facilities in KBK region. The respondents mentioned in the table, were interviewed.

Respondents Categories								
State	District Block GP		Village					
P & C Deptt.	District Administration – ADMO	BDO / ABDO	Sarpanch	School Teacher				
RD Deptt.	PD / APD - DRDA	Jr. Er RWSS	Deputy Sarpanch	AWW				
SWSM	DSWM	CDPO / Supervisor - ICDS	Ward Members	Head of Households				
RWSS	E. Er RWSS	School Inspector	Executive Officer	Club members				
	President / Vice President - ZP	Medical Officer - PHC	ANM	VDC Members				
OSDMA	CSOs	Members of Panchayat Samiti	AWW	SHG Members				
CSOs		cso	Teachers / VEC members	Village Opinion Leaders				
		BEE	CBOs	Village Development Worker				

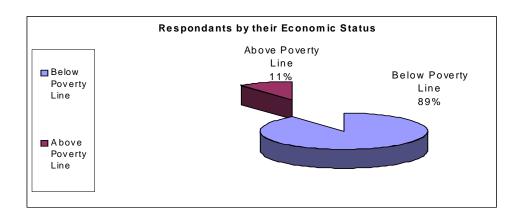
#### Area Coverage Sample Size: Respondents **KBK** Sample Size **Districts** State level officials: Key departments & govt. agencies Koraput Reference Group Members: Civil society & resource No of districts: 8 Malkangiri agencies Nabarangpur District officials: from district and blocks No of Blocks: 24 Rayagada Line Agency Officials: RWSS/ SWSM/DWSM Bolangir No of GPs: 48 Panchayat representatives: GP/ PS/ ZP Sonepur Beneficiaries): 2328 Kalahandi Nuapada Beneficiaries:

Chart no-2: Division of respondents as per social category



The majority of beneficiaries 42% were taken from Scheduled Tribe, OBCs 31%, Scheduled castes 23% and general 4%. This is due to population composition and its distribution in KBK districts.

Chart No-3: Division of respondents as per economic status.



#### Sampling:

The data / information have been collected from KBK region through a carefully planned sampling procedure that upholds authenticity and representative character for generalization. The unit selection is done on multi stage stratified random sampling. Interviews, FGDs, Record reviews and Site inspections were structured in reference to respondent background and study objectives.

#### **Study Procedure**

All 8 districts of KBK region are included in the study. The respondents' were taken from rural areas, covering four blocks from larger and 2 from smaller districts. Based on Water and Sanitation performance indicators, (one most successful Gram Panchayat and one least successful gram Panchayat in each block), considering - distance from district headquarter, programme coverage, demographic and socio-economic factors like population density, social categories i.e. SC /ST, was taken. Before final selection of content of study, geographical area. coverage, sample size etc. A thorough consultation was made with Water and sanitation Mission and RWSS authorities in Bhubaneswar

The questionnaires finalized in were consultation with the Planning and Coordination Department, Government of Orissa. It was agreed to physically verify 30 % of tube wells in each of the 24 sample blocks and prepare a status report on location, distance covered to collect water, condition of chandini, soak pit, O& M arrangement etc. A printed checklist was prepared to facilitate the inspection process.

#### Content Coverage:

The Evaluation process included multiple methods & tools, to understand water and sanitation situation in the targeted project districts of KBK region.

The questions asked, were related to access of water and sanitation facilities, its type, ownership, quality of water, maintenance, disposal of waste water and household garbage, community participation, awareness on water and sanitation services, community contribution and its overall impact in improving the quality of life of the people.

The details on these heads can be seen from the questionnaire used for data collection from various stakeholders, which is available in this report as an annexure.

#### **Survey Process:**

#### **Holistic Approach:**

Consultations were held with concerned officials at state and district levels to define the scope of the study. It was agreed to look at drinking water provisions created through RLTAP funds only since that would not reflect coverage status vis a vis needs in the KBK region. Hence, the study examined the provision of drinking water and sanitation in sample blocks in a holistic manner besides throwing light on the utilization of funds placed for the purpose from RLTAP grant.

#### Sample size:

The sample design submitted in the proposal was drastically changed to make it representative and statistically adequate. It was decided to look at water supply and sanitation provisions in all the villages of 4 blocks from larger and 2 from smaller districts. Besides, about 30 % tube wells in each sample block was subjected to physical inspection by the survey team for situation assessment.

#### Study tools:

Study tools were developed in consultation with subject experts and officials of the line agencies. A set was provided to Planning and Coordination Department Government of Orissa for feedback. Tools were field tested and finalized after incorporating required modifications and suggestions.

#### Training:

Suitably qualified field investigators were engaged for the study. A two day training programme was organized for them. They were oriented about the objectives, scope, and procedure of the study. The investigators were actively involved in the field testing stage. 8 District teams were appointed one for each district to expedite data collection and physical inspection of tube wells.

#### **Secondary Data Review:**

A desk review of secondary data was done at state level to have a glimpse of the water and sanitation scenario in KBK districts. The research team obtained the list of secondary data and project details from concerned officials in respective district and blocks to get an overall understanding of water and sanitation coverage in the district.

#### Field Work and Report:

Field work was organized in consultation with district and block officials. Selection of sample blocks was done for authentic representation of the entire district. During the survey, the research team was guided, cross-checked on the spot on day-to-day basis and necessary guidance was given to ensure consistency and accuracy of information. It was monitored / supervised by the senior team members of CYSD. The draft report has been prepared after scrutiny, validation and analysis of data.

## CHAPTER III RLTAP: AN OVERVIEW

It was during early nineties that Union government recognized that those areas being backward had been grossly neglected in the fields of agriculture, education, health, industrialization, irrigation, employment, social and economic development. To bring about rapid economic growth for minimizing the economic gap in this region, then Prime Minister of India, PV Narasimha Rao declared a special Kalahandi-Bolangir-Koraput or KBK Yojana in 1995 at Koraput.

Despite the much-hyped declaration, subsequent events suggest that no separate provision were made in the Union budget in the name of "KBK Yojana". It was mentioned in the third Revised Long Term Action Plan that in the field of rural development other then the allotted money of central plan there would be an additional requirement of Rs. 715.15 Crore.

Similarly, in the field of agriculture, health and family welfare, employment etc. there will be an additional requirement of Rs. 789.35 Crore. Going through such calculations the Union Ministry of Finance decided to provide an additional amount of Rs. 1503.85 Crore only. Subsequently, another Central delegation headed by Yugandhar, the then Secretary of PMO, after holding discussion with the state government observed that at both the stage the required amount is Rs. 4859 Crore.

In addition, after deducting the already allotted central assistance of Rs. 4282.39 Crore in those areas, it calculated that another Rs. 576.61 Crore could be provided for these areas. Finally, the grant amount came down to only a sum of Rs. 389.21 Crore. In the subsequent years what was provided in the name of KBK Yojana or Revised Long Term Action Plan was far below from what was announced originally.

The undivided districts of K-B-K are predominantly tribal inhabited and majority of its population are deprived of the bare necessities of life, forget about the comforts. Taking account of the deplorable socio-economic condition of these districts, the KBK programme would have been a milestone had it focused on Primary Education, Higher Education (Medical College, Agriculture College, Mining school), Irrigation (small and medium), Livelihood, Health care, Drinking water and sanitation, Agro based industries, cooperatives etc.

Nevertheless, the project envisages an integrated approach for speeding up the socio-economic development of this region by synergizing effectively the various developmental activities and schemes under implementation both in central as well as state sectors. The critical gaps in the development efforts as well as resources are sought to be bridged through Additional Central Assistance (ACA) / Special Central Assistance (SCA) as a special dispensation. Therefore, there has to be pooling of resources for different sources like:

- (i) Normal flow of funds to KBK districts under Central Plan (CP) and Centrally Sponsored Plan (CSP) schemes.
- (ii) Additional funds received from Government of India exclusively for programmes in KBK districts as agreed by the Planning Commission.
- (iii) Central assistance under programmes of Government of India to be implemented in KBK districts with some relaxation in norms such as Accelerated Irrigation Benefit Programme (AIBP) for earmarked irrigation projects.

A total outlay of funds to the tune of Rs.6,251.08 crore over a project period of 9 years from 1998-99 to 2006-07 was envisaged under the revised project. The project estimates were prepared based on comprehensive area and group specific needs assessment to address following key objectives:

- Drought proofing,
- · Poverty alleviation and development saturation, and
- Improved quality of life for local people.

The RLTAP comprises of various schemes, sponsored by Govt. of India, including agriculture, horticulture, watershed development, aforestation, irrigation, health, drinking water& sanitation, emergency feeding, rural connectivity and welfare of SC / ST. The Government of Orissa, Under Revised Long Term Action Plan (RLTAP) initiated Drinking Water Supply and Sanitation Programme, supported by Govt. of India. Though not much emphasized initially, at present, emphasis is laid on sanitation at household, educational institutions and Anganwadi level under the Total sanitation Campaign.

Table 9: Scheme-wise abstract of projected outlay from 1998-99 to 2006-07

			ojected Out				Grand
SI	Scheme	Central	Centrally S <sub>l</sub> Plan (CSP)		. Ota.	Total	Total
No.		Plan (CP)	Central	State	Central Share	State Share	(Rupees In crore)
1	Agriculture	44.74	30.19	10.01	74.93	10.01	84.94
2	Horticulture	66.17	6.35	1.62	72.52	1.62	74.14
3	Watershed Development	601.90	194.96	81.42	796.86	81.42	878.28
4	Afforestation	347.83	14.11	14.11	361.94	14.11	376.05
5	Rural Employment	-	2,235.05	558.76	2235.05	558.76	2,793.81
6	Irrigation	812.11	-	-	812.11	-	812.11
7	Health	150.95	ı	-	150.95	1	150.95
8	Emergency Feeding	88.50	-	-	88.50	-	88.50
9	Drinking Water Supply	-	67.74	67.74	67.74	67.74	135.48
10	Rural Connectivity	-	534.70	65.00	534.70	65.00	599.70
11	Welfare of ST/SC	257.12	-	-	257.12	-	257.12
	Total	2,369.32	3,083.10	798.66	5,452.42	798.66	6,251.08

Irrigation was accorded highest priority in terms of financial allocations under RLTAP followed by watershed activities and Afforestation. Drinking water was to receive Rs 135.48 crore on fifty percent partnership of both centre and state. There was no special mention of sanitation in the sub sectors.

## Convergence of Resources under RLTAP For KBK Districts

The State Government is striving to increase flow of funds from different sources with a view to accelerating the pace of development in KBK districts. Total flow of funds under CP, CSP, SP, RLTAP and from other sources to the KBK districts was of the order of Rs. 1,117.32 crore, Rs. 940.97 crore during 2003-04 and 2004-05 respectively. The total flow of funds to KBK districts during 2005-06 was projected at Rs. 1294.65 crore.

Total flow of funds under CP, CSP, SP, and RLTAP and from other sources to the KBK districts during 2003-04 and 2004-05 and the projected flow of funds during 2005-06 are summarized in Table 10.

Table 10: Sector-wise Total Flow of Funds under CP, CSP, SP, RLTAP and Other Sources to the KBK Districts: 2003-04, 2004-05 and 2005-06

Sl.	Sector	Flow of	Funds (Rs. in l	Lakh)
No.	Sector	2003-04	2004-05	2005-06
1.	Watershed Development Horticulture & Agriculture	5,321.33	5321.74	9,740.97
2.	Animal Resources Development	503.60	320.91	524.93
3.	Fisheries Development Programme	309.10	171.21	200.00
4.	Forest Regeneration and Development	3,365.21	2,545.69	2,397.53
5.	Health and Family Welfare Programme	3,162.37	2,427.08	5,013.70
6.	Drinking Water Supply	6,058.65	3,363.01	4,794.13
7.	Connectivity in KBK district	28,859.01	16,858.19	35,556.34
8.	Welfare of ST & SC	6,697.58	6,111.52	7,158.37
9.	Textiles and Handloom	317.74	450.15	339.98
10.	Irrigation	29,295.00	21,911.00	13,657.00
11.	Safety Net for Old / Infirm, Women and Children	6,137.08	7,767.54	10,078.99
12.	Anti-poverty Programme	17,984.70	17,733.87	18,040.96
13.	Other Programmes	3,720.52	9,115.19	21,961.92
	Total	111,731.89	94,097.10	129,464.82

Table 11: Consolidated Information on Release & Utilisation of CP, CSP, SP and ACA
Funds in KBK Districts: 1998-99 – 2001-02

	199	98-99	199	99-00	200	00-01	200	1-02
	Release	Expen diture	Release	Expen diture	Release	Expen diture	Release	Expen diture
Funding				(Rupees i	n crore)			
CP/CSP	267.53	211.65	202.13	150.20	216.66	172.01	301.84	175.21
ACA (RLTAP)	46.00	13.17	57.60	55.91	40.35	57.14	100.00	61.38
AIBP (RLTAP)	.00	.00	40.40	46.11	49.82	44.97	71.66	54.69
Total	313.53	224.82	300.13	252,22	306.83	274.12	473.5 0	291.28

Table 12: Year-wise Receipt and Utilization of SCA under RLTAP

Sl. No.	Year	SCA Received from GOI (Rs. in Crore)	SCA Utilized (Rs. in crore)	Percentage of Utilisation
1	1998-99	46.00	10.51	22.84
2	1999-00	57.60	55.91	97.06
3	2000-01	40.35	57.14	141.61
4	2001-02	100.00	61.37	61.37
5	2002-03	200.00	131.99	66.00
6	2003-04	250.00	318.54	127.41
7	2004-05	250.00	279.11	111.64
Grand	d Total	943.95	914.57	96.89

NB: Utilization of ACA/SCA includes unspent balance of previous years

Table 13: Year-wise Receipt and Utilization of RLTAP Water Supply Grant in KBK Districts

		2001	-02	2002-03	2003	-04	Utilization					
SI	District	Allotted	Utilized	Allotted	Allotted	Utilized	Percentage					
1	Rayagada	100.05	100.05	223.38	193.52	193.52	100%					
2	Koraput	128.67	128.67	202.56	197.24	197.24	100%					
3	Nawarangpur	121.6	121.6	129.4	176.18	176.18	100%					
4	Malkanagiri	63.72	63.72	121.23	56.94	56.94	100%					
5	Sonepur	89.45	89.45	120.52	126.42	126.42	100%					
6	Nuapada	58.93	58.93	130.41	92.34	92.34	100%					
7	Kalahandi		Data Not Available									
8	Bolangiri	Data Not Available										

**Table 13 Continued** 

		200	4-05	Utilization	2005	-06	Utilization					
SI	District	Allotted	Utilized	Percentage	Allotted	Utilized	Percentage					
1	Rayagada	194.08	194.08	100%	129.43	129.43	100%					
2	Koraput	82.42	82.42	100%	121.08	121.08	100%					
3	Nawarangpur	66.02	66.02	100%	208.8	100%						
4	Malkanagiri	42.12	42.12	100%	22.57	22.57	100%					
5	Sonepur	104.98	104.98	100%	61.75	61.75	100%					
6	Nuapada	109.68	109.68	100%	D	ata not Avail	able					
7	Kalahandi		Data not Available									
8	Bolangiri		Data not Available									

Table 14: District wise details of Assets Created under RLTAP Grant

			20	01-02			20	02-03				
SL NO.	DISTRICTS	SP/SB	TW	SW	Institution TW/SW	SP/SB	TW	SW	Institution TW/SW			
1	Rayagada	-	242	8	-	-	337	123	-			
2	Koraput	-	322	7	-	0/24	409	135	-			
3	Nawarangpur	-	290	14	-		470	11	-			
4	Malkanagiri	2/0	149	21	-	3/0	307	61	-			
5	Sonepur	1	189	-	-	8	241	-	-			
6	Kalahandi				Data n	ot Available	)					
7	Nuapada		Data not Available									
8	Bolangiri				Data n	ot Available	9					

## District wise details of Assets Created under RLTAP Grant (Table No-14,Cont)

DISTRICT		200	3-04			20	04-05			20	005-06	
	SP /SB	TW	SW	Institut ion TW/SW	SP /SB	TW	SW	Institutio n TW/SW	SP /SB	TW	SW	Institution TW/SW
Rayagada	26	199	75	-	44	150	50	-	68	188	54	70/0
Koraput	6	334	47	-	0/3	163	48	-	2	155	62	-
Nawarang pur	-	432	3	-	-	159	4	-		435	-	
Malkanagi ri	1	32	12	-	ı	54	2	-	1	66	1	
Sonepur	9	393	-	-	6	502	5	-	-	550	-	-
Kalahandi					Segre	gated	Data	Not Availal	ole			
Nuapada		Segregated Data Not Available										
Bolangiri					Segre	gated	Data	Not Availal	ole			

**Table 15: District wise details of Assets Created under Other Grant** 

SL	DISTRICTS		20	01-02			20	002-03				
NO.		SP/SB	TW	SW	Institution TW/SW	SP/SB	TW	SW	Institution TW/SW			
1	Rayagada	33	94	31	132/0	-	386	177	192/19			
2	Koraput	0/20	308	51	-	-	440	109	-			
3	Nawarangpur		356	13			276	9				
4	Malkanagiri	ı	198	19	•	1	246	30	-			
5	Sonepur			S	egregated Da	ata Not Av	/ailable					
6	Kalahandi		Segregated Data Not Available									
7	Nuapada		Segregated Data Not Available									
8	Bolangiri			S	egregated Da	ata Not Av	/ailable					

District wise details of Assets Created under Other Grant (Table No-15,Cont)

DISTRICTS		2003	-04			20	004-05			200	5-06	
	SP /SB	TW	SW	Institu tion TW/ SW	SP /SB	TW	SW	Institutio n TW/ SW	SP/ SB	TW	SW	Instituti on TW/SW
Rayagada	13	181	54	30/0	15	170	100	150/ 55	40	201	11 5	145/ 78
Koraput	2	279	73	-	1	245	63	-	1	169	12 0	-
Nawarang pur		349	16			341	16			192	20	-
Malkanagi ri	-	249	32	-	-	288	4	-	-	156	23	-
Sonepur					Segre	gated D	ata Not	Available				
Kalahandi		Segregated Data Not Available										
Nuapada		Segregated Data Not Available										
Bolangiri					Segre	gated D	ata Not	Available			•	·

Table 16: District wise details of Piped water supply under RLTAP

SI. No	District	2001-02	2002-03	2003-04	2004-05	2005- 06	2006-07 (Oct.2006)	Total
1	Koraput	1	1	2	2	7	0	13
2	Rayagada	3	1	4	4	5	1	18
3	Malkanagir	2	0	3	3	4	0	12
4	Nawarangpur	1	0	3	3	1	1	09
5	Kalahandi	1	1	0	0	2	0	04
6	Nuapada	1	0	0	0	2	2	05
7	Bolangir	2	3	7	7	4	1	24
8	Sonepur	1	1	0	0	3	0	05
	Total	12	7	19	19	28	5	90

Table 17: Cumulative details of water supply under RLTAP

Unit	Туре	1999- 2000	2000 - 2001	2001- 2002	2002- 2003	2003 -04	2004- 05	2005- 06	Total
	Tube well	2497	349	2127	3612	2885	1320	1040	13830
KBK	Sanitary well	3	9	54	280	0	69	217	632
	Spring based	0	0	0	24	0	0	0	24

Table 18: Cumulative details of water supply under RLTAP in KBK Districts

DISTRICT	Type	99-00	00-01	01-02	02-03	03-04	04-05	05-06	Total
Koraput	TW	310	45	322	447	389	180	57	1750
	SW	0	0	7	97	0	34	54	192
	SB	0	0	0	24	0	0	0	24
Sub Total									1966
Rayagada	TW	260	45	242	407	274	224	164	1616
	SW	0	0	8	53	0	25	58	144
	SB	0	0	0	0	0	0	0	0
Sub Total									1760
Malkanagir	TW	120	32	152	289	43	65	50	751
	SW	0	3	25	97	0	1	31	157
	SB	0	0	0	0	0	0	0	0
Sub Total									908
Nawarangpur	TW	317	52	290	469	435	337	433	2333
	SW	3	6	14	12	0	0	29	64
	SB	0	0	0	0	0	0	0	0
Sub Total									2397
Kalahandi	TW	550	45	416	868	763	58	19	2719
	SW	0	0	0	21	0	3	32	56
	SB	0	0	0	0	0	0	0	0
Sub Total									2775
Nuapada	TW	250	36	142	322	223	108	33	1114
	SW	0	0	0	0	0	6	13	19
	SB	0	0	0	0	0	0	0	0
Sub Total									1133
Bolangir	TW	440	58	374	571	558	214	163	2378
	SW	0	0	0	0	0	0		0
	SB	0	0	0	0	0	0		0
Sub Total									2378
Sonepur	TW	250	36	189	239	200	134	121	1169
	SW	0	0	0	0	0	0	0	0
	SB	0	0	0	0	0	0	0	0
Sub Total									1169
KBK	TW	2497	349	2127	3612	2885	1320	1040	13830
	SW	3	9	54	280	0	69	217	632
	SB	0	0	0	24	0	0	0	24

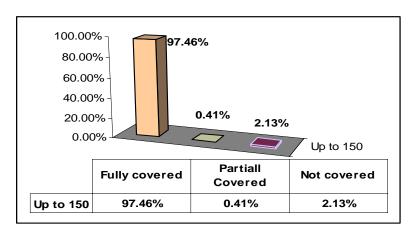
## **Chapter IV**

## **Coverage Status in Sample Blocks of KBK Districts**

## Adequacy of Supply in KBK region:

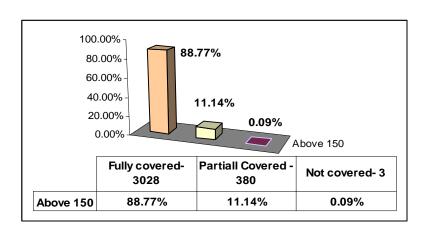
Adequacy availability of safe drinking was ascertained from 5105 habitations located in 24 sample blocks. Of these, 33.19 % (1694) have population less than 150 whereas 66.81% (3411) habitations have population above 150. Adequacy was measured with reference to approved norms on number of beneficiaries per tube well, distance of dependent household from source, water quality and per capita availability. Accordingly, the habitations have been classified as fully covered, partially covered and not covered categories.

Chart no-4: Adequate availability in habitations with less than 150 population in KBK region.



One can see from the chart no-4, out of 1694 habitations with less than 150 population 97.46 % are fully covered, 0.41 % partially covered and 2.13 are in the not covered category.

**Chart no-5** Adequacy availability of safe drinking water out of 3411 habitations with more than 150 population in KBK region.

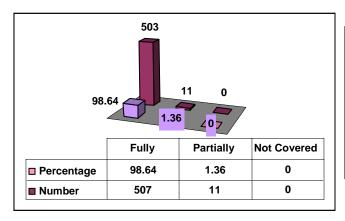


One can see from the chart no-5, out of 3411 habitations with more than 150 population 88.77 % are fully covered, 11.14 % partially covered and 0.09 % are in the not covered category. Coverage of habitations with less than 150 population appears to be better.

## **Water Coverage in Balangir District**

Adequacy/ availability of safe drinking were ascertained from 514 habitations located in 4 sample blocks. Of these, 2.14 % (11) have population less than 150 whereas 97.86% (503) habitations have population above 150. Adequacy was measured with reference to approved norms on number of beneficiaries per tube well, distance of dependent household from source, water quality and per capita availability. Accordingly, the habitations have been classified as fully covered, partially covered and not covered categories.

Chart no-6: Adequacy availability of safe drinking water out of 514 habitations in Balangir district.



#### **Coverage:**

One can see from the chart no-6, out of total 514 habitations 98.46 % are fully covered, 1.36 % partially covered and there is none in the not covered category. District indicates very impressive performance

Chart no-7: Adequacy availability of safe drinking water out of 11habitations with less than 150 population

in Balangir district.

## Coverage: Below 150 Population

One can see from the chart no-7, out of 11 habitations with less than 150 population all 100 % are fully covered. This is a rare achievement compared to other KBK Districts.

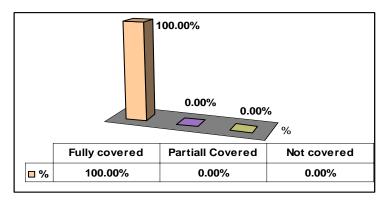
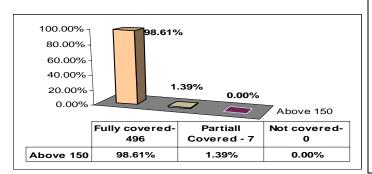


Chart no-8 Adequacy availability of safe drinking water out of 503 habitations with more than 150 population in Balangir district.

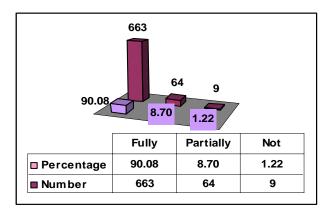


Coverage: Above 150 Population
One can see from the chart no-8,
out of 503 habitations with more
than 150 population 98.61 % are
fully covered, 1.39 % partially
covered and there is none in the
not covered category. The district
has done well in habitations with
above 150 population too.

## Water Coverage in Kalahandi District

Adequacy availability of safe drinking was ascertained from 736 habitations located in 4 sample blocks. Of these, 22.69 % (167) have population less than 150 whereas 77.31% (569) habitations have population above 150. Adequacy was measured with reference to approved norms on number of beneficiaries per tube well, distance of dependent household from source, water quality and per capita availability. Accordingly, the habitations have been classified as fully covered, partially covered and not covered categories.

Chart no-9: Adequacy availability of safe drinking water out of 736 habitations in Kalahandi District.



#### **Coverage:**

One can see from the chart no-9, out of total 736 habitations 90.08 % are fully covered, 8.70 % partially covered and 1.22 % is in the not covered category. District indicates good performance.

Chart no-10: Adequacy availability of safe drinking water out of 167 habitations with less than 150 population in Kalahandi District.

## **Coverage: Below 150 Population**

One can see from the chart no-10, out of 167 habitations with less than 150 population 94.01 % are fully covered, 0.60 % partially covered and 5.39 % are in the not covered category.

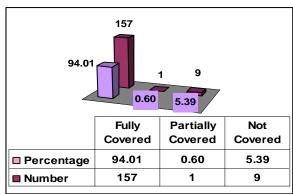
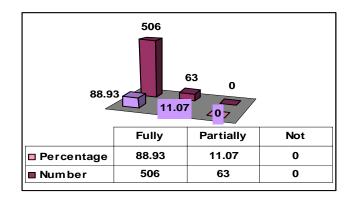


Chart no-11: Adequacy availability of safe drinking water out of 569 habitations with more than 150 populations.



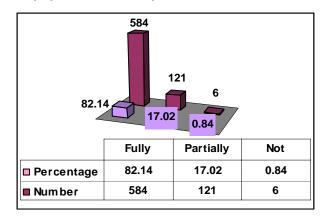
## **Coverage: Above 150 Population**

One can see from the chart no -11, out of 569 habitations with more than 150 population 88.93 % are fully covered, 11.07 % partially covered and there is none in the not covered category. The district has done well in habitations with above 150 population too.

### Water Coverage in Koraput District

Adequacy and availability of safe drinking was ascertained from 711 habitations located in 3 sample blocks. Of these, 37.69 % (268) have population less than 150 whereas 62.31% (443) habitations have population above 150. Adequacy was measured with reference to approved norms on number of beneficiaries per tube well, distance of dependent household from source, water quality and per capita availability. Accordingly, the habitations have been classified as fully covered, partially covered and not covered categories.

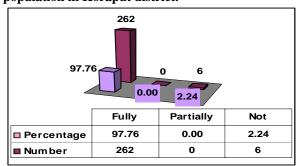
Chart no-12: Adequacy availability of safe drinking water out of 569 habitations with more than 150 population in Koraput District.



#### Coverage:

One can see from the chart no-12, out of total 711 habitations 82.14 % are fully covered, 17.02 % partially covered and 0.84 % is in the not covered category. District indicates reasonable performance.

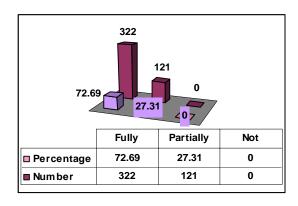
Chart no-13: Adequacy availability of safe drinking water out of 268 habitations with less than 150 population in Koraput district.



## **Coverage: Below 150 Population**

One can see from the chart no-13, out of 268 habitations with less than 150 population 97.76 % are fully covered, 2.24 % not covered and there is none in the not covered category.

Chart no-14: Adequacy availability of safe drinking water out of 443 habitations with more than 150 population in Koraput district.



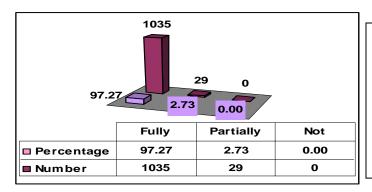
### **Coverage: Above 150 Population**

One can see form the chart no -14,
Out of 443 habitations with more than 150 population 72.69 % are fully covered,
27.31 % partially covered and there is none in the not covered category. The district has done moderately in habitations with above 150 population.

## Water Coverage in Malkangiri District

Adequacy and availability of safe drinking was ascertained from 1064 habitations located in 3 sample blocks. Of these, 54 % (575) have population less than 150 whereas 46 % (489) habitations have population above 150. Adequacy was measured with reference to approved norms on number of beneficiaries per tube well, distance of dependent household from source, water quality and per capita availability. Accordingly, the habitations have been classified as fully covered, partially covered and not covered categories.

Chart no-15: Adequate availability of safe drinking water of 1064 habitations in Malkanagiri district.



#### Coverage:

One can see from the chart no-15, out of total 1064 habitations 97.27 % are fully covered, 2.73 % partially covered and 0 % is in the not covered category. District indicates reasonable performance.

Chart no-16: Adequate availability in less than 150 population in Malkanagiri district.

Coverage: Below 150
Population

One can see from the chart no16, out of 575 habitations with
less than 150 population 100 %
are fully covered

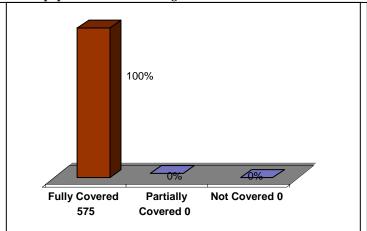
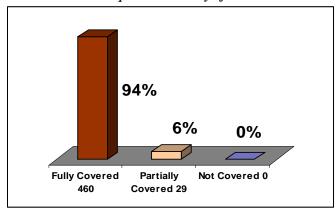


Chart no-17: Adequate availability of SDW in habitations with 150 populations in Malkanagiri district.



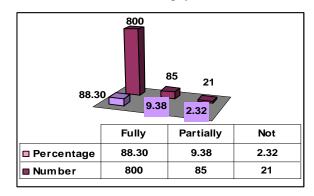
#### **Coverage: Above 150 Population**

One can see from the chart no -17, Out of 489 habitations with more than 150 population 94 % are fully covered, 6 % partially covered and there is none in the not covered category. The district has done moderately in habitations with above 150 population.

### **Water Coverage in Nawrangpur District**

Adequacy and availability of safe drinking was ascertained from 906 habitations located in 3 sample blocks. Of these, 44.26 % (401) have population less than 150 whereas 55.74% (505) habitations have population above 150. Adequacy was measured with reference to approved norms on number of beneficiaries per tube well, distance of dependent household from source, water quality and per capita availability. Accordingly, the habitations have been classified as fully covered, partially covered and not covered categories.

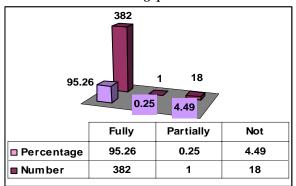
Chart no-18: Adequacy availability of safe drinking water out of 906 habitations in Nabarangapur district.



#### Coverage:

One can see from the chart no-18, out of total 906 habitations 88.30 % are fully covered, 9.38 % partially covered and 2.32 % is in the not covered category. District indicates reasonable performance.

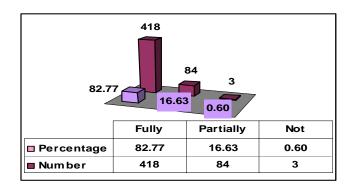
Chart no-19: Adequate availability of SDW in habitations with with less than 150 population in Nabarangapur



## **Coverage: Below 150 Population**

One can see from the chart no-19, out of 401 habitations with less than 150 population 95.26 % are fully covered, 0.25 % partially covered and 4.49% are not covered as per norms.

Chart no-20: Adequate availability of SDW in habitations with with more than 150 population in Nabarangapur

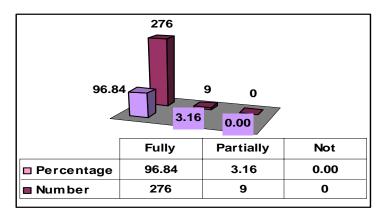


Coverage: Above 150 Population
One can see from the Chart no-20,
out of 505 habitations with more than
150 population 82.77 % are fully
covered, 16.63 % partially covered and
0.60 % is in the not covered category.
The district has done moderately in
habitations with above 150 population.

## **Water Coverage in Nuapada District**

Adequacy and availability of safe drinking was ascertained from 285 habitations located in 2 sample blocks. Of these, 8.07 % (23) have population less than 150 whereas 91.93% (262) habitations have population above 150. Adequacy was measured with reference to approved norms on number of beneficiaries per tube well, distance of dependent household from source, water quality and per capita availability. Accordingly, the habitations have been classified as fully covered, partially covered and not covered categories.

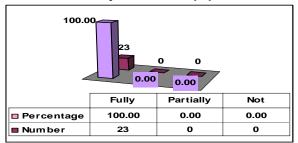
Chart no-21: Adequate availability of safe drinking water out of 285 habitations in Nuapada district.



#### **Coverage:**

One can see from the chart no-21, out of total 285 habitations 96.84 % are fully covered, 3.16 % partially covered and none is in the not covered category. District indicates very good performance.

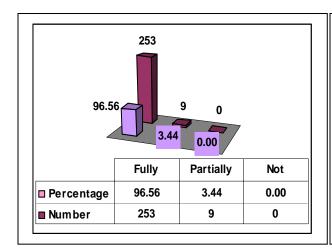
Chart no-22: Adequate availability of SDW in habitations with less than 150 population in Nuapada district.



## **Coverage: Below 150 Population**

One can see from the chart no-22, out of 23 habitations with less than 150 population 100 % are fully covered. This is a very creditable performance in respect of settlements with smaller population.

Chart no-23: Adequate availability of SDW in habitations with more than 150 population in Nuapada district.



#### **Coverage: Above 150 Population one** can

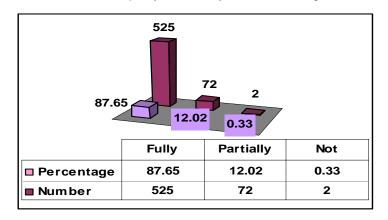
See from the chart no-23,

Out of 262 habitations with more than 150 population 96.56 % are fully covered, 3.44 % partially covered and none is in the not covered category. The district has done very well in habitations with above 150 population.

#### Water Coverage in Rayagada District

Adequacy and availability of safe drinking was ascertained from 599 habitations located in 3 sample blocks. Of these, 34.39 % (206) have population less than 150 whereas 65.61% (393) habitations have population above 150. Adequacy was measured with reference to approved norms on number of beneficiaries per tube well, distance of dependent household from source, water quality and per capita availability. Accordingly, the habitations have been classified as fully covered, partially covered and not covered categories.

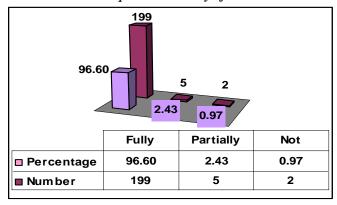
Chart no-24: Adequacy availability of safe drinking water out of 599 habitations in Rayagada district.



#### Coverage:

One can see from the chart no-24, out of total 599 habitations 87.65 % are fully covered, 12.02 % partially covered and 0.33 % is in the not covered category. District indicates good performance.

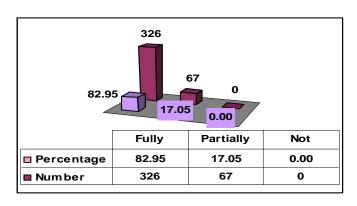
Chart no-25: Adequate availability of SDW in habitations with less than 150 population in Rayagada district.



## **Coverage: Below 150 Population**

One can see from the chart no-25, out of 206 habitations with less than 150 population 96.60 % are fully covered, 2.43 % partially covered and 0.97% is in the not covered category.

Chart no-26: Adequate availability of SDW in habitations with more than 150 population in Rayagada district.



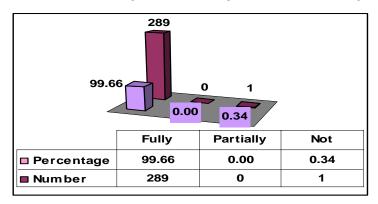
# Coverage: Above 150 Population One can See from the table no-26,

Out of 393 habitations with more than 150 population 82.95 % are fully covered, 17.05 % partially covered and none is in the not covered category. The district has done moderately well in habitations with above 150 population.

## Water Coverage in Subarnapur District

Adequacy and availability of safe drinking was ascertained from 290 habitations located in 2 sample blocks. Of these, 14.83 % (43) have population less than 150 whereas 85.17% (247) habitations have population above 150. Adequacy was measured with reference to approved norms on number of beneficiaries per tube well, distance of dependent household from source, water quality and per capita availability. Accordingly, the habitations have been classified as fully covered, partially covered and not covered categories.

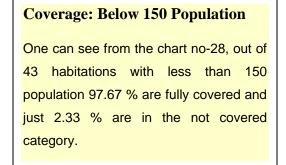
Chart no-27: Adequate availability of SDW in 290 sample habitations in Subarnapur district.



#### **Coverage:**

One can see from the chart no-27, out of total 290 habitations 99.66 % are fully covered and 0.34 % is in the not covered category. District indicates very good performance compared to others.

Chart no-28: Adequate availability of S habitations with less than 150 population in Subarnapur district.



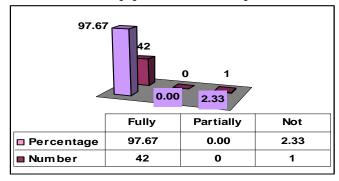
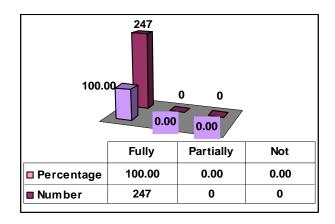


Chart no-29: Adequate availability of SDW in habitations with more than 150 population in Subarnapur district.



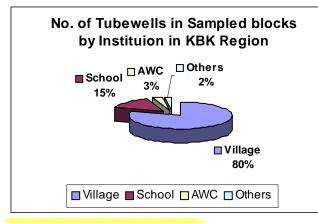
# Coverage: Above 150 Population One can see from the chart no-29,

Out of 247 habitations with more than 150 population 100 % are fully covered. The district has done excellently well in habitations with above 150 population. Subarnapur as per sample findings is successful in addressing water supply needs.

#### Location of Tube wells KBK region:

Tube well is the main source for drinking water. There are four main institutions i.e. village, Schools, Anganwadi Center and the others like GP office, Government Offices, Market, Religious- cultural places etc. The majority of Tube wells are located in the villages.

#### Chart no-30

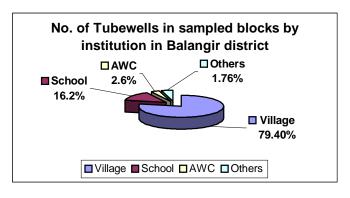


24 sample blocks together in 8 districts of KBK region have 21329 tube wells. Out of this 80 % (17070) tube wells are located in villages, 15 % (3151) tube wells are in schools, 3 % (643) in Anganwadi centers and 2 % (465) in other institutions.

## Distribution in Balangir District

4 sample blocks together in Balangir district have 3641 tube wells. Out of this 79.40 % (2891) tube wells are located in villages, 16.20 % (590) tube wells are in schools, 2.6 % (91) in Anganwadi centers and 1.76 % (69) in other institutions.

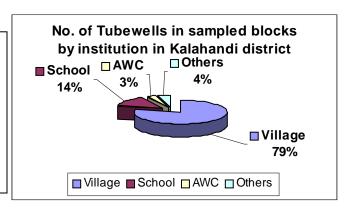
#### Chart No 31



## Distribution in Kalahandi District

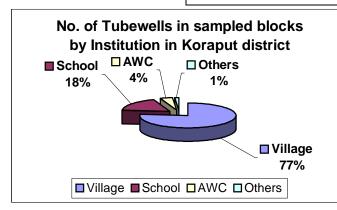
4 sample blocks together in Kalahandi district have 3799 tube wells. Out of this 79 % (2976) tube wells are located in villages, 14 % (538) tube wells are in schools, 3 % (119) in Anganwadi centers and 4 % (166) in other institutions.

Chart no-32



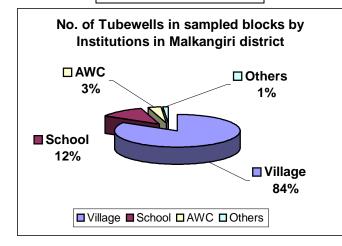
## Distribution in Koraput District

#### Chart no-33



3 sample blocks together in Koraput district have 2009 tube wells. Out of this 77 % (1534) tube wells are located in villages, 18 % (362) tube wells are in schools, 4 % (83) in Anganwadi centers and 1 % (30) in other institutions.

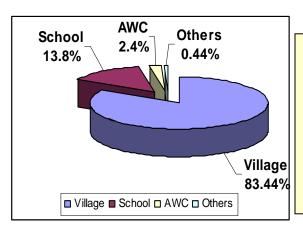
### Chart No-34



## Distribution in Malkangiri District

3 sample blocks in Malkangiri district have 2815 tube wells. Out of this 84 % (2345) tube wells are located in villages, 12 % (337) tube wells are in schools, 3 % (96) in Anganwadi centers and 1 % (37) in other institutions.

#### Chart No-35



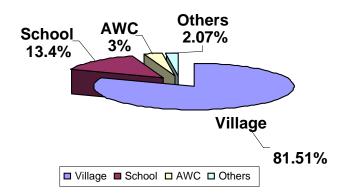
## Distribution in Nawrangpur District

3 sample blocks together in Nabrangpur district have 2753 tube wells. Out of this 83.44 % (2297) tube wells are located in villages, 13.80 % (379) tube wells are in schools, 2.4 % (65) in Anganwadi centers and 0.44 % (12) in other institutions.

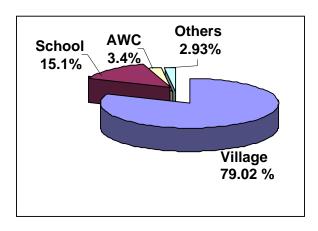
## Distribution in Nuapada District

2 sample blocks together in Nuapada district have 2315 tube wells. Out of this 81.51 % (1887) tube wells are located in villages, 13.40 % (310) tube wells are in schools, 3 % (70) in Anganwadi centers and 2.07 % (48) in other institutions.

#### Chart No-36



#### Chart No-37



## Distribution in Rayagada District

2 sample blocks together in Rayagada district have 2146 tube wells. Out of this 78.64 % (1690) tube wells are located in villages, 15.10 % (324) tube wells are in schools, 3.4 % (72) in Anganwadi centers and 2.93 % (63) in other institutions.

## **Distribution in Subarnapur district**

2 sample blocks together in Subarnapur district have 1848 tube wells. Out of this 78.46 % (1450) tube wells are located in villages, 16.80 % (311) tube wells are in schools, 2.5 % (47) in Anganwadi centers and 2.16 % (40) in other institutions.

#### Chart No-38

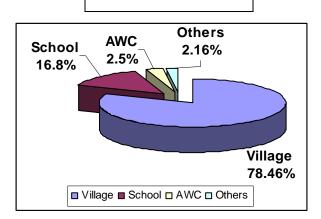


Table no-19: District wise Tube well status:

	DISTRICTWISE TUBWELL LOCATION REPORT										
District	No of Tubewell		Location of Tubewells								
District		Village	%	School	%	AWC	%	Others	%		
Bolangir	3641	2891	79.40	590	16.2	91	2.6	69	1.76		
Kalahandi	3799	2976	78.34	538	14.2	119	3.1	166	4.37		
Koraput	2009	1534	76.36	362	18.0	83	4.1	30	1.49		
Malkangiri	2815	2345	83.30	337	12.0	96	3.4	37	1.31		
Nawarangpur	2753	2297	83.44	379	13.8	65	2.4	12	0.44		
Nuapada	2315	1887	81.51	310	13.4	70	3.0	48	2.07		
Rayagada	2149	1690	78.64	324	15.1	72	3.4	63	2.93		
Subarnpur	1848	1450	78.46	311	16.8	47	2.5	40	2.16		
КВК	21329	17070	80.03	3151	14.8	643	3.0	465	2.16		

## **Chapter V**

## STATUS OF VERIFIED TUBE WELLS IN KBK REGION

### **Distribution of Verified Tube wells**

#### Table No-20

	Distributi	on of Ve	rified T	ube wells	in Per	centage	
		No of Tube	% of Tube wells verified under different categories				
SI. NO	District	wells verified	Village	Schools	AWC	Other Institutions	
1	Balangir	1250	80.08	15.52	2.24	2.16	
2	Kalahandi	1271	81.43	12.9	2.12	3.54	
3	Koraput	745	79.46	16.64	3.36	0.54	
4	Malkanagiri	1015	84.63	11.23	3.84	0.3	
5	Nawarangpur	995	82.21	14.07	3.12	0.6	
6	Nuapada	791	80.15	13.65	3.16	3.03	
7	Rayagada	724	80.39	15.47	2.35	1.8	
8	Sonepur	676	78.7	16.86	2.22	2.22	
	Total	7367	81.62	14.52	2.81	1.86	

Distribution of verified Tube wells by Institutions in KBK Region:

The Research team made a faire attempt to visit different institutions, villages, Schools and Anganwadi centers. Of the total 7637 verified tube wells in KBK region 81.62 % were located in villages, 14.52 % in schools, 2.81 % in AWCs and 1.86 % in other institutions.

#### Table No-21

### Distribution of Verified tube Wells in Balangir District

Of the total 1250 verified tube wells in Balangir district 80.08 % were located in villages, 15.52 % in schools, 2.24 % in AWCs and 1.26 % in other institutions.

	Distribution	Distribution of Verified Tube wells in Balangir District								
		No of Tube		% of Tube wells verified under different categories						
SI. NO	Sample Blocks	wells	Village	Schools	AWC	Other Institutions				
1	Bangamunda	314	78.98	14.97	3.18	2.87				
2	Bolangiri	301	81.06	14.62	1.99	2.33				
3	Khaparakhol	318	77.67	17.92	2.2	2.2				
4	Titilagarh	317	82.65	14.51	1.58	1.26				
	Total	1250	80.08	15.52	2.24	2.16				

Table No - 22

	Distribution of Verified Tube wells in Kalahandi Distric									
	Sample Blocks	No of Tube	% of Tube wells verified under different categories							
SI. NO		wells vereified	Village	Schools	AWC	Other Institutions				
1	Bhawanipatana	517	82.59	9.28	2.32	1.93				
2	Kesinga	368	82.61	11.14	2.17	4.08				
3	Karlamunda	193	75.65	19.17	2.07	3.11				
4	Thuamularampur	193	81.87	9.33	1.55	7.25				
	Total	1271	81.43	11.33	2.12	3.54				

### Distribution of Verified tube Wells in Kalahandi District

Of the total 1271 tube wells verified in Kalahandi district 81.43 % were located in villages, 11.33 % in schools, 2.12 % in AWCs and 3.54 % in other institutions.

# Distribution of verified Tube wells in Koraput District

Of the total 745 tube wells verified in Koraput district 79.46 % were located in villages, 16.64 % in schools, 3.36 % in AWCs and 0.54 % in other institutions.

#### Table No-23

SI.		No of verified	% of Tube wells verified under different categories					
NO	Sample Blocks	Tube wells verified	Village	Schools	AWC	Other Institutions		
1	Baipariguda	319	86.21	10.66	3.13	0		
2	Koraput	201	73.13	20.4	4.98	1.49		
3	Kotpad	225	75.56	21.78	2.22	0.44		
Total 745			79.46	16.64	3.36	0.54		

Table No-24

SI NO		No of Tube	% of Tube wells verified under different categories					
NO	Sample Blocks	wells	Village	Schools	AWC	Other Institutions		
1	Korkunda	436	85.09	11.47	2.75	0.69		
2	Malakanagiri	227	85.46	11.45	3.08	0		
3	Mathili	352	83.52	10.8	5.68	0		
	Total	1015	84.63	11.23	3.84	0.3		

#### Distribution of verified Tube wells in Malkangiri District

Of the total 1015 tube wells verified in Malkangiri district 84.63 % were located in villages, 11.23 % in schools, 3.84 % in AWCs and 0.3% in other institutions.

Table No-25

## Distribution of verified Tube wells in Nawrangpur District

Of the total 995 tube wells verified in Nawrangpur district 82.21 % were located in villages, 14.07 % in schools, 3.12 % in AWCs and 0.6 % in other institutions.

SI.		No of verified	% of Tube wells verified under different categories				
NO	Sample Blocks	Tube wells verified	Village	Schools	AWC	Other Institutions	
1	Nawarangpur	259	82.24	14.29	3.47	0	
2	Raighar	497	83.1	13.68	3.02	0.2	
3	Tentulikhunti	239	80.33	14.64	2.93	2.09	
	Total 995		82.21	14.07	3.12	0.6	

Table No-26

	Distribut	ion of Ve	on of Verified Tube wells in Nuapada District							
		No of verified	% of Tube wells verified under different categories							
SI. NO	Sample Blocks	Tube wells verified	Village	Schools	AWC	Other Institutions				
1	Khariar	260	00.67	10.64	F 0	1 40				
. 1	Khariar	269	80.67	12.64	5.2	1.49				
2	Nuapada	522	79.89	14.18	2.11	3.83				
-	Total 791			13.65	3.16	3.03				

## Distribution of verified Tube wells in Nuapada District

Of the total 791 tube wells verified in Nuapada district 80.15 % were located in villages, 13.65 % in schools, 3.16 % in AWCs and 3.03 % in other institutions.

### Distribution of verified Tube wells in Rayagada District

Of the total 724 tube wells verified in Rayagada district 80.39 % were located in villages, 15.47 % in schools, 2.35 % in AWCs and 1.08 % in other institutions.

#### Table No-27

	Distribution of	f Verified	d Tube v	wells in F	Rayaga	ada District	
	No of verified		% of Tube wells verified under different categories				
SI. NO	Sample Blocks	Tube wells verified	Village	Schools	AWC	Other Institutions	
1	Kalyansinghpur	248	79.84	13.31	2.82	4.03	
2	Padmapur	183	84.15	14.75	0.55	0.55	
3	Rayagada	293	78.5	17.75	3.07	0.68	
	Total	724	80.39	15.47	2.35	1.8	

Table No-28

	Distrib	Distribution of Verified Tube wells in Subarnapur  District								
		No of verified	fied different categories							
SI. NO	Sample Blocks	Tube wells verified	Village	Schools	AWC	Other Institutions				
1	Sonepur	311	80.06	16.08	1.93	1.93				
2	Ullunda	365	77.53	17.53	2.47	2.47				
T	Total 676 78.7 16.86 2.22 2.22									

## Distribution of verified Tube wells in Subarnapur District

Of the total 676 tube wells verified in Subarnapur district 78.7 % were located in villages, 16.86 % in schools, 2.22 % in AWCs and 2.22 % in other institutions.

## **Functional Status of Verified Tube wells**

### Table No-29

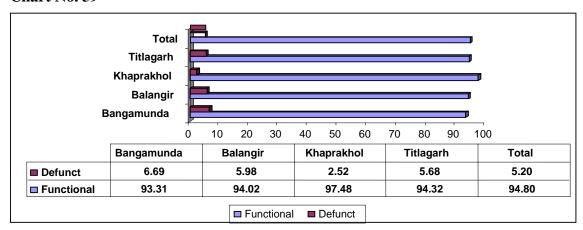
		Statu	s of Veri	ified Tube w	ells		
		No of Tube			Status of Tube		
		wells	Tube we	ells verified	well (	%)	
		in			Functional		
SI. NO		sample Block		Percentage	Tube Walls	Tube wells	
1	Balangir	3641	1250	34.33	94.8	5.2	
2	Kalahandi	3799	1271	33.46	97.25	2.75	
3	Koraput	2009	745	37.08	96.91	3.09	
4	Malkanagiri	2815	1015	36.06	97.24	2.76	
5	Nawarangpur	2753	995	34.17	98.09	1.91	
6	Nuapada	2315	791	40.25	98.61	1.39	
7	Rayagada	2149	724	33.69	81.62	18.38	
8	Sonepur	1848	676	35.67	97.04	2.96	
	Total	21329	7467	35	95.27	4.73	

During the study the research team verified the tube wells at spot and recorded its observation. Out of 21329 tube wells in sampled area, 35% (7467) tube wells are physically verified by the team and it was found that 95.27% tube wells were functional and only 4.73 % were in defunct state. There are inter-district variations, which reflect a different story.

n Rayagada district 18.38% tube wells were defunct which is highest among all district whereas, in Nuapada only 1.39% tube wells were defunct at the time of survey. More details on functional and defunct status of tube wells in KBK region can be seen from the table. The variations in blocks within a district can be seen from the respective district table.

## **Functional Tube wells: Bolangir District:**

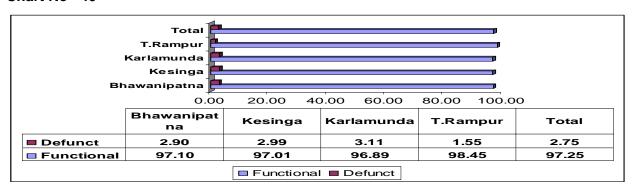
Chart No. 39



In Bolangir district 3641 tube wells exist in sampled blocks of which 1250 tube wells were verified covering four sample blocks- Bangamunda, Bolangir, Khaparakhol and Titilagarh. On the whole 94.80 % tube wells are functional in the total sample against 5.20 % defunct. Khaprakhol block has highest percentage of (97.48 %) functional tube wells in contrast to lowest reported by Bangamunda (93.31%).

#### **Functional Tube wells: Kalahandi District:**

Chart No -40

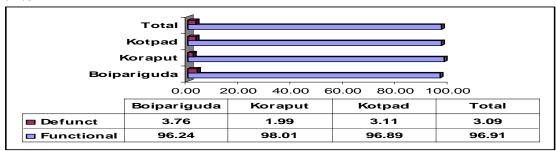


In Kalahandi district 3799 tube wells exist in sampled blocks of which 1271 tube wells were verified covering four sample blocks- Bhawanipatna, Kesinga, Karlamunda and T. Rampur. On the whole 97.25 % tube wells are functional in the total sample against 2.75 % defunct. T. Rampur block has highest percentage of (98.45 %) functional tube wells in contrast to lowest reported by Kesinga (97.01%).

## **Functional Tube wells: Koraput District:**

In Koraput district 2009 tube wells exist in sampled blocks of which 745 tube wells were verified covering 3 sample blocks- Boipariguda, Kotpad and Koraput. On the whole 96.91 % tube wells are functional in the total sample against 3.09 % defunct. Koraput block has highest percentage of (98.01 %) functional tube wells in contrast to lowest reported by Boipariguda (96.24%).

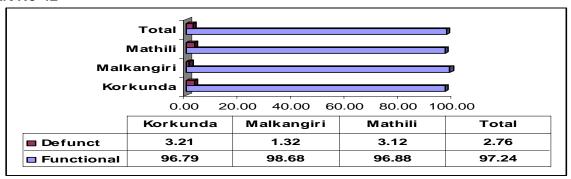
#### **Chart No-41**



## **Functional Tube wells: Malkangiri District:**

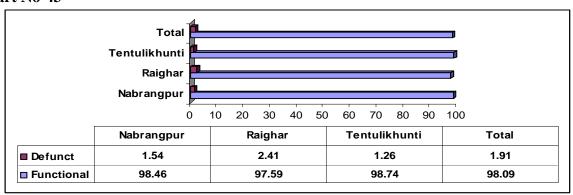
In Malkangiri district 2815 tube wells exist in sampled blocks of which 1015 tube wells were verified covering 3 sample blocks- Korkunda, Malkangiri and Mathli. On the whole 97.24 % tube wells are functional in the total sample against 2.76 % defunct. Malkangiri block has highest percentage of (98.68 %) functional tube wells in contrast to lowest reported by Korkunda (96.79%).

#### Chart No-42



## **Functional Tube wells: Nabrangpur District:**

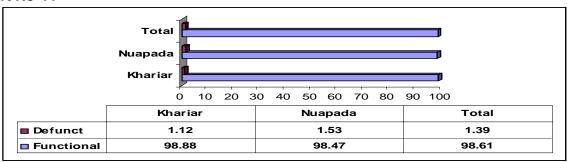
#### **Chart No-43**



In Nabrangpur district 2753 tube wells exist in sampled blocks of which 995 tube wells were verified covering 3 sample blocks- Nabrangpur, Raighar and Tentulikhunti. On the whole 98.09 % tube wells are functional in the total sample against 1.54 % defunct. Tentulikhunti block has highest percentage of (98.74 %) functional tube wells in contrast to lowest reported by Nabrangpur (98.46%).

#### **Functional Tube wells: Nuapada District:**

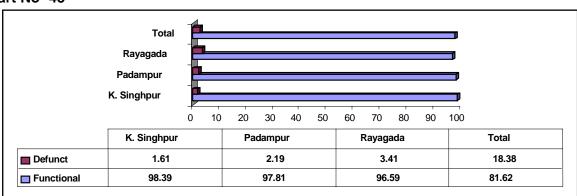
#### **Chart No-44**



In Nuapada district 2315 tube wells exist in sampled blocks of which 791 tube wells were verified covering 2 sample blocks- Khariar and Nuapada. On the whole 98.61 % tube wells are functional in the total sample against 1.39 % defunct.

## **Functional Tube wells: Rayagada District:**

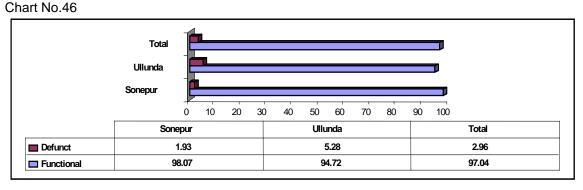
Chart No -45



In Rayagada district 2149 tube wells exist in sampled blocks of which 724 tube wells were verified covering 3 sample blocks- K.Singhpur, Padampur and Rayagada. On the whole 81.62 % tube wells are functional in the total sample against 18.38 % defunct.

#### **Functional Tube wells: Subarnapur District:**

In Subarnapur district 1848 tube wells exist in sampled blocks of which 676 tube wells were verified covering 2 sample blocks- Sonepurr and Ullunda. On the whole 97.04 % tube wells are functional in the total sample against 2.96 % defunct.



#### Status of Chandini in Verified Tube wells of KBK Region

Table No-30

	Status	of Chan	dini in Ve	rified	Tube wells	S	
			No of	Condition of Chandini %			
		No of	Tube				
SI.		Tube well	wells have	Very	Partly	Fully	
No	District	verified		_	Damaged	_	
1	Balangir	1250	1189	64.42	31.37	4.21	
2	Kalahandi	1271	1180	60.42	32.46	7.12	
3	Koraput	745	732	65.16	28.69	6.15	
4	Malkanagiri	1015	975	64.1	31.79	4.1	
5	Nawarangpur	995	967	67.01	28.96	4.03	
6	Nuapada	791	777	72.1	24.8	3.1	
7	Rayagada	724	707	76.38	19.8	3.82	
8	Sonepur	676	548	81.93	13.87	4.2	
	Total	7467	7075	67.53	27.77	4.70	

Construction of Chandini or washing platform around the tube wells is most essential component to ensure safe potable water. The construction of chandini is a part of Tube well installation. The research team visited a total of 7467 tube wells in KBK sampled area where 94.75 % (7075) tube wells had washing platform. Out of which 67.53% tube wells had good quality of platforms and 27.77% tube wells had partly damaged platforms. More than 4.7% tube wells had fully damaged platforms. Looking at the district level, Kalahandi district had the maximum No. of fully damaged platforms 7.12% with 32.46% partly damaged. By combining fully and partially damaged

platforms, near about 40% tube wells in Kalahandi district had problems with washing platforms, followed by Bolangir district with the similar situation. More details are available in the table that may kindly be referred.

#### Status of Chandini in Verified Tube wells of Bolangir District

Table No - 31

Sta	Status of Chandini in Verified Tube wells in Balangir District								
SI. No	Sample Block	Tube well verified	% Have Platform	Condition of Chandini (%)					
				Very Good	Partly Damaged	Fully Damaged			
1	Bangamunda	314	97.77	68.08	28.01	3.91			
2	Bolangiri	301	95.02	61.19	35.66	3.15			
3	Khaparakhol	318	97.48	63.87	31.94	4.19			
4	Titilagarh	317	90.22	64.34	30.07	5.59			
Total 1250 95.12 64.42 31.37 4.21									

In Bolangir district out of total 1250 verified tube wells, (sampled area), 95.12% (1189) tube wells had platforms and it was observed that 64.42% tube wells had good quality of platforms and near about 36% tube wells had either partly damaged platforms or fully damaged. Looking at the sampled blocks within Bolangir district, Titilagarh block had more No. of fully damaged platforms in comparison to other blocks. Whereas, the % of partly damaged platforms was high in Bolangir block 35.66%.

#### Status of Chandini in Verified Tube wells of Kalahandi District

Table No-32

In Kalahandi district out of total 1271 verified tube wells, (sampled area), 92.84% (1180) tube wells had platforms and it was observed that 60.42% tube wells had good quality of platforms and near about 40% tube wells had either partly damaged platforms or fully damaged. Looking at the sampled blocks within Kalahandi district, Karlamunda block

St	Status of Chandini in Verified Tube wells in Kalahandi District								
				Condition of Chandini %					
SI.			% Have			Fully			
No	Sample Block	verified	Platform	Good	Damaged	Damaged			
1	Bhawanipatana	517	97.68	62.38	28.91	8.71			
2	Kesinga	368	98.91	59.34	34.89	5.77			
3	Karlamunda	193	99.48	51.04	42.19	6.77			
4	Thuamularampur	193	61.66	70.59	24.37	5.04			
	Total 1271 92.84 60.42 32.46 7.12								

had more No. of damaged platforms in comparison to other blocks. Near about 50% tube wells had problems with washing platforms. Please refer the table for further detail.

#### Status of Chandini in Verified Tube wells of Koraput District

Table No-33

	140.0110									
;	Status of Chandini in Verified Tube wells in Koraput District									
		Tube		Condition of Chandini 9						
SI. No	Sample Block	well	% have Chandini			Fully Damaged				
	Baipariguda		97.81	65.06		6.41				
2	Koraput	201	99.50	63	31	6				
3	Kotpad	225	97.78	67.27	26.82	5.91				
	Total	745	98.26	65.16	28.69	6.15				

745 tube wells were physically verified in three sample blocks of Koraput district. Out of which 98.26 % tube wells had platforms.

Among these 65.16% tube wells had good quality of platforms, 28.69 % tube wells had partly damaged platforms whereas 6.15 % had fully damaged platforms.

#### Status of Chandini in Verified Tube wells of Malkangiri District

Table No-34

1015 tube wells were physically verified in three sample blocks of Malkangiri district. Out of which 96.06% tube wells had platforms. Among these 64.1% tube wells had good quality of platforms, 31.8 % tube wells had partly damaged platforms whereas 4.1 % had fully damaged platforms.

S	Status of Chandini in Verified Tube wells in Malkangiri District									
		Tube		Condition of Chandini %						
SI. No	•	well	% have Chandini			Fully Damaged				
1	Korkunda	436	94.95	70.53		4.35				
2	Malakanagiri	227	93.83	63.38	33.33	3.29				
3	Mathili	352	98.86	56.9	38.79	4.31				
	Total	1015	96.06	64.1	31.80	4.1				

#### Status of Chandini in Verified Tube wells of Nabrangpur District

Table No-35

S	Status of Chandini in Verified Tube wells in Nabrangpur District									
		Tube	Condition of Chandini							
SI. No	Sample Block	well	% have Chandini			Fully Damaged				
1	Nawarangpur	259	90.35	82.05	16.24	1.71				
2	Raighar	497	100	61.97	33.4	4.63				
3	Tentulikhunti	239	98.74	62.71	32.2	5.08				
	Total	995	97.19	67.01	28.96	4.03				

995 tube wells were physically verified in three sample blocks of Nawrangpur district. Out of which 97.19 % tube wells had platforms. Among these 67.01 % tube wells had good quality of platforms, 28.96 % tube wells had partly damaged platforms whereas 4.03 % had fully damaged platforms.

Status of Chandini in Verified Tube wells of Nuapada District

Table No 36

791 tube wells were physically verified in two sample blocks of Nuapada district. Out of which 98.23 % tube wells had platforms. Among these 72.1% tube wells had good quality of platforms, 24.8 % tube wells had partly damaged platforms whereas 3.1 % had fully damaged platforms. Highest 99.62 % tube wells had platform in Nuapada.

St	Status of Chandini in Verified Tube wells in Nuapada District								
	Tube					nandini %			
SI. No	Sample Block	well	% have Chandini			Fully Damaged			
1	Khariar	269	95.54	78.2	19.8	1.9			
2	Nuapada	522	99.62	69	27.3	3.7			
	Total 791 98.23 72.1 24.8 3.1								

#### Status of Chandini in Verified Tube wells of Rayagada District

Table No - 37

Ia	Table NO - 37								
	Status of Chandini in Verified Tube wells in Rayagada District								
				Condition of Chandini %					
I. No	Sample Block	Tube well verified	% have Chandini			Fully Damaged			
1	Kalyansinghpur	248	93.55	80.17	12.93	6.9			
2	Padmapur	183	100	83.06	14.21	2.73			
3	Rayagada	293	99.66	69.18	28.77	2.05			
Total 724 97.65 76.38 19.8 3.82									

724 tube wells were physically verified in three sample blocks of Rayagada district. Out of which 97.65% (707) tube wells had platforms. Among these 76.38% tube wells had good quality of platforms, 19.8 % tube wells had partly damaged platforms whereas 3.82 % had fully damaged platforms. All the tube wells had platform in Padampur followed by 99.66% in Rayagada and 93.55 % in Kalyansinghpur.

#### Status of Chandini in Verified Tube wells of Subarnpur District

676 tube wells were physically verified in two sample blocks of Subarnapur district. Out of which 81.06 % tube wells had platforms. Among these 81.93% tube wells had good quality of platforms, 13.87 % tube wells had partly damaged platforms whereas 4.2 % had fully damaged platforms. All the tube wells had platform in Sonepur followed by 89.43 % in Ullunda.

Status of Chandini in Verified Tube wells in **Subarnapur District** Condition of Chandini % SI. Sample % have Very Partly No. No Block verified Chandini Good Damaged Damaged 1 Sonepur 84.89 311 100 10.93 4.18 2 Ullunda 365 89.43 78.06 17.72 4.22

81.93

13.87

4.2

81.06

Table No- 38

## Status of Soak Pit in Verified Tube wells of KBK Districts

Total

676

#### Table No-39

	Status of Soak Pit in Verified Tube wells of KBK										
	Districts										
SI.	District	No of	Have	Cor	dition of S	oak Pit					
No		Tube	Soak	Very	Partly	Fully					
		well	Pit	Good	Damaged	Damaged					
		verified									
1	Balangir	1250	395	38.48	41.77	19.75					
2	Kalahandi	1271	262	51.91	35.88	12.21					
3	Koraput	745	544	54.04	34.19	11.76					
4	Malkanagiri	1015	591	54.82	34.52	10.66					
	Nawarang	005	003	56.7	25.44	0.40					
5	pur	995	903	56.7	35.11	8.19					
6	Nuapada	791	197	62.94	29.44	7.61					
7	Rayagada	724	340	57.06	32.94	10					
8	Sonepur	676	51	66.67	25.49	7.84					
	Total	7467	3283	53.91	35	11.09					

It was observed that out of total 7467 tube wells verified in all the sampled blocks of KBK districts, only 53.91% Tube wells had very good soak pit, 35% had partly damaged and 11.09% fully damaged soak pits.

Looking at the district level, Bolangir district had the highest No. of fully damaged soak pits 19.75% whereas Nuapada had lowest 7.61%. On the other hand Sonepur district had the higher % of very good soak pit 66.67% and Bolangir had the lowest % of 38.48%. More details are available in the table, which may kindly be referred.

#### **Bolangir:**

In Bolangir district out of 1250 Tube wells verified. 395 tube wells had soak pit. Out of this 38.48% tube wells had very good quality soak pit, 41.77% partly damaged and 19.75% Tube wells had fully damaged soak pits. Looking at block level scenario, Bolangir block a 20.7% soak pits fully damaged and the lower % of fully damaged soak pit was in Bangamunda block. By and large including all the blocks the good quality of soak pit was below 50% and this is indirect indication of community participation and poor management of assets.

#### Kalahandi:

Out of 1271 Tube wells verified, 262 (20%) tube wells had soak pit. Out of this 51.91% tube wells had very good quality soak pit, 35.88% partly damaged and 12.21% had fully damaged soak pits. Kesinga and T. Rampur had no soak pit. In total near about 80% Tube wells had no soak pit.

Table No-40

Sta	Status of Soak Pit in Verified Tube wells in Balangir District								
SI. No	Sample Block	No of Tube well verified	Have Soak Pit	Very	tion of Soa Partly Damaged	Fully			
1	Bangamunda	314	98	26.53	57.14	16.33			
2	Bolangiri	301	256	42.19	37.11	20.7			
3	Khaparakhol	318	16	43.75	37.5	18.75			
4	Titilagarh	317	25	44	32	24			
	Total	1250	395	38.48	41.77	19.75			

Table No-41

Sta	Status of Soak Pit in Verified Tube wells in Kalahandi District								
SI.	Sample Block	Tube	Have	Condition of Soak Pit					
No		well	Soak	Very	Partly	Fully			
		verified	Pit	Good	Damaged	Damaged			
1	Bhawanipatana	517	117	54.7	35.04	10.26			
2	Kesinga	368	0	0	0	0			
3	Karlamunda	193	145	49.66	36.55	13.79			
4	Thuamularampur	193	0	0	0	0			
	Total	1271	262	51.91	35.88	12.21			

#### **Koraput:**

Out of 745 Tube wells verified, 544 (73 %) tube wells had soak pit. Out of this 54.04 % tube wells had very good quality soak pit, 34.18 % partly damaged and 11.76 % had fully damaged soak pits. While Boipariguda had ighest percentage interestingly Koraput was found trailing behind Kotpad.

Table No-42

Sta	Status of Soak Pit in Verified Tube wells in Koraput District								
		Tube	Have	Cor	ndition of S	oak Pit			
SI.		well	Soak		,	Fully			
No	Sample Block	verified	Pit	Good	Damaged	Damaged			
1	Boipariguda	319	312	53.53	33.01	13.46			
2	Koraput	201	76	59.21	31.58	9.21			
3	Kotpad	225	156	52.56	37.82	9.62			
	Total	745	544	54.04	34.19	11.76			

Malkangiri: Table No 43

	Status of Soak Pit in Verified Tube wells in Malkangiri District								
	Tube Have Condition of Soak Pit								
		well	Soak	Very	Fully				
No	Sample Block	verified	Pit	Good	Damaged	Damaged			
1	Korkunda	436	377	54.38	36.07	9.55			
2	Malakanagiri	227	214	55.61	31.78	12.62			
3	Mathili	352	0	0	0	0			
	Total 1015 591 54.82 34.52 10.66								

Out of 1015 verified only 591 (58 %) tube wells had soak pit. Among these (591) 54.82% had very good soak pit, 34.52% partly damaged and 10.66.76% fully damaged soak pits. Looking at block wise variations, Malkangiri block is having more number of fully damaged soak pits (13.46%) followed by Korkunda (9.55%). Mathili had no soak pit at all.

#### Nabarangpur:

Out of 995 tube wells verified 903 (90%) tube wells had soak pit. Among these 56.7%% had very good soak pit, 35.11% partly damaged and 8.19% fully damaged soak pits. Looking at block wise variations, Nabarangpur block is having more No. of fully damaged soak pits 11.11% followed by Tentulikhunti 8.23. In this district 43% tube wells have problems with soak pit.

Table No-44

5	Status of Soak Pit in Verified Tube wells in Nabrangpur District								
	Tube Have Condition of Soak Pit								
SI.		well	Soak	Very Partly Fully					
No	Sample Block	verified	Pit	Good	Damaged	Damaged			
1	Nawarangpur	259	216	50	38.89	11.11			
2	Raighar	497	456	58.99	34.21	6.8			
3	Tentulikhunti	239	231	58.44	33.33	8.23			
	Total	995	903	56.7	35.11	8.19			

## Nuapada:

#### Table No-45

Sta	Status of Soak Pit in Verified Tube wells in Nuapada District									
		Tube		Condition of Soak Pit						
SI.	Sample	well				Fully				
No	Block	verified	Soak Pit	Good	Damaged	Damaged				
1	Khariar	269	63	71.43	22.22	6.35				
2	Nuapada	522	134	60.45	31.34	8.21				
Total 791 197 62.94 29.4						7.61				

In Nuapada district a total of 791 tube wells in sampled blocks, verified physically and out that only 197 tube wells had soak pit which is near about 25%. Out of it 62.94% had very good soak pit, 29.44% partly damaged and 7.61% fully damaged soak pits. Looking at block wise variations,

Nuapada block is having more No. of fully damaged soak pits 8.21% followed by Khariyar 6.35. In other words, one can say that in this district 75% tube wells have No soak at all and wherever, there is soak pit 38% are not in good condition.

## Rayagada:

ixayagada.

In Rayagada district out of total 724 tube wells physically verified during the study only 340 tube wells ad soak pit, which is even below 50% mark. Out of existing soak pits 57.06% were found in good condition and rest 43% were either partly or fully damaged. At block level, Rayagada block had more No. of good soak pits in comparison to other sampled blocks i.e Padampur, Kalyansinghpur.

#### Table No-46

	Status of Soak Pit in Verified Tube wells in Rayagada District								
		Tube	Have	Cor	ndition of S	Soak Pit			
SI.		well	Soak	Very	Partly	Fully			
No	Sample Block	verified	Pit	Good	Damaged	Damaged			
1	Kalyansinghpur	248	239	52.72	35.15	12.13			
2	Padmapur	183	52	59.62	34.62	5.77			
3	Rayagada	293	49	75.51	20.41	4.08			
	Total 724 340 57.06 32.94 10								

#### Subarnpur:

Table No-47

S	Status of Soak Pit in Verified Tube wells in Subarnapur District								
	Tube Condition of Soak Pit								
SI.	Sample	well			Partly	Fully			
No	Block	verified	Soak Pit	Good	Damaged	Damaged			
1	Sonepur	311	44	65.91	25	9.09			
2	Ullunda	365	7	71.43	28.57	0			
	Total 676 51 66.67 25.49 7.84								

In Subarnpur district a total of 676 tube wells in sampled blocks, verified physically and out that 51 tube wells had soak pit which is not even 10% of the total verified tube wells in the district. Out of existing soak pit 66.67% had very good soak pit, 25.49% partly damaged and 7.84% fully damaged soak pits.

## Perception of Respondents on Quality of Drinking Water:

People's Perception on Water Quality in KBK Districts of Orissa.



Taking KBK region as a whole, 91.4% respondents said water quality to be good, 5.17 % said poor and 2.06 % said very poor. 1.37 % did not respond.

S	Status of reported water quality in KBK Districts in Percentage								
		Tube	_	Quality	of Wate	er			
SI.		well			Very	No			
No	District	verified	Good	Poor	Poor	Response			
1	Balangir	1250	85.76	9.44	2.64	2.16			
2	Kalahandi	1271	92.29	4.41	2.12	1.18			
3	Koraput	745	85.5	8.72	3.76	2.01			
4	Malkanagiri	1015	88.97	6.6	2.76	1.67			
5	Nawarangpur	995	94.07	3.92	1.01	1.01			
6	Nuapada	791	95.7	2.28	1.39	0.63			
7	Rayagada	724	96.69	1.24	1.1	0.97			
8	Sonepur	676	95.71	2.07	1.33	0.89			
	Total 7467 91.4 5.17 2.06 1.37								

Table No-48

#### Table No-49

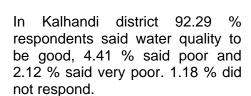
S	Status of reported water quality in Verified Tube wells in Balangir District in Percentage								
		No of		Quality	of Wate	er			
		Tube							
SI.		well			Very	No			
No	Sample Block	verified	Good	Poor	Poor	Response			
1	Bangamunda	314	84.39	14.01	0.96	0.64			
2	Bolangiri	301	88.7	5.65	4.32	1.33			
3	Khaparakhol	318	91.51	3.77	1.89	2.83			
4	Titilagarh	317	78.55	14.2	3.47	3.79			
	Total 1250 85.76 9.44 2.64 2.16								

People's Perception on Water Quality in Bolangir District

In Balangir district 85.76 % respondents said water quality to be good, 9.44 % said poor and 2.64 % said very poor. 2.17 % did not respond.

Table No-50

People's Perception on Water Quality in Kalahandi District



S	Status of reported water quality in Verified Tube wells in Kalahandi District in Percentage							
		No of		Quality	of Wat	er		
		Tube						
SI.		well			Very	No		
No	Sample Block	verified	Good	Poor	Poor	Response		
1	Bhawanipatana	517	92.46	5.61	1.35	0.58		
2	Kesinga	368	95.65	2.17	1.36	0.82		
3	Karlamunda	193	94.3	1.04	2.07	2.59		
4	Thuamularampur	193	83.42	8.81	5.7	2.07		
	Total 1271 92.29 4.41 2.12 1.18							

Table No-51

_									
S	Status of reported water quality in Verified Tube wells in Koraput District in Percentage								
		Tube		Quality	of Wate	er			
SI.		well	Very No						
No	Sample Block	verified	Good	Poor	Poor	Response			
1	Baipariguda	319	80.25	14.11	3.76	1.88			
2	Koraput	201	91.54	2.99	3.48	1.99			
3	Kotpad	225	87.56	6.22	4	2.22			
	Total	8.72	3.76	2.01					

People's Perception on Water Quality in Koraput District

In Koraput district 85.5 % respondents said water quality to be good, 8.72 % said poor and 3.76 % said very poor. 2.01 % did not respond.

People's Perception on Water Quality in Malkangiri District

In Malkangiri district 88.97 % respondents said water quality to be good, 6.6 % said poor and 2.76 % said very poor. 1.67 % did not respond.

Table No-52

S	Status of reported water quality in Verified Tube wells in Malkangiri District in Percentage								
		Tube Quality of Water							
SI.		well	Very No						
No	Sample Block	verified	Good	Poor	Poor	Response			
1	Korkunda	436	94.5	2.52	2.06	0.92			
2	Malakanagiri	227	86.34	8.37	2.2	3.08			
3	Mathili	352	83.81	10.51	3.98	1.7			
	Total 1015 88.97 6.6 2.76 1.67								

#### Table No-53

S	Status of reported water quality in Verified Tube wells in Nabarangpur District in Percentage							
		No of		Quality	of Wate	er		
		Tube						
SI.		well			Very	No		
No	Sample Block	verified	Good	Poor	Poor	Response		
1	Nawarangpur	259	95.75	2.32	1.16	0.77		
2	Raighar	497	93.16	5.23	1.01	0.6		
3	Tentulikhunti	239	94.14	2.93	0.84	2.09		
	Total 995 94.07 3.92 1.01 1.01							

People's Perception on Water Quality in Nabarangpur District

In Nawrangpur district 94.07 % respondents said water quality to be good, 3.92 % said poor and 1.01 % said very poor. 1.01 % did not respond.

Table No-54

People's Perception on Water Quality in Nuapada District

In Nuapada district 95.7 % respondents said water quality to be good, 2.28 % said poor and 1.39 % said very poor. 0.63 % did not respond.

Status of reported water quality in Verified Tube wells in Nuapada District in Percentage

	No of Tube		Quality of Water			
SI. Sample	well			Very	No	
No Block	verified	Good	Poor	Poor	Response	
1 Khariar	269	94.42	2.6	1.86	1.12	
2 Nuapada	522	96.36	2.11	1.15	0.38	
Total	791	95.7	2.28	1.39	0.63	

Table No-55
Status of reported water quality in Verified Tube wells in Rayagada District in Percentage

ì		Quality of Water				
		Tube				
	SI.	well			Very	No
I	No Sample Block	verified	Good	Poor	Poor	Response
	1 Kalyansinghpur	248	97.58	0.81	1.61	0
	2 Padmapur	183	96.72	1.64	0.55	1.09
	3 Rayagada	293	95.9	1.37	1.02	1.71
	Total	724	96.69	1.24	1.1	0.97

People's Perception on Water Quality in RayagadaDistrict

In Rayagada district 96.69 % respondents said water quality to be good, 1.24 % said poor and 1.1 % said very poor. 0.97 % did not respond.

People's Perception on Water Quality in Subarnpur District

In Subarnapur district 95.71 % respondents said water quality to be good, 2.07 % said poor and 1.33 % said very poor. 0.89 % did not respond.

Table No-56
Status of reported water quality in Verified Tube wells in Subarnapur District in Percentage

		No of Tube		Quality of Water		
SI.	Sample	well			Very	No
No	Block	verified	Good	Poor	Poor	Response
1	Sonepur	311	96.14	1.93	0.64	1.29
2	Ullunda	365	95.34	2.19	1.92	0.55
	Total	676	95.71	2.07	1.33	0.89

## Repair and Maintenance Arrangements of verified Tube wells in KBK Districts

Table No-57

	I )ictrict	No of Tube well verified		Time taken to attend Complaint			
SI. No			Agency Responsible	In a Day or Two	About a Week	More than a Week	
1	Balangir	1250	SEM/RWSS	59.04	35.04	5.92	
2	Kalahandi	1271	SEM/RWSS	55.15	37.92	6.92	
3	Koraput	745	SEM/RWSS	57.45	36.24	6.31	
4	Malkanagiri	1015	SEM/RWSS	51.72	41.38	6.90	
5	Nawarangpur	995	SEM/RWSS	63.42	29.55	7.04	
6	Nuapada	791	SEM/RWSS	65.11	30.85	4.05	
7	Rayagada	724	SEM/RWSS	58.15	36.33	5.52	
8	Sonepur	676	SEM/RWSS	46.15	46.75	7.10	
	Total	7467		56.14	35.84	8.02	

The above table shows the data of repair and maintenance arrangement of verified Tube Wells in KBK Districts. In this region, the repair and maintenance arrangement of Tube wells has done by Self Employed Mechanic (SEM) or RWSS. In this region, 56.14 percent Tube wells reported 'in a day or percent two', 35.84 reported 'about a week' and only 8.02 percent reported 'more than a week' about time taken to attend complaint. Among KBK districts. Nuapada

reports highest (65.11%) and Sonepur district reports lowest (46.15%) percentage in 'in a day or two' time taken category.

Similarly, Maximum (46.75%) reported 'about a week' about time taken to attend complaint in Sonepur district in contrast to the lowest (29.55%) 'about a week' reported from Nawarangpur district. Similarly, Maximum (7.10%) reported 'more than a week' about time taken to attend complaint in Sonepur district in contrast to the lowest (4.05%) 'more than a week' reported from Nuapada district.

## Repair and Maintenance Arrangements of Tube wells in Balangir District

## The above table shows the and maintenance arrangement of verified Tube Wells in Balangir District. In this district, the maintenance arrangement of Tube wells has done by Self Employed Mechanic (SEM) or RWSS. In Balangir district, 59.04 percent

percent

Repair and Maintenance Arrangements of Tube wells in Balangir District								
SI.	SI. Sample No Block	No of Tube well verified	Agency Responsible	Time taken to attend Complaint (%)				
No				In a Day or Two	About a Week	More than a Week		
1	Bangamunda	314	SEM/RWSS	56.69	36.94	6.37		
2	Bolangiri	301	SEM/RWSS	61.13	34.88	3.99		
3	Khaparakhol	318	SEM/RWSS	65.41	27.04	7.55		
4	Titilagarh	317	SEM/RWSS	53.00	41.32	5.68		
	Total	1250		59.04	35.04	5.92		

Table No-58

'more than a week' about time taken to attend complaint. Within the district, Khaparakhol Block reports highest (65.41%) and Titilagarh Block reports lowest (53.00%) percentage in 'in a day or two' time taken category. Similarly, Maximum (41.32%) reported 'about a week' about time taken to attend complaint in Titilagarh Block in contrast to the lowest (27.04%) reported from Khaparakhol Block. Similarly, Maximum (7.55%) reported 'more than a week' about time taken to attend complaint in Khaparakhol Block in contrast to the lowest (3.99%) 'more than a week' reported from Balangir Block.

#### Repair and Maintenance Arrangements of Tube wells in Kalahandi District

#### Table No-59

data

repair

or

of

and

two',

Tube wells reported 'in a day

reported 'about a week' and only 5.92 percent reported

35.04

repair

Repair and Maintenance Arrangements of Tube wells in Kalahandi District								
CI		No of Tube well verified	Agency Responsible	Time taken to attend Complaint				
SI. No	Sample Block			In a Day or Two	About a Week	More than a Week		
1	Bhawanipatana	517	SEM/RWSS	59.57	34.04	6.38		
2	Kesinga	368	SEM/RWSS	51.90	41.58	6.52		
3	Karlamunda	193	SEM/RWSS	56.99	35.23	7.77		
4	Thuamularampur	193	SEM/RWSS	47.67	44.04	8.29		
	Total	1271		55.15	37.92	6.92		

The above table shows the data of repair and maintenance arrangement of verified Tube Wells in Kalahandi District. In this district, the repair and maintenance arrangement of Tube wells has done by Self Employed Mechanic (SEM) or RWSS. Kalahandi district, 55.15 percent Tube

reported 'in a day or two', 37.92 percent reported 'about a week' and only 6.92 percent reported 'more than a week' about time taken to attend complaint. Within the district, Bhawanipatana Block reports highest (59.57%) and Thuamularampur Block reports lowest (47.67%) percentage in 'in a day or two' time taken category. Similarly, Maximum (44.04%) reported 'about a week' about time taken to attend complaint in Thuamularampur Block in contrast to the lowest (34.04%) eported from Bhawanipatana Block. Similarly, Maximum (8.29%) reported 'more than a week' about time taken to attend complaint in Thuamularampur Block in contrast to the lowest (6.38%) 'more than a week' reported from Bhawanipatana Block.

## Repair and Maintenance Arrangements of Tube wells in Koraput District

Table No-60

The above table shows the data of repair and maintenance arrangement of verified Tube Wells in Koraput District. In this district, the repair and maintenance arrangement of Tube wells has also done by Self Employed Mechanic (SEM) or RWSS. In Koraput district, 57.45 percent Tube wells reported 'in a day or two', 36.24 percent reported 'about a week'

	Repair and Maintenance Arrangements of Tube wells in Koraput District								
CI.	Commis	No of	<b>A</b>	Time taken to attend Complaint					
SI. No	Sample Block	Tube well verified	Agency Responsible	In a Day or Two	About a Week	More than a Week			
1	Baipariguda	319	SEM/RWSS	51.41	40.13	8.46			
2	Koraput	201	SEM/RWSS	64.18	32.84	2.99			
3	Kotpad	225	SEM/RWSS	60.00	33.78	6.22			
	Total	745		57.45	36.24	6.31			

and only 6.31 percent reported 'more than a week' about time taken to attend complaint. Within the district, Koraput Block reports highest (64.18%) and Baipariguda Block reports lowest (51.41%) percentage in 'in a day or two' time taken category. Similarly, Maximum (40.13%) reported 'about a week' about time taken to attend complaint in Baipariguda Block in contrast to the lowest (32.84%) reported from Koraput Block. Similarly, Maximum (8.46%) reported 'more than a week' about time taken to attend complaint in Baipariguda Block in contrast to the lowest (2.99%) 'more than a week' reported from Koraput Block.

## Repair and Maintenance Arrangements of Tube wells in Malkangiri District

Table No-61

	Repair and Maintenance Arrangements of Tube wells in Malkangiri District									
SI.	Sample	•	Agency	Time taken to attend Complaint						
No	Block		Responsible	In a Day or Two	About a Week	More than a Week				
1	Korkunda	436	SEM/RWSS	38.07	52.98	8.94				
2	Malakanagiri	227	SEM/RWSS	65.20	31.28	3.52				
3	Mathili	352	SEM/RWSS	59.94	33.52	6.53				
	Total	1015		51.72	41.38	6.90				

The above table shows the data of repair and maintenance arrangement of verified Tube Wells in Malkanagiri District. In this district. the repair maintenance arrangement of Tube wells are done by Self Employed Mechanic (SEM) or RWSS. In Malkanagiri district, 51.72 percent Tube wells reported 'in a day or two', 41.38 percent reported 'about a week' and only 6.90 percent

reported 'more than a week' about time taken to attend complaint. Within the district, Malkanagiri Block reports highest (65.20%) and Korkunda Block reports lowest (38.07%) percentage in 'in a day or two' time taken category. Similarly, Maximum (52.98%) reported 'about a week' about time taken to attend complaint in Korkunda Block in contrast to the lowest (31.28%) reported from Malkanagiri Block. Similarly, Maximum (8.94%) reported 'more than a week' about time taken to attend complaint in Korkunda Block in contrast to the lowest (3.52%) 'more than a week' reported from Malkanagiri Block.

## Repair and Maintenance Arrangements of Tube wells in Nabrangpur District

The above table shows the data of repair maintenance arrangement of verified Tube Wells Nawarangpur District. In this district. the repair and maintenance arrangement of Tube wells has also done by Self Employed Mechanic (SEM) or RWSS. Nawarangpur district, 63.42 percent Tube wells reported 'in a day or two', 29.55

	Repair and Maintenance Arrangements of Tube wells in Nabrangpur District								
SI.	Sample	No of Tube	Agency	Time taken to attend Complaint					
No	Block	well verified	Responsible	In a Day or Two	About a Week	More than a Week			
1	Nawarangpur	259	SEM/RWSS	73.36	24.71	1.93			
2	Raighar	497	SEM/RWSS	56.74	35.01	8.25			
3	Tentulikhunti	239	SEM/RWSS	66.53	23.43	10.04			
	Total	995		63.42	29.55	7.04			

Table No-62

percent reported 'about a week' and only 7.04 percent reported 'more than a week' about time taken to attend complaint. Within the district, Nawarangpur Block reports highest (73.36%) and Raighar Block reports lowest (56.74%) percentage in 'in a day or two' time taken category. Similarly, Maximum (35.01%) reported 'about a week' about time taken to attend complaint in Raighar Block in contrast to the lowest (23.43%) reported from Tentulikhunti Block.

Similarly, Maximum (10.04%) reported 'more than a week' about time taken to attend complaint in Tentulikhunti Block in contrast to the lowest (1.93%) 'more than a week' reported from Nawarangpur Block.

## Repair and Maintenance Arrangements of Tube wells in Nuapada District

Table No-63

	Repair and Maintenance Arrangements of Tube wells in Nuapada District								
CI	Commis	No of	<b>A</b>	Time taken to attend Complaint					
SI. No	Sample Block	Tube well verified	Agency Responsible	In a Day or Two	About a Week	More than a Week			
1	Khariar	269	SEM/RWSS	57.25	36.43	6.32			
2	Nuapada	522	SEM/RWSS	69.16	27.97	2.87			
	Total	791		65.11	30.85	4.05			

The above table shows the data of repair and maintenance arrangement of verified Tube Wells in Nuapada District. In this district, the repair and maintenance arrangement of Tube wells is done by Self Employed Mechanic (SEM) or RWSS.

In Nuapada district, 65.11 percent Tube wells reported 'in a day or two', 30.85 percent reported 'about a week' and only 4.05 percent reported 'more than a week' about time taken to attend complaint. Within the district, Nuapada Block reports highest (69.16%) and Khariar Block reports lowest (57.25%) percentage in 'in a day or two' time taken category.

Similarly, Maximum (36.43%) reported 'about a week' about time taken to attend complaint in Khariar Block in contrast to the lowest (27.97%) reported from Nuapada Block. Similarly, Maximum (6.32%) reported 'more than a week' about time taken to attend complaint in Khariar Block in contrast to the lowest (2.87%) 'more than a week' reported from Nuapada Block.

## Repair and Maintenance Arrangements of Verified Tube wells in Rayagada District

Table No-64

The above table shows the data of repair arrangement maintenance of verified Tube Wells in Rayagada District. In this district. the repair and maintenance arrangement of Tube wells is done by Self Employed Mechanic (SEM) or RWSS. In Rayagada district, 58.15 percent Tube wells reported 'in a day or two', 36.33 percent reported

Repair and Maintenance Arrangements of Verified Tube wells in Rayagada District									
SI. No	Sample Block	No of Tube	Agency	Time taken to attend Complaint					
		well verified	Responsible	In a Day or Two	About a Week	More than a Week			
1	Kalyansinghpur	248	SEM/RWSS	58.87	34.68	6.45			
2	Padmapur	183	SEM/RWSS	59.02	37.70	3.28			
3	Rayagada	293	SEM/RWSS	57.00	36.86	6.14			
	Total	724		58.15	36.33	5.52			

'about a week' and only 5.52 percent reported 'more than a week' about time taken to attend complaint.

Within the district, Padmapur Block reports highest (59.02%) and Rayagada Block reports lowest (57.00%) percentage in 'in a day or two' time taken category. Similarly, Maximum (37.70%) reported 'about a week' about time taken to attend complaint in Padmapur Block in contrast to the lowest (34.68%) reported from Kalyansinghpur Block. Similarly, Maximum (6.45%) reported 'more than a week' about time taken to attend complaint in Kalyansinghpur Block in contrast to the lowest (3.28%) 'more than a week' reported from Padmapur Block.

# Repair and Maintenance Arrangements of Verified Tube wells in Subarnapur District

#### Table No-65

	Repair and Maintenance Arrangements of Verified Tube wells in Subarnapur District								
		No of	Agency Responsible	Time taken to attend Complaint					
SI. No	Sample Block	Tube well verified		In a Day or Two	About a Week	More than a Week			
1	Sonepur	311	SEM/RWSS	52.73	42.77	4.50			
2	Ullunda	365	SEM/RWSS	40.55	50.14	9.32			
	Total	676		46.15	46.75	7.10			

The above table shows the data of and maintenance arrangement of verified Tube Wells in Sonepur District. In this district. the repair maintenance arrangement of Tube wells has also done by Self Employed Mechanic (SEM) or RWSS. In Sonepur district, 46.15 percent Tube wells reported 'in a day or two', 46.75 percent reported 'about a week' and only 7.10

percent reported 'more than a week' about time taken to attend complaint. Within the district, Sonepur Block reports highest (52.73%) and Ullunda Block reports lowest (40.55%) percentage in 'in a day or two' time taken category.

Similarly, Maximum (50.14%) reported 'about a week' about time taken to attend complaint in Ullunda Block in contrast to the lowest (42.77%) reported from Sonepur Block. Similarly, Maximum (9.32%) reported 'more than a week' about time taken to attend complaint in Ullunda Block in contrast to the lowest (4.50%) 'more than a week' reported from Sonepur Block.

### Distance traveled to collect water from Verified Tube wells in KBK Districts

The above table reveals the data of Distance traveled to collect water from Verified Tube wells in KBK Districts bv the individual households. In this region, the study collects the information about 7467 number of verified Tube well. In this region, 84.07 percent Tube wells reported 'less than 100 Meters, 9.54 percent reported 'more than 101 but less than 200 meters', 3.50 percent reported 'more than 201 but less than 300 meters' and only 2.89 percent reported 'above 300 meters' about to collect water from Verified Tube wells in KBK Districts by the individual households. Among KBK districts, Nuapada reports highest (91.66%) and Koraput district reports lowest (74.09%) percentage in 'less than 100 Meters, distance traveled

Dis	Distance traveled to collect water from Verified Tube wells in KBK Districts							
		No of	ı	Distance	travelle	ed		
SI No	District	Tube well verified	Less than 100 M	101- 200m	201- 300m	Above 300m		
1	Balangir	1250	86.08	8.96	3.44	1.52		
2	Kalahandi	1271	86.08	8.96	3.44	1.52		
3	Koraput	745	74.09	18.12	5.23	2.55		
4	Malkanagiri	1015	83.25	13.20	2.86	0.69		
5	Nawarangpur	995	89.15	6.83	3.42	0.60		
6	Nuapada	791	91.66	5.06	2.65	0.63		
7	Rayagada	724	79.97	12.57	4.42	3.04		
8	Sonepur	676	90.83	5.03	2.96	1.18		
	Total	7467	84.07	9.54	3.50	2.89		

Table No-66

category. Similarly, Maximum (18.12%) reported 'more than101 but less than 200 meters' about to collect water from Verified Tube wells in KBK Districts by the individual households in Koraput district in contrast to the lowest (5.03%) reported from Sonepur district. Similarly, Maximum (5.23%) reported 'more than 201 but less than 300 meters' about to collect water from Verified Tube wells in KBK Districts by the individual households in Koraput district in contrast to the lowest (2.65%) reported from Nuapada district. Again, Maximum (3.04%) reported 'above 300 meters' about to collect water from Verified Tube wells in KBK Districts by the individual households in Rayagada district in contrast to the lowest (0.60%) reported from Nabarangpur district. Above analysis indicates that maximum numbers of households are able collect the water from verified tube wells in shortest distance in KBK region.

### Distance travelled to collect water from Verified Tube wells in Balangir District

### Table No-67

Dist	Distance travelled to collect water from Verified Tube wells in Balangir District								
		No of	[	Distance	travelle	ed			
SI No	Sample Block	Tube well verified	Less than 100 M	101- 200m	201- 300m	Above 300m			
1	Bangamunda	314	83.12	10.19	4.78	1.91			
2	Bolangiri	301	91.03	5.98	2.33	0.66			
3	Khaparakhol	318	87.74	5.97	4.09	2.20			
4	Titilagarh	317	82.65	13.56	2.52	1.26			
	Total	1250	86.08	8.96	3.44	1.52			

In this district, 86.08 percent Tube wells reported 'less than 100 Meters, 8.96 percent reported 'more than 101 but less than 200 meters', 3.44 percent reported 'more than 201 but less than 300 meters' and only 1.52 percent reported 'above 300 meters' about to collect water from Verified Tube wells in Balangir District by the individual households. Within the district. Balangir block reports highest (91.03%) and Titilagarh Block reports lowest (82.65%) percentage in 'less than 100 Meters, distance traveled category. Similarly, Maximum

(13.56%) reported 'more than 101 but less than 200 meters' about to collect water from Verified Tube wells in Balangir District by the individual households in Titilagarh Block in contrast to the lowest (5.97%) reported from Khaparakhol Block. Similarly, Maximum (4.78%) reported 'more than 201 but less than 300 meters' about to collect water from Verified Tube wells in Balangir District by the individual households in

Bangamunda Block in contrast to the lowest (2.33%) reported from Balangir block. Again, Maximum (2.20%) reported 'above 300 meters' about to collect water from Verified Tube wells in Balangir District by the individual households in Khaparakhol Block in contrast to the lowest (0.66%) reported from Balangir block. Above analysis indicates that maximum numbers of households are able collect the water from verified tube wells in shortest distance in Balangir district.

### Distance travelled to collect water from Verified Tube wells in Kalahandi District

In this region, the study collects the information about 1271 number of verified Tube well. In this district, 86.08 percent Tube wells reported 'less than 100 Meters, 8.96 percent reported 'more than101 but less than 200 meters', 3.44 percent reported 'more than 201 but less than 300 meters' and only 1.52 percent reported 'above 300 meters' about to collect water from Verified Tube wells in Kalahandi District by the individual households. Within

	Table No-68								
D	Distance travelled to collect water from Verified Tube wells in								
	Kalahandi District								
SI		No of		Distance trav	elled				
N o	Sample Block	Tube well verified	Less than 100 M	101-200m	201- 300m	Above 300m			
1	Bhawanipatan a	517	83.12	10.19	4.78	1.91			
2	Kesinga	368	91.03	5.98	2.33	0.66			
3	Karlamunda	193	87.74	5.97	4.09	2.20			
4	Thuamularamp ur	193	82.65	13.56	2.52	1.26			
	Total	1271	86.08	8.96	3.44	1.52			

the district, Kesinga block reports highest (91.03%) and Thuamularampur Block reports lowest (82.65%) percentage in 'less than 100 Meters, distance traveled category. Similarly, Maximum (13.56%) reported 'more than101 but less than 200 meters' about to collect water from Verified Tube wells in Kalahandi District by the individual households in Thuamularampur Block in contrast to the lowest (5.97%) reported from Karlamunda Block. Similarly, Maximum (4.78%) reported 'more than 201 but less than 300 meters' about to collect water from Verified Tube wells in Kalahandi District by the individual households in Bhawanipatana Block in contrast to the lowest (2.33%) reported from Kesinga block. Again, Maximum (2.20%) reported 'above 300 meters' about to collect water from Verified Tube wells in Kalahandi District by the individual households in Karlamunda Block in contrast to the lowest (0.66%) reported from Kesinga block. Above analysis indicates that maximum numbers of households are able collect the water from verified tube wells in shortest distance in Kalahandi district.

### Distance travelled to collect water from Verified Tube wells in Koraput District

#### Table No-69

Dist	Distance travelled to collect water from Verified Tube wells in Koraput District							
		No of	D	istance	travelle	ed		
SI No	Sample Block	Tube well verified	Less than 100 M	101- 200m	201- 300m	Above 300m		
1	Boipariguda	319	61.13	26.65	7.84	4.39		
2	Koraput	201	86.07	9.95	2.49	1.49		
3	Kotpad	225	81.78	13.33	4.00	0.89		
	Total	745	74.09	18.12	5.23	2.55		

In this district, 74.09 percent Tube wells reported 'less than 100 Meters, 18.12 percent reported 'more than101 but less than 200 meters', 5.23 percent reported 'more than 201 but less than 300 meters' and only 2.55 percent reported 'above 300 meters' about to collect water from Verified Tube wells in Koraput District by the individual households. Within the district, Koraput block reports highest (86.07%) Boipariguda Block reports lowest (61.13%) percentage in 'less than

100 Meters, distance traveled category. Similarly, Maximum (26.65%) reported 'more than 101 but less than 200 meters' about to collect water from Verified Tube wells in Koraput District by the individual households in Boipariguda Block in contrast to the lowest (9.95%) reported from Koraput Block. Similarly, Maximum (7.84%) reported 'more than 201 but less than 300 meters' about to collect water from Verified

Tube wells in Koraput District by the individual households in Boipariguda Block in contrast to the lowest (2.49%) reported from Koraput block. Again, Maximum (4.39%) reported 'above 300 meters' about to collect water from Verified Tube wells in Koraput District by the individual households in Boipariguda Block in contrast to the lowest (0.89%) reported from Kotpad block. Above analysis indicates that maximum numbers of households are able collect the water from verified tube wells in shortest distance in Koraput district.

## Distance travelled to collect water from Verified Tube wells in Malkangiri District

In this district, 83.25 percent Tube wells reported 'less than 100 Meters, 13.20 percent reported 'more than 101 but less than 200 meters', 2.86 percent reported 'more than 201 but less than 300 meters' and only 0.69 percent reported 'above 300 meters' about to collect water from Verified Tube wells in Malkanagiri District by the individual households. Within the district, Malkanagiri reports block highest (84.58%) and Korkunda Block reports lowest (81.88%) percentage in 'less

Table No-70									
Distance travelled to collect water from Verified Tube wells in Malkangiri District									
0.	Sample Block	No of				d			
SI No		Tube well verified	Less than 100 M	101- 200m	201- 300m	Above 300m			
1	Korkunda	436	81.88	14.91	2.52	0.69			
2	Malakanagiri	227	84.58	13.22	1.32	0.88			
3	Mathili	352	84.09	11.08	4.26	0.57			
	Total	1015	83.25	13.20	2.86	0.69			

than 100 Meters, distance traveled category. Similarly, Maximum (14.91%) reported 'more than101 but less than 200 meters' about to collect water from Verified Tube wells in Malkanagiri District by the individual households in Korkunda Block in contrast to the lowest (11.08%) reported from Mathili Block. Similarly, Maximum (4.26%) reported 'more than 201 but less than 300 meters' about to collect water from Verified Tube wells in Malkanagiri District by the individual households in Mathili Block in contrast to the lowest (1.32%) reported from Malkanagiri block. Again, Maximum (0.88%) reported 'above 300 meters' about to collect water from Verified Tube wells in Malkanagiri District by the individual households in Malkanagiri Block in contrast to the lowest (0.57%) reported from Mathili block. Above analysis indicates that maximum numbers of households are able collect the water from verified tube wells in shortest distance in Malkanagiri district.

### Distance travelled to collect water from Verified Tube wells in Nabarangpur District

### Table No-71

D	Distance travelled to collect water from Verified Tube wells in Nabrangpur District							
		No of	Distance travelled					
SI No	Sample Block	Tube well verified	Less than 100 M	101- 200m	201- 300m	Above 300m		
1	Nawarangpur	259	91.51	6.95	1.54	0.00		
2	Raighar	497	87.53	7.24	4.43	0.80		
3	Tentulikhunti	239	89.96	5.86	3.35	0.84		
	Total	995	89.15	6.83	3.42	0.60		

In this district, 89.15 percent Tube wells reported 'less than 100 Meters, 6.83 percent reported 'more than101 but less than 200 meters', 3.42 percent reported 'more than 201 but less than 300 meters' and only 0.60 percent reported 'above 300 meters' about to collect water from Verified Tube wells in Nabrangour District by the individual households. Within the district. Nabrangpur block reports (91.51%) and Raighar Block reports lowest (87.53%) percentage in 'less than 100 Meters, distance traveled

category. Similarly, Maximum (7.24%) reported 'more than101 but less than 200 meters' about to collect water from Verified Tube wells in Nabrangpur District by the individual households in Raighar Block in contrast to the lowest (5.86%) reported from Tentulikhunti Block. Similarly, Maximum (4.43%) reported 'more than 201 but less than 300 meters' about to collect water from Verified Tube wells in Malkanagiri District by the individual households in Raighar Block in contrast to the lowest (1.54%) reported from Nabrangpur block.

Again, Maximum (0.84%) reported 'above 300 meters' about to collect water from Verified Tube wells in Nabrangpur District by the individual households in Tentulikhunti Block in contrast to the lowest (0.00%) reported from Nabrangpur block. Above analysis indicates that maximum numbers of households are able collect the water from verified tube wells in shortest distance in Nabrangpur district.

## Distance travelled to collect water from Verified Tube wells in Nuapada District

In this district, 91.66 percent Tube wells reported 'less than 100 Meters, 5.06 percent reported 'more than 101 but less than 200 meters', 2.65 percent reported 'more than 201 but less than 300 meters' and only 0.63 percent reported 'above 300 meters' about to collect water from Verified Tube wells in Nuapada District by the individual households. Within the district. Nuapada block reports highest

	l able No-72											
D	Distance travelled to collect water from Verified Tube wells in Nuapada District											
No of Distance travelled												
SI No	Sample Block	Tube well verified	Less than 100 M 200m 300m Above 300m									
1	Khariar	269	91.45	5.95	1.86	0.74						
2	2 Nuapada 522 91.76 4.60 3.07 0.57											
	Total	791	91.66	5.06	2.65	0.63						

(91.76%) and Khariar Block reports lowest (91.45%) percentage in 'less than 100 Meters, distance traveled category. Similarly, Maximum (5.95%) reported 'more than 101 but less than 200 meters' about to collect water from Verified Tube wells in Nuapada District by the individual households in Khariar Block in contrast to the lowest (4.60%) reported from Nuapada Block. Similarly, Maximum (3.07%) reported 'more than 201 but less than 300 meters' about to collect water from Verified Tube wells in Nuapada District by the individual households in Nuapada Block in contrast to the lowest (1.86%) reported from Khariar block. Again, Maximum (0.74%) reported 'above 300 meters' about to collect water from Verified Tube wells in Nuapada District by the individual households in Khariar Block in contrast to the lowest (0.57%) reported from Nuapada block. Above analysis indicates that maximum numbers of households are able collect the water from verified tube wells in shortest distance in Nuapada district.

## Distance travelled to collect water from Verified Tube wells in Rayagada District

## Table No-73

Dis	Distance travelled to collect water from Verified Tube wells in Rayagada District											
		No of	D	istance	travelle	ed						
SI No	Sample Block	Tube well verified	Less than 100 M	101- 200m	201- 300m	Above 300m						
1	Kalyansinghpur	248	79.84	14.11	3.63	2.42						
2	Padmapur	183	84.70	9.29	3.83	2.19						
4	Rayagada	293	77.13	13.31	5.46	4.10						
	Total	724	79.97	12.57	4.42	3.04						

In this district, 79.97 percent Tube wells reported 'less than 100 Meters, percent reported 'more than101 but less than 200 meters', 4.42 percent reported 'more than 201 but less than 300 meters' and only 3.04 percent reported 'above 300 meters' about to collect water Tube Verified wells Rayagada District by the individual households. Within the district. Padmapur block reports and Rayagada (84.70%)

reports lowest (77.13%) percentage in 'less than 100 Meters, distance traveled category. Similarly, Maximum (14.11%) reported 'more than 101 but less than 200 meters' about to collect water from Verified Tube wells in Rayagada District by the individual households in Kalyansinghpur Block in contrast to the lowest (9.29%) reported from Padmapur Block. Similarly, Maximum (5.46%) reported 'more than 201 but less than 300 meters' about to collect water from Verified Tube wells in Rayagada District by the individual households in Rayagada Block in contrast to the lowest (3.63%) reported from Kalyansinghpur block. Again, Maximum (4.10%) reported 'above 300 meters' about to collect water from Verified Tube wells in Rayagada District by the individual households in Rayagada Block in contrast to the lowest (2.19%) reported from Padmapur block. Above analysis indicates that maximum numbers of households are able collect the water from verified tube wells in shortest distance in Rayagada district.

## Distance travelled to collect water from Verified Tube wells in Subarnapur District

In this region, the study presents the information about 676 number of verified Tube well. In this district, 90.83 percent Tube wells reported 'less than 100 Meters, 5.03 percent reported 'more than101 but less than 200 meters', 2.96 percent reported 'more than 201 but less than 300 meters' and only 1.18 percent reported 'above 300

	Table No-74											
D	Distance travelled to collect water from Verified Tube wells in Subarnapur District											
0.	No of Distance travelled											
SI No	Sample Block	Tube well verified	Less than 100 M	201- 300m	Above 300m							
1	Sonepur	311	94.21	4.82	0.96	0.00						
2	Ullunda	365 87.95 5.21 4.66 2.19										
	Total	676	90.83	5.03	2.96	1.18						

meters' about to collect water from Verified Tube wells in Sonepur District by the individual households. Within the district, Sonepur block reports highest (94.21%) and Ullunda Block reports lowest (87.95%) percentage in 'less than 100 Meters, distance traveled category.

Similarly, Maximum (5.21%) reported 'more than 101 but less than 200 meters' about to collect water from Verified Tube wells in Sonepur District by the individual households in Ullunda Block in contrast to the lowest (4.82%) reported from Sonepur Block. Similarly, Maximum (4.66%) reported 'more than 201 but less than 300 meters' about to collect water from Verified Tube wells in Sonepur District by the individual households in Ullunda Block in contrast to the lowest (0.96%) reported from Sonepur block.

Again, Maximum (2.19%) reported 'above 300 meters' about to collect water from Verified Tube wells in Sonepur District by the individual households in Ullunda Block in contrast to the lowest (0.00%) reported from Sonepur block. Above analysis indicates that maximum numbers of households are able collect the water from verified tube wells in shortest distance in Sonepur district.

## **Chapter VI**

## HOUSEHOLD SURVEY FINDINGS

## **Respondent Profile**

Table: 75 Distribution of Respondents by Religion

	Total		RE	LIGION			
DISTRICTS	Respondent	Hindu	%	Christian	%	Muslim	%
Bolangiri	401	401	100.00	0	0.0	0	0.0
Kalahandi	391	387	98.98	4	1.02	0	0.0
Koraput	321	309	96.26	12	3.74	0	0.0
Malkanagiri	275	275	100.00	0	0.0	0	0.0
Nawarangpur	292	290	99.32	2	0.68	0	0.0
Nuapada	149	144	96.64	0	0.0	5	3.36
Rayagada	300	300	100.00	0	0.0	0	0.0
Sonepur	199	199	100.00	0	0.0	0	0.0
Total	2328	2305	99.01	18	0.77	5	0.21

Table No 75 shows the religion status of sampled Households in KBK region. In this region out of total 2328 Households, 99.01 % are Hindu, 0.77 percent is Christian and only 0.21 percent is Muslim. Among KBK districts, Bolangir, Malkanagiri, Rayagada and Sonepur reports highest (100.00%) and Koraput district reports lowest (96.26%) percentage as Hindu community. Similarly, Maximum (3.74%) are Christian in Koraput district in contrast to the lowest (0.0%) reported from Bolangir, Malkanagiri, Nuapada, Rayagada and Sonepur district. Similarly, Muslims are reported only from Nuapada district (3.36%).

Table: 76 Distribution of Respondents by Caste

DISTRICTS	Total				CAS	STE			
	Respondent	SC	%	ST	%	OBC	%	ОС	%
Bolangiri	401	103	25.69	111	27.68	179	44.64	8	2.00
Kalahandi	391	106	27.11	106	27.11	158	40.41	21	5.37
Koraput	321	30	9.35	193	60.12	77	23.99	21	6.54
Malkanagiri	275	76	27.64	197	71.64	2	0.73	0	0.00
Nawarangpur	292	40	13.70	200	68.49	47	16.1	5	1.71
Nuapada	149	7	4.70	43	28.86	91	61.07	8	5.40
Rayagada	300	53	17.67	145	48.33	78	26.0	24	8.00
Sonepur	199	115	57.79	3	1.51	71	35.68	10	5.03
Total	2328	530	22.77	998	42.87	703	30.20	97	4.17

Table No 76 shows the caste status of sampled Households in KBK region. In this region out of total 2328 Households, 22.77 % are SC, 42.87 % are ST, 30.20 % are OBC and only 4.17 % are Other Castes category. Among KBK districts, Sonepur district reports highest (57.79%) and Nuapada district reports lowest (4.70%) percentage in SC category. Similarly, Maximum (71.64%) are ST in Malkanagiri district in contrast to the lowest (1.51%) ST reported from Sonepur district. Similarly, Maximum (61.07%) are OBC in Nuapada district in contrast to the lowest (0.73%) OBC reported from Malkangiri district. Again, maximum (8.00%) are Other Castes Community in Rayagada District in contrast to the lowest (0.00%) Other Castes reported from Malkangiri district.

Table: 77 Distribution of Respondents by Occupation

					Major so	urce of livel	ihood		
DISTRICTS	Respond ent	FARM	%	NON- FARM	%	WAGE	%	SERVICE	%
Bolangiri	401	92	22.94	72	17.96	218	54.36	19	4.74
Kalahandi	391	138	35.29	8	2.05	234	59.85	11	2.81
Koraput	321	120	37.38	24	7.48	172	53.58	5	1.56
Malkanagiri	275	156	56.73	4	1.45	113	41.09	2	0.73
Nawarangpur	292	6	2.05	11	3.77	275	94.18	0	0.00
Nuapada	149	86	57.72	4	2.68	59	39.60	0	0.00
Rayagada	300	101	33.67	31	10.33	147	49.00	21	7.00
Sonepur	199	16	8.04	8	4.02	174	87.44	1	0.50
Total	2328	715	30.71	162	6.96	1392	59.79	59	2.53

Table No 77 shows the main sources of income of sampled Households in KBK region. In this region out of total 2328 Households, 30.71 percent Households depend on Farming, 6.96 percent depend on Nonfarming, 59.79 percent depend on daily wage and only 2.53 percent depend on Service. Among KBK districts, Nuapada district reports highest (57.72%) and Nawarangpur district reports lowest (2.05%) percentage depend on farming sector. Similarly, Maximum (17.96%) depend on Non farming sector in Bolangir district in contrast to the lowest (1.45%) depend on non farm reported from Malkangiri district. Similarly, Maximum (94.18%) depend on wage in Nawarangpur district in contrast to the lowest (39.60%) depend on wage reported from Nuapada district. Again, maximum (7.00%) depend on service in Rayagada District in contrast to the lowest (0.00%) depend on service reported from both Nawarangpur and Nuapada district.

Table: 78 Distribution of Respondents by economic status

DISTRICTS	Total		POVERTY STATUS						
	Respondent	BPL	%	APL	%				
Bolangiri	401	306	76.31	95	23.69				
Kalahandi	391	341	87.21	50	12.79				
Koraput	321	303	94.39	18	5.61				
Malkanagiri	275	272	98.91	3	1.09				
Nawarangpur	292	280	95.89	12	4.11				
Nuapada	149	123	82.55	26	17.45				
Rayagada	300	278	92.67	22	7.33				
Sonepur	199	188	94.47	11	5.53				
Total	2328	2091	89.82	237	10.18				

Table No 78 shows the poverty status of sampled Households in KBK region. In this region out of total 2328 Households, 89.82 percent Households belong to BPL families and only 10.18 percent belong to APL families.

Among KBK districts, Malkangiri district reports highest (98.91%) and Bolangir district reports lowest (76.31%) percentage are BPL families. Similarly, Maximum (23.69%) is APL, families in Bolangir district in contrast to the lowest (1.09%) APL reported from Malkangiri district. It clearly indicates that in KBK region the BPL families are more compared to APL families.

Table: 79 Distribution of Respondents by dwelling units

DISTRICTS	Total		Type of House									
	respondents	Pucca	%	Semi Pucca	%	Kutcha	%	Hutmet	%			
Bolangiri	401	28	6.98	72	17.96	298	74.31	3	0.75			
Kalahandi	391	21	5.37	99	25.32	270	69.05	1	0.26			
Koraput	321	21	6.54	46	14.33	254	79.13	0	0.00			
Malkanagiri	275	0	0.00	39	2.75	236	85.82	0	0.00			
Nawarangpur	292	6	2.05	13	4.45	273	93.49	0	0.00			
Nuapada	149	7	4.70	21	14.09	120	80.54	1	0.67			
Rayagada	300	19	6.33	76	25.33	205	68.33	0	0.00			
Sonepur	199	7	3.52	4	2.01	188	94.47	0	0.00			
Total	2328	109	4.68	370	15.89	1844	79.21	5	0.21			

Table No 79 shows that in KBK region out of total 2328 Households, 4.68 percent Households have the Pucca house, 15.89 percent Households have the Semi-Pucca house, 79.21 percent Households have the Kutcha house and only 0.21 percent have the Hutmet house. Among KBK districts, Bolangir district reports highest (6.98%) and Malkangiri district reports lowest (0.0%) percentage of pucca house.

Similarly, Maximum (25.33%) Households have the Semi-Pucca house in Rayagada district in contrast to the lowest (2.01%) have the Semi-Pucca house in Sonepur district. Again, Maximum (94.47%) Households have the Kutcha house in Sonepur district in contrast to the lowest (68.33%) have the Kutcha house in Rayagada district. In case of Hutmet house, Bolangir, Kalahadi and Nuapada districts report 0.75%, 0.26% and 0.67% respectively. It clearly indicates that in KBK region the Kutcha houses are more compare to other categories.

Table: 80 Distribution of Respondents by electricity connection

DISTRICTS		Electrification							
	Total respondents	Have connection	%	Don't have	%				
Bolangiri	401	72	17.96	329	82.04				
Kalahandi	391	36	9.21	355	90.79				
Koraput	321	19	5.92	302	94.08				
Malkanagiri	275	15	5.45	260	94.55				
Nawarangpur	292	8	2.74	284	97.26				
Nuapada	149	37	24.83	112	75.17				
Rayagada	300	83	27.67	217	72.33				
Sonepur	199	19	9.55	180	90.45				
Total	2328	289	12.41	2039	87.59				

Table No 80 shows the electrification status of sampled Households in KBK region. In this region out of total 2328 Households, only 12.41 percent Household have the electricity facility and 87.59 percent Household have no electricity facility. Among KBK districts, Rayagada district reports highest (27.67%) and Nawarangpur district reports lowest (2.74%) percentage having electricity. Similarly, Maximum (97.26%) Household have no electricity facility in Nawarangpur district in contrast to the lowest (72.33%) reported from Malkangiri district. It clearly indicates that the electrification accessibility is less in all most all KBK districts.

Table: 81 Distribution of Respondents by possession of cattlesheds

DISTRICTS	Total			Cowsh	ed		
	respondents	Attached	%	Detached	%	Don't have	%
Bolangiri	401	39	9.73	138	34.41	224	55.86
Kalahandi	391	9	2.30	91	23.27	291	74.42
Koraput	321	91	28.35	70	21.81	160	49.84
Malkanagiri	275	186	67.64	49	17.82	40	14.55
Nawarangpur	292	181	61.99	36	12.33	75	25.68
Nuapada	149	5	3.36	83	55.70	61	40.94
Rayagada	300	65	21.67	72	24.00	163	54.33
Sonepur	199	105	52.76	30	15.08	64	32.16
Total	2328	681	29.25	569	24.44	1078	46.31

Table No 81 shows the location status of cattlesheds in sampled Households in KBK region. In this region out of total 2328 Households, 29.25 percent Households have cattlesheds attached to their house, 24.44 percent Households have it at a distance. 46.31 percent Households have no such sheds. Among KBK districts, Malkangiri district reports highest (67.64%) and Kalahandi district reports lowest (2.30%) percentage in attached cattlesheds. Similarly, Maximum (55.70%) Households have cattlesheds at a distance in Nuapada district in contrast to the lowest (12.33%) reported from Nawarangpur district. Maximum (74.42%) Households have no cattleshed in Kalahandi district in contrast to the lowest (14.55%) reported from Malkangiri district.

Table: 82 Distribution of Respondents by means of garbage disposal

DISTRICTS	Total		Disposal of HH Garbage								
	respondents	Compost Pit	%	Special Pit	%	Thrown Outside	%				
Bolangiri	401	129	32.17	10	2.49	262	65.34				
Kalahandi	391	18	4.60	6	1.53	367	93.86				
Koraput	321	70	21.81	8	2.49	243	75.70				
Malkanagiri	275	62	22.55	2	0.73	211	76.73				
Nawarangpur	292	77	26.37	0	0.00	215	73.63				
Nuapada	149	0	0.00	3	2.01	146	97.99				
Rayagada	300	29	9.67	101	33.67	170	56.67				
Sonepur	199	147	73.87	0	0.00	52	26.13				
Total	2328	532	22.85	130	5.58	1666	71.56				

Table No 82 shows the disposal of HH garbage of sampled Households in KBK region. In this region out of total 2328 Households, only 22.85 percent Households thrown their garbage at compost pit, only 5.58 percent Households thrown their garbage at special pit and a huge 71.56 percent Households thrown their garbage outside the house. Among KBK districts, Sonepur district reports highest (73.87%) and Nuapada district reports lowest (0.00%) percentage throwing their garbage at compost pit.

Similarly, Maximum (33.67%) Households throwing their garbage at special pit in Rayagada district in contrast to the lowest (0.0%) percentage reported from Nawarangpur and Sonepur district. Maximum (97.99%) Households throw their garbage outside the house in Nuapada district in contrast to the lowest (26.13%) reported from Sonepur district.

Table: 83 Distribution of Respondents by means of waste water disposal

DISTRICTS	Total		Disp	osal of Was	te Water		
	respondents	Soak Pit	%	Kitchen Garden	%	Left uncared	%
Bolangiri	401	5	1.25	2	0.50	394	98.25
Kalahandi	391	94	24.04	0	0.00	297	75.96
Koraput	321	2	0.62	51	15.89	268	83.49
Malkanagiri	275	1	0.36	51	18.55	223	81.09
Nawarangpur	292	0	0.00	22	7.53	270	92.47
Nuapada	149	0	0.00	0	0.00	149	100.00
Rayagada	300	2	0.67	37	12.33	261	87.00
Sonepur	199	7	3.52	1	0.50	191	95.98
Total	2328	111	4.77	164	7.04	2053	88.19

Table No 83 shows the disposal of HH waste water of sampled Households in KBK region. In this region out of total 2328 Households, only 4.77 percent Households dispose their waste water to the soakpit, only 7.04 percent Households dispose their waste water to the Kitchen garden and a huge 88.19 percent Households let it flow randomly. Among KBK districts, Kalahandi district reports highest (24.04%) and both Nawarangpur and Nuapada district report lowest (0.00%) percentage Households disposing waste water to the soakpit.

Similarly, Maximum (18.55%) households dispose their waste water to the Kitchen garden in Malkangiri district in contrast to the lowest (0.0%) percentage reported from both Kalahandi and Nuapada district. Maximum (100.00%) Households let waste water to flow randomly in Nuapada district in contrast to the lowest (75.96%) reported from Kalahandi district.

Table: 84 Distribution of Respondents by disposal child excreta

DISTRICTS				Disp	osal of	Children	n Excreta		
	Total respond ents	Compost Pit	%	Special Pit	%	Thrown Outside	%	No Response	%
Bolangiri	401	45	11.22	0	0.00	201	50.12	155	38.65
Kalahandi	391	0	0.00	0	0.00	297	75.96	94	24.04
Koraput	321	8	2.49	4	1.25	188	58.57	121	37.69
Malkanagiri	275	18	6.55	1	0.36	196	71.27	60	21.82
Nawarangpur	292	7	2.40	0	0.00	193	66.10	92	31.51
Nuapada	149	0	0.00	0	0.00	118	79.19	31	20.81
Rayagada	300	1	0.33	1	0.33	136	45.33	162	54.00
Sonepur	199	79	39.70	19	9.55	37	18.59	64	32.16
Total	2328	158	6.79	25	1.07	1366	58.68	779	33.46

Table No 84 shows the disposal of children excreta system of sampled Households in KBK region. In this region out of total 2328 Households, only 6.79 percent Households throw children excreta in compost pit, only 1.07 percent Households throw it in special pit, huge 58.68 percent Households throw it outside the house. 33.46 percentage Households did not respond.

Table: 85 Distribution of Respondents by defecation practice

			Place of Defecation							
DISTRICTS	Total respondents	HH Latrine	%	Community Latrine	%	Open Space	%			
Bolangiri	401	23	5.74	0	0.00	378	94.26			
Kalahandi	391	69	17.65	0	0.00	322	82.35			
Koraput	321	5	1.56	0	0.00	316	98.44			
Malkanagiri	275	27	9.82	0	0.00	248	90.18			
Nawarangpur	292	0	0.00	0	0.00	292	100.00			
Nuapada	149	8	5.37	0	0.00	141	94.63			
Rayagada	300	25	8.33	0	0.00	275	91.67			
Sonepur	199	2	1.01	0	0.00	197	98.99			
Total	2328	159	6.83	0	0.00	2169	93.17			

Table No 85 shows the data on defecation practice of sampled Households in KBK region. In this region, out of total 2328 Households, only 6.83 percent Households use HH Latrine, none in Community latrine and a huge 93.17 percent Households go for open air defecation. Among KBK districts, Kalahandi district reports highest (17.65%) and Nawarangpur district reports lowest (0.00%) percentage Households having HH Latrine. Maximum (100.00%) Households go for open-air defecation in Nawarangpur district in contrast to the lowest (82.35%) percentage reported from Kalahandi districtlt. The data clearly indicates that open air defecation is a popular and dominanat practice in KBK region.

#### DRINKING WATER AVAILABILITY AT HOUSEHOLD LEVEL

Table: 86 Distribution of Respondents by drinking water source

			Sources							
District	Total respondents	Тар	%	TW	%	Open Well	%			
Bolangiri	401	166	41.40	225	56.11	10	2.49			
Kalahandi	391	0	0.00	389	99.49	2	0.51			
Koraput	321	1	0.31	320	99.69	0	0.00			
Malkanagiri	275	0	0.00	275	100.00	0	0.00			
Nawarangpur	292	1	0.34	291	99.66	0	0.00			
Nuapada	149	0	0.00	149	100.00	0	0.00			
Rayagada	300	75	25.00	225	75.00	0	0.00			
Sonepur	199	1	0.50	198	99.50	0	0.00			
Total	2328	244	10.48	2072	89.00	12	0.52			

The above table shows the data on sources of drinking water of sampled Households in KBK region. In this region, out of total 2328 Households, only 10.48 percent Households have Tap water facility, 89.00 percent Households have Tube well facility and only 0.52 percent Households have the open well or stream as the major sources of drinking water.

Among KBK districts, Bolangir district reports highest (41.40%) and Kalahandi, Malkangiri and Nuapada district reports no Households have the tape water facility. Similarly, Maximum (100.00%) Households have Tube well facility in Malkangiri and Nuapada district in contrast to the lowest (56.11%) percentage reported from Bolangir district. Interestingly we found the open well as the source of drinking water in Bolangir and Kalahandi district. It clearly indicates that, the tube well is the major source of drinking water in KBK region.

Table: 87 Distribution of Respondents by ownership of drinking water source

		Ownership					
DISTRICT	Total respondents	Public	%	Private	%		
Bolangiri	401	391	97.51	10	2.49		
Kalahandi	391	391	100.00	0	0		
Koraput	321	321	100.00	0	0		
Malkanagiri	275	275	100.00	0	0		
Nawarangpur	292	292	100.00	0	0		
Nuapada	149	149	100.00	0	0		
Rayagada	300	300	100.00	0	0		
Sonepur	199	198	99.50	1	0.50		
Total	2328	2317	99.53	11	0.47		

Table No 87 shows the ownership status of sources of drinking water according to sampled Households in KBK region. In this region out of total 2328 Households, 99.53 percent Household reported public ownership of sources; on the other hand only 0.47 percent had Private ownership.

Table: 88 Distribution of Respondents by opinion on quality drinking of water

DICTRICT	Total	Water Quality						
DISTRICT	respondents	Good	%	Manageable	%			
Bolangiri	401	391	97.51	10	2.49			
Kalahandi	391	391	100.00	0	0.00			
Koraput	321	321	100.00	0	0.00			
Malkanagiri	275	275	100.00	0	0.00			
Nawarangpur	292	292	100.00	0	0.00			
Nuapada	149	149	100.00	0	0.00			
Rayagada	300	300	100.00	0	0.00			
Sonepur	199	199	100.00	0	0.00			
Total	2328	2318	99.57	10	0.43			

Table No 80 reveals the opinion of individual HH on the quality of safe drinking water in KBK region. In this region, 99.57 percent HHs have opined the quality as good. Only 0.43 percent have viewed it manageable.

Table: 89 Distribution of Respondents by opinion on water availability

i a	Die. 03 Distributio	ni oi itespondeni	.s by opinion o	ii watei avaiie	ibility				
DISTRICT			Water Availability						
DioTitio	Total respondents	Round the Year	%	Seasonal	%				
Bolangiri	401	401	100.00	0	0.00				
Kalahandi	391	391	100.00	0	0.00				
Koraput	321	321	100.00	0	0.00				
Malkanagiri	275	275	100.00	0	0.00				
Nawarangpur	292	292	100.00	0	0.00				
Nuapada	149	149	100.00	0	0.00				
Rayagada	300	300	100.00	0	0.00				
Sonepur	199	149	74.87	50	25.13				
Total	2328	2278	97.85	50	2.12				

Table No 89 reveals the opinion of HHs on the availability of safe drinking water in KBK region. In this region, 97.85 percent HHs have opined round the year, and only 2.12 percent have mentioned seasonal availability of safe drinking water. Among KBK districts, except Sonepur district other reported 100 percent availability of safe drinking water round the year. Interestingly, only Sonepur district reports 25.13 percent seasonally availability.

### **WASHING FACILITIES**

Table: 90 Distribution of Respondents by opinion on water availability for washing

				S	ources	of Drinkin	g Water		
DISTRICT	Total respondents	Тар	%	TW	%	Open Well	%	Tank/ River	%
Bolangiri	401	22	5.49	42	10.47	0	0.00	337	84.04
Kalahandi	391	0	0.00	11	2.81	7	1.79	373	95.40
Koraput	321	1	0.31	210	65.42	64	19.94	46	14.33
Malkanagiri	275	0	0.00	168	61.09	0	0.00	107	38.91
Nawarangpur	292	0	0.00	88	30.14	22	7.53	182	62.33
Nuapada	149	0	0.00	22	14.77	35	23.49	92	61.74
Rayagada	300	60	20.00	165	55.00	50	16.67	25	8.33
Sonepur	199	0	0.00	2	1.01	97	48.74	100	50.25
Total	2328	83	3.57	708	30.41	275	11.81	1262	54.21

Table No 90 shows the data on sources of washing water of sampled Households in KBK region. In this region, out of total 2328 Households, only 3.57 percent Households have opined Tap water, 30.41 percent Households have opined Tube well, 11.81 percent Households have opined open well and 54.21 percent Households have opined the Tank/river as the major sources of washing water.

### **BATHING FACILITIES**

Table: 91 Distribution of Respondents by opinion on water source for washing

					5	Sources			
DISTRICT	Total Respondents	Тар	%	TW	%	Open Well	%	Tank/ River	%
Bolangiri	401	3	0.75	1	0.25	0	0.00	397	99.00
Kalahandi	391	0	0.00	3	0.77	6	1.53	382	97.70
Koraput	321	0	0.00	56	17.45	22	6.85	243	75.70
Malkanagiri	275	0	0.00	161	58.55	0	0.00	114	41.45
Nawarangpur	292	0	0.00	27	9.25	7	2.40	258	88.36
Nuapada	149	0	0.00	22	14.77	35	23.49	92	61.74
Rayagada	300	50	16.67	165	55.00	0	0.00	85	28.33
Sonepur	199	0	0.00	1	0.50	0	0.00	198	99.50
Total	2328	53	2.28	436	18.73	70	3.01	1769	75.99

Table No 91 shows the data on sources bathing water of sampled Households in KBK region. In this region, out of total 2328 Households, only 2.28 percent Households have opined Tap water as the source, 18.73 percent Households have opined Tube well as the source, 3.01 percent Households have opined Open well as the source and 75.99 percent Households have opined Tank/river as the major sources of bathing water. Maximum (58.55%) Households have Tube well as the source of bathing water in Malkanagiri district in contrast to the lowest (0.25%) percentage reported from Bolangir district.

## **Storage of Drinking Water**

Table: 92 Distribution of Respondents by opinion on usage for water storage

DISTRICT	Respondents	Metal Vessels	%	Earthen Vessels	%
Bolangiri	401	332	82.79	69	17.21
Kalahandi	391	149	38.11	242	61.89
Koraput	321	319	99.38	2	0.62
Malkanagiri	275	275	100.00	0	0.00
Nawarangpur	292	292	100.00	0	0.00
Nuapada	149	144	96.64	5	3.36
Rayagada	300	300	100.00	0	0.00
Sonepur	199	197	98.99	2	1.01
TOTAL	2328	2008	86.25	320	13.75

Table No 92 presents the opinion of HHs on the storage system of drinking water in KBK region. In this region, 86.25 percent HHs have the practice of metal vessels and only 13.75 percent have the practice of earthen vessels for storage system of drinking water. Malkanagiri, Nawarangpur and Rayagada district report highest (100.00%) and Kalahandi district reports lowest (38.11%) practice of metal vessels for storage of drinking. Similarly, Maximum (61.89%) Households have the practice of earthen vessels in Kalahandi district in contrast to the lowest (0.0%) percentage reported from Malkanagiri, Nawarangpur and Rayagada districts.

Table: 93 Distribution of Respondents by opinion on covering vessel

DISTRICT	Respondents	Yes	%	No	%
Bolangiri	401	364	90.77	37	9.23
Kalahandi	391	385	98.47	6	1.53
Koraput	321	125	38.94	196	61.06
Malkanagiri	275	66	24.00	209	76.00
Nawarangpur	292	116	39.73	176	60.27
Nuapada	149	149	100.00	0	0.00
Rayagada	300	124	41.33	176	58.67
Sonepur	199	199	100.00	0	0.00
TOTAL	2328	1528	65.64	800	34.36

Table No 93 shows the data about the storage practices of drinking water by the HHs in KBK region. In this region, 65.64 percent HHs cover the vessels. Nuapada and Sonepur district report highest (100.00%) and Malkanagiri district reports lowest (24.00%) on covering the vessels.

Table: 94 Distribution of Respondents by opinion on cleaning vessel

				by cpinion on creating reces.				
DISTRICT	Respondents	Regular	%	Occasional	%			
Bolangiri	401	347	86.53	54	13.47			
Kalahandi	391	369	94.37	22	5.63			
Koraput	321	314	97.82	7	2.18			
Malkanagiri	275	267	97.09	8	2.91			
Nawarangpur	292	290	99.32	2	0.68			
Nuapada	149	149	100.00	0	0.00			
Rayagada	300	299	99.67	1	0.33			
Sonepur	199	198	99.50	1	0.50			
TOTAL	2328	2233	95.92	95	4.08			

Table No 94 shows the data about the opinion of HHs on the cleaning practices of vessels in KBK region. In this region, 95.92 percent HHs clean regularly and only 4.08 percent clean occasionally. Among KBK districts, Nuapada district report highest (100.00%) and Bolangir district reports lowest (86.53%) in regular cleaning of the vessels.

Table: 95 Distribution of Respondents by opinion on drawing water

DISTRICT	Respondents	Slanting	%	Dipping	%	Specific Devices	%
Bolangiri	401	190	47.38	159	39.65	52	12.97
Kalahandi	391	177	45.27	171	43.73	43	11.00
Koraput	321	7	2.18	314	97.82	0	0.00
Malkanagiri	275	0	0.00	273	99.27	2	0.73
Nawarangpur	292	13	4.45	279	95.55	0	0.00
Nuapada	149	128	85.91	21	14.09	0	0.00
Rayagada	300	1	0.33	286	95.33	13	4.33
Sonepur	199	94	47.24	105	52.76	0	0.00
TOTAL	2328	610	26.20	1608	69.07	110	4.73

Table No 95 shows the data about the practice of drawing drinking water from vessel. In this region, 26.20 percent HHs use slanting, 69.07 percent use dipping, and only 4.73 percent say they use a ladel or mug for drawing water.

Table: 96 Distribution of Respondents by opinion on water purification

District		Disinfecting	%	Filtering	%	Chlorinating	%
Bolangiri	401	66	16.46	63	15.71	3	0.75
Kalahandi	391	98	25.06	98	25.06	0	0.00
Koraput	321	0	0.00	0	0.00	0	0.00
Malkanagiri	275	2	0.73	2	0.73	0	0.00
Nawarangpur	292	0	0.00	0	0.00	0	0.00
Nuapada	149	35	23.49	35	23.49	0	0.00
Rayagada	300	13	4.33	13	4.33	0	0.00
Sonepur	199	0	0.00	0	0.00	0	0.00
TOTAL	2328	214	9.19	211	9.06	3	0.13

Table No 96 shows the data about water purification measures adopted by households in KBK region. In this region, 9.19 percent HHs practice disinfecting source, 9.06 percent HHs practice filtering and 0.13 percent have practice chlorinating in KBK region.

### **SANITATION AND PERSONAL HYGIENE**

Table: 97 Distribution of Respondents by ownership of IHHL

DISTRICTS	Respondents	Have IHL	%	Don't hve IHL	%
Bolangiri	401	78	19.45	323	80.5
Kalahandi	391	100	25.58	291	74.4
Koraput	321	95	29.60	226	70.40
Malkanagiri	275	33	12.00	242	88.00
Nawarangpur	292	106	36.30	186	63.7
Nuapada	149	20	13.42	129	86.6
Rayagada	300	86	28.67	214	71.3
Sonepur	199	140	70.35	59	29.6
Total	2328	658	28.26	1670	71.7

Table No 97 shows the data about ownership of household latrines in KBK region. While 28.26 percent report having an overwhelming 71.7 percent admit lack of it. Among the districts Sonepur reports highest (70.35%) and Nuapada the lowest (13.42%).

Table: 98 Distribution of Respondents by Type owned and funding source for IHHL

		Туре	Type of Latrine			Source of Funding		
District	Have IHL	Sanitary	%	Barpali	%	Own	%	Govt.
Bolangiri	78	17	21.79	61	78.2	0	100	78
Kalahandi	100	16	16.00	84	84	0	100	100
Koraput	95	3	3.15	92	96.8	0	100	95
Malkanagiri	33	33	100	0	0	0	100	33
Nawarangpur	106	0	0	106	100	0	100	106
Nuapada	20	20	100	0	0	0	100	20
Rayagada	86	54	62.79	32	37.2	0	100	86
Sonepur	140	0	0	140	100	0	100	140
Total	658	143	21.73	515	78.3	0	100	658

Table No 98 shows the data about type of latrines and sources of funding of household in KBK region. While 21.73 percent report having sanitary latrine an overwhelming 78.3 percent have Barpali. All the households have availed government assistance for construction of household latrine.

Table: 99 Distribution of Respondents by type of mason used for construction

DIGTRICTO		Masons fro	om the village	Masons outside the village		
DISTRICTS	Have IHL	Trained	Untrained	Trained	Untrained	
Balangir	78	56.25	43.75	85.48	14.52	
Kalahandi	100	67.74	32.26	79.71	20.29	
Koraput	95	42.86	57.14	77.61	22.39	
Malkanagiri	33	45.45	54.55	86.36	13.64	
Nawarangpur	106	48.65	51.35	72.46	27.54	
Nuapada	20	33.33	66.67	71.43	28.57	
Rayagada	86	59.26	40.74	81.36	18.64	
Sonepur	140	54.35	45.65	76.60	23.40	
Total	658	53.47	46.53	78.73	21.27	

Table No 99 shows the preference for trained masons in KBK region. From within the village 53.47 % masons are trained compared to 78.73 % from outside the village. Among districts Kalahandi has highest trained masons from within the village and Nuapada has lowest.

Table: 100 Distribution of Respondents by hand wash practice after defecation

	Total	Hand wash after Defecation					
DISTRICT	respondents	Yes	%	No	%		
Bolangiri	401	401	100.00	0	0.00		
Kalahandi	391	391	100.00	0	0.00		
Koraput	321	321	100.00	0	0.00		
Malkanagiri	275	275	100.00	0	0.00		
Nawarangpur	292	292	100.00	0	0.00		
Nuapada	149	149	100.00	0	0.00		
Rayagada	300	300	100.00	0	0.00		
Sonepur	199	173	86.93	26	13.07		
TOTAL	2328	2302	98.88	26	1.12		

Table No 100 shows the data about the hand washing practices after the defecation in KBK region. In this region, 98.88 percent HHs have viewed 'yes' whereas 1.12 percent do not wash their hand after defecation.

Table: 101 Distribution of Respondents by hand wash usage after defecation

		Type of material used						
DISTRICT	Respondents	Soil	%	Ashes	%	Soap	%	
Bolangiri	401	388	96.76	3	0.75	10	2.49	
Kalahandi	391	302	77.24	6	1.53	83	21.23	
Koraput	321	316	98.44	5	1.56	0	0.00	
Malkanagiri	275	269	97.82	2	0.73	4	1.45	
Nawarangpur	292	292	100.00	0	0.00	0	0.00	
Nuapada	149	112	75.17	0	0.00	37	24.83	
Rayagada	300	290	96.67	0	0.00	10	3.33	
Sonepur	173	169	97.69	2	1.16	2	1.16	
TOTAL	2302	2138	92.88	18	0.78	146	6.34	

Table No 101 presents data on hand washing practices after defecation. 92.88 percent HHs use soil, 0.78 percent use ashes, and only 1.16 percent use shop. Among KBK districts, Nawarangpur district report highest (100.00%) and Nuapada district reports lowest (75.17%) percentage on soil use. Highest 1.56% Households use ashes in Koraput district whereas none does so int Nawarangpur, Nuapada and Rayagada districts. Similarly, highest 21.23% Households use shop in Kalahandi district and lowest (0.0%) percentage in both Koraput and Nawarangpur districts

Table: 102 Distribution of Respondents by use of footwear for defecation

DISTRICT	D	Use footwear while going for Defecation					
	Respondents	Yes	%	No	%		
Bolangiri	401	275	68.58	126	31.42		
Kalahandi	391	339	86.70	52	13.30		
Koraput	321	86	26.79	235	73.21		
Malkanagiri	275	72	26.18	203	73.82		
Nawarangpur	292	76	26.03	216	73.97		
Nuapada	149	97	65.10	52	34.90		
Rayagada	300	62	20.67	238	79.33		
Sonepur	199	57	28.64	142	71.36		
TOTAL	2328	1064	45.70	1264	54.30		

Table No 102 presents data on usage of footwear while going for defecation in KBK region. In this region, 45.70 percent HHs use Chapals, and 54.30 percent said 'No' about the use of Chapals while going for defecation. Among KBK districts, Kalahandi district report highest (86.70%) and Rayagada district reports lowest (20.67%) percentage of Chapal use. Maximum (79.33%) Households have said they are not using Chapals in Rayagada district in contrast to the lowest (13.30%) percentage reported from Kalahandi district about the use of Chapals while going for defecation KBK region.

#### Conclusion

The household survey data depicts the mixed scenario on water and sanitation in KBK districts. The situation is highly satisfactory on availability of water but as a whole there is much to be desired in usages regarding collection, storage and hygienic use of it. The situation is dismal on sanitation front as the statistics are poor with regard to household and institutional facilities and usages of use. This calls for undertaking awareness campaigns and effective delivery of behavior change communication in the region.

## **Chapter VII**

## STAKEHOLDER PERSPECTIVES

## Awareness level of PRI representatives on RLTAP in KBK region

Table: 402 Assertance level of BBI representatives							
Table: 103 Awareness level of PRI representatives on the RLTAP for KBK region							
			1		I		
District	Number	Highly	Aware	Not	No		
		Aware		Aware	Response		
Balangir	19	26.3	42.1	31.6	0.0		
Kalahandi	32	28.1	56.3	12.5	3.1		
Koraput	21	28.6	47.6	23.8	0.0		
Malkangiri	21	23.8	38.1	28.6	9.5		
Nabrangpur	21	33.3	47.6	19.0	0.0		
Nuapada	14	35.7	42.9	21.4	0.0		
Rayagada	20	30.0	40.0	25.0	5.0		
Subarnapur	16	31.3	50.0	18.8	0.0		
Total	164	29.3	46.3	22.0	2.4		

Table No 103 presents data on awareness of PRI representatives about RLTAP being implemented in KBK region, 29.3 percent PRI representatives are highly aware, 46.30% are aware and only 22% are not aware about Revised Long term Action Plan (RLTAP). Among KBK districts, Nuapada reports highest (35.7%) and Malkanagiri district reports lowest (23.8%) percentage in highly aware category. Similarly, Maximum (56.3%) are aware about RLTAP in Kalahandi district in contrast to the lowest (38.1%) aware reported from Malkangiri Maximum (31.6%) are not aware about RLTAP in Balangir district in contrast to the lowest (12.5%) not aware reported from Malkangiri district. The percentage of

non-respondents in Malkanagiri, Rayagada, and Kalahandi district is 9.5 percent, 5 percent and 3.1 percent respectively.

# Awareness level among PRI representatives on rural water supply and sanitation components in RLTAP

Table No 104 presents data on awareness of PRI representatives about water and sanitation components in RLTAP. In this region, 26.2 percent PRI representatives are highly aware, 42.1% are aware and only 23.2% are not aware about rural water supply and sanitation components in RLTAP. Among KBK districts, Subarnapur reports highest (31.3%) and Balangiri district reports lowest (21.1%) percentage in highly aware category. Similarly, Maximum (50.0%) are aware about rural water supply and sanitation components in RLTAP in Subarnapur district in contrast to the lowest (34.4%) aware reported from Kalahandi district. Maximum (35.7%) are not aware about such components in RLTAP in Nuapada district in contrast to the lowest (18.8%) not aware reported from Subaranapur district.

RLTAP for M District	Number		Aware	Not Aware	No Response
Balangir	19	21.1	47.4	26.3	10.5
Kalahandi	32	25.0	34.4	21.9	18.8
Koraput	21	28.6	42.9	19.0	4.8
Malkangiri	21	23.8	47.6	19.0	9.5
Nabrangpur	21	28.6	38.1	23.8	9.5
Nuapada	14	28.6	35.7	35.7	0.0
Rayagada	20	25.0	45.0	25.0	5.0
Subarnapur	16	31.3	50.0	18.8	0.0
Total	164	26.2	42.1	23.2	8.5

Table: 104 Awareness level of PRI representatives on

### Awareness among PRI representatives on rural water supply and sanitation initiatives under WATSAN Mission

Table: 105 Awareness levels of PRI representatives on the rural water supply and sanitation initiative under the State/ District WATSAN Mission

MA I SAIM INI	331011				
District	Number	Highly Aware	Aware	Not Aware	No Response
Balangir	19	21.1	42.1	26.3	10.5
Kalahandi	32	21.9	34.4	31.3	12.5
Koraput	21	23.8	47.6	19.0	9.5
Malkangiri	21	28.6	38.1	23.8	9.5
Nabrangpur	21	23.8	47.6	19.0	9.5
Nuapada	14	35.7	42.9	14.3	7.1
Rayagada	20	35.0	30.0	25.0	5.0
Subarnapur	16	25.0	31.3	37.5	6.3
Total	164	26.2	39.0	25.0	9.1

Table No 105 presents data on awareness of PRI representatives about WASAN Mission. In this region, 26.2 percent PRI representatives are highly aware, 39.0% are aware and only 25.0% are not aware about rural water supply and sanitation initiative under the State/ WATSAN District Mission. Among KBK districts, Nuapada reports highest (35.7%) and Balangiri district reports lowest (21.1%)percentage in highly aware category, Maximum (57.6%) are aware about rural water supply and sanitation initiative under the State/ District WATSAN Mission in both Koraput and

Nabarangpur district in contrast to the lowest (30.0%) aware reported from Rayagada district. Maximum (37.5%) are not aware about rural water supply and sanitation initiative under the State/ District WATSAN Mission in Subaranapur district in contrast to the lowest (19.0%) not aware reported from both Koraput and Nabarangpur district. The percentage of non-respondents is highest (12.5%) in Kalahandi district in contrast to the lowest (5.0%) in Rayagada districts on this issue.

## Awareness among PRI representatives on Water and Sanitation Committees formed at Village/ GP and Block level

Table No 106 presents data on Table: 106 Awareness levels of PRI representatives on the awareness of PRI representatives about water and sanitation committees. In this region, 26.2 percent PRI representatives are highly aware, 46.3% are aware and only 20.1% are not aware about Water and Sanitation Committees being formed at Village/ GP and Block level. Among districts. Nuapada highest (35.7%) and Rayagada district reports lowest (20.0%) percentage in highly aware category. Similarly, Maximum (56.3%) are aware about Water and Sanitation Committees being formed at Village/ GP and Block level in Kalahandi district in contrast to the lowest (40.0%) aware reported Rayagada district. Similarly,

	Water and Sanitation Committees being formed at Village/ GP and Block level							
District	Number	Highly Aware	Aware	Not Aware	No Response			
Balangir	19	26.3	42.1	31.6	0.0			
Kalahandi	32	28.1	56.3	12.5	3.1			
Koraput	21	28.6	42.9	19.0	4.8			
Malkangiri	21	23.8	47.6	19.0	9.5			
Nabrangpur	21	23.8	47.6	19.0	9.5			
Nuapada	14	35.7	42.9	14.3	7.1			
Rayagada	20	20.0	40.0	25.0	15.0			
Subarnapur	16	25.0	43.8	25.0	6.3			
Total	164	26.2	46.3	20.1	6.7			

Maximum (31.6%) are not aware about Water and Sanitation Committees being formed at Village/ GP and Block level in Balangir district in contrast to the lowest (19.0%) not aware reported from Koraput, Malkanagiri and Nabarangpur districts.

### Opinion of PRI representatives on working of Water and Sanitation Committees

Table: 107 Opinion of PRI representatives on working of Water and Sanitation Committees								
District	Number							
		Satisfactory		Satisfactory	Response			
Balangir	19	31.6	42.1	21.1	5.3			
Kalahandi	32	28.1	62.5	9.4	0.0			
Koraput	21	38.1	52.4	4.8	0.0			
Malkangiri	21	33.3	47.6	14.3	4.8			
Nabrangpur	21	38.1	47.6	9.5	4.8			
Nuapada	14	42.9	50.0	7.1	0.0			
Rayagada	20	25.0	70.0	5.0	0.0			
Subarnapur	16	37.5	56.3	6.3	0.0			
Total	164	33.5	54.3	9.8	1.8			

Table No 107 presets opinion of PRI representatives on working of Water and Sanitation Committees in KBK region. In this region, 33.5 percent representatives are very satisfied, 54.3 percent are satisfied and only 9.8 percent are not satisfied with the working of Water Sanitation and Nuapada Committees. reports highest (42.9%) and Rayagada district reports lowest (25.0%) percentage in very satisfied category.

Maximum (70.0%) are satisfied about working of Water and Sanitation Committees in Rayagada district in contrast to the lowest (42.1%) satisfied reported from Balangir district. Maximum (21.1%) are not satisfied about working of Water and Sanitation Committees in Balangir district in contrast to the lowest (4.8%) not satisfied reported in Koraput district.

## Views of PRI representatives on meeting officials for safe drinking water

Table No 108 presents data on meeting of PRI representatives with officials for provision of safe drinking water.

In this region, 16.5 percent PRI representatives meet frequently, 69.5 percent meet occasionally and only 10.4 percent are not meeting officials for the provision of safe drinking water.

Among KBK districts, Rayagada reports highest (20.0%) and Subarnapur district reports lowest (12.5%) percentage in frequently meeting category. Similarly, Maximum (78.6%) has viewed occasionally meeting

Table: 108 Views of PRI representatives on meeting officials for provision of safe drinking water									
District	Number	Frequent	Occasional	Not	No Response				
Balangir	19	15.8	63.2	10.5	10.5				
Kalahandi	32	15.6	71.9	9.4	3.1				
Koraput	21	19.0	71.4	9.5	0.0				
Malkangiri	21	14.3	66.7	14.3	4.8				
Nabrangpur	21	19.0	66.7	9.5	4.8				
Nuapada	14	14.3	78.6	7.1	0.0				
Rayagada	20	20.0	70.0	10.0	0.0				
Subarnapur	16	12.5	68.8	12.5	6.3				
Total	164	16.5	69.5	10.4	3.7				

officials for the provision of safe drinking water in Nuapada district in contrast to the lowest (63.2%) occasionally reported from Balangir district.

Similarly, Maximum (14.3%) are not meeting officials for the provision of safe drinking water in Malkanagiri district in contrast to the lowest (7.1%) not meeting reported in Nuapada district. The percentages of non-respondents are highest (10.5%) in Bolangir district in contrast to the lowest (0.0%) in Koraput, Nuapada and Rayagada districts on this issue.

### Opinion of PRI representatives on provisions for safe drinking water

Table: 109 Opinion of PRI representatives on the provisions for safe drinking water										
District	t Number Very Satisfactor		Satisfactory	Not	No					
		Satisfactory		Satisfactory	Response					
Balangir	19	21.1	57.9	15.8	5.3					
Kalahandi	32	9.4	78.1	12.5	0.0					
Koraput	21	9.5	71.4	14.3	4.8					
Malkangiri	21	14.3	61.9	19.0	4.8					
Nabrangpur	21	9.5	71.4	19.0	0.0					
Nuapada	14	14.3	64.3	21.4	0.0					
Rayagada	20	20.0	60.0	15.0	5.0					
Subarnapur	16	18.8	56.3	18.8	6.3					
Total	164	14.0	66.5	16.5	3.0					

Table No 109 presents data about the opinion of PRI representatives on the issue of provisions for safe drinking water. In this region, 14.0 percent PRI representatives are very satisfied, percent are satisfied and only 16.5 percent are not satisfied about the provisions for safe drinking water. Among KBK districts, Balangir reports highest (21.1%)and Kalahandi district reports lowest (9.4%) percentage in satisfied very category. Similarly, Maximum (78.1%) are satisfied about provisions for safe drinking

water in Kalahandi district in contrast to the lowest (56.3%) satisfy reported from Subarnapur district. Similarly, Maximum (21.4%) is not satisfied about the provisions for safe drinking water in Nuapada district in contrast to the lowest (12.5%) not satisfied reported in Kalahandi district. The percentage of non-respondents is highest (6.35%) in Subarnapur district on the above question.

### Opinion of PRI representatives on the availability of safe drinking water round the year

Table No 110 presents data about the opinion of PRI representatives on the issue of availability of safe drinking water round the year.

In this region, 38.4 percent PRI representatives have affirmed availability round the year, 53.0 percent say it is available in most parts of the year and only 8.5 percent complain non availability during the summer season.

Among KBK districts, both Koraput and Nuapada district report highest (42.9%) and Rayagada district reports lowest (35.0%) percentage on round the year of availability of

Table: 110 Opinion of PRI representatives on the availability of safe drinking water round the year										
District	Number									
Balangir	19	36.8	47.4	15.8	0.0					
Kalahandi	32	37.5	59.4	3.1	0.0					
Koraput	21	42.9	52.4	4.8	0.0					
Malkangiri	21	38.1	47.6	14.3	0.0					
Nabrangpur	21	38.1	52.4	9.5	0.0					
Nuapada	14	42.9	50.0	7.1	0.0					
Rayagada	20	35.0	55.0	10.0	0.0					
Subarnapur	16	37.5	56.3	6.3	0.0					
Total	164	38.4	53.0	8.5	0.0					

drinking water. Maximum (59.4%) say available 'most part of the year' in Kalahandi district in contrast to the lowest (47.4%) percentage reported from Balangir district. Similarly, Maximum (15.8%) complains about not being available during summer season. Thus, except a few pockets water supply is not a problem round the year. The real problem it was ascertained fom the PRI representatives concern about timely repair and replacement of defunct tube wells.

## Opinion of PRI representatives on the availability of safe drinking water in adequate quantity

Table: 111 Opinion of PRI representatives on the availability of safe drinking water in adequate quantity									
District	Number	Adequate	Average	Poor	No Response				
Balangir	19	36.8	47.4	15.8	0.0				
Kalahandi	32	9.4	78.1	12.5	0.0				
Koraput	21	38.1	52.4	9.5	0.0				
Malkangiri	21	42.9	52.4	4.8	0.0				
Nabrangpur	21	14.3	61.9	19.0	4.8				
Nuapada	14	28.6	64.3	7.1	0.0				
Rayagada	20	25.0	60.0	15.0	5.0				
Subarnapur	16	25.0	56.3	18.8	0.0				
Total	164	26.2	60.4	12.8	1.2				

Table No 111 presents the opinion of PRI representatives on the availability of safe drinking water in adequate quantity in KBK region is also average. In this region, 26.2 percent PRI representatives have opined adequate, 60.4 percent have viewed average and only 12.8 percent have viewed poor about the availability of safe drinking water in adequate quantity question. Among districts, Malkanagiri highest (42.9%) and Kalahandi district reports lowest (9.4%) percentage in adequate of availability of drinking water category. Similarly, Maximum (78.1%) viewed average about the availability of safe drinking water in adequate quantity in Kalahandi district in contrast to the lowest (47.4%)percentage reported from Balangir district.

Similarly, Maximum (19.0%) has viewed poor about the availability of safe drinking water in adequate quantity in Nabarangpur district in contrast to the lowest (4.8%) reported in Malkanagiri district. The percentage of non-respondents in Nabarangpur and Rayagada district is 4.8 percent and 5.0 percent respectively to the above question.

### Opinion of PRI representatives on the Quality of safe drinking water

Table No 111 presents the opinion of PRI representatives on quality of safe drinking water in KBK region. In this region, 25.6 percent PRI representatives say good, 52.4 percent say average and only 12.8 percent say poor.

Among KBK districts, Malkanagiri reports highest (42.9%) and Kalahandi district reports lowest (9.4%) percentage of opinions in good category. Similarly, Maximum (68.8%) has viewed average about the quality of safe drinking water in Kalahandi district in contrast to the lowest (43.8%) percentage reported from Subarnapur district. Similarly, Maximum (19.0%) has viewed poor about the quality of safe drinking water in Nabarangpur district in contrast to the lowest (4.8%)

Table: 112 Opinion of PRI representatives on the Quality of safe drinking water									
District	Number	Good	Average	Poor	No Response				
Balangir	19	36.8	47.4	15.8	0.0				
Kalahandi	32	9.4	68.8	12.5	9.4				
Koraput	21	38.1	52.4	9.5	0.0				
Malkangiri	21	42.9	42.9	4.8	9.5				
Nabrangpur	21	14.3	47.6	19.0	19.0				
Nuapada	14	28.6	50.0	7.1	14.3				
Rayagada	20	25.0	55.0	15.0	10.0				
Subarnapur	16	18.8	43.8	18.8	18.8				
Total	164	25.6	52.4	12.8	9.8				

reported in Malkanagiri district. The percentage of non-respondents in Nabarangpur district is highest (19.0%) to the above question.

### Opinion of PRI representatives on the average distance of safe drinking water source

Table: 113 Opinion of PRI representatives on the average distance of safe drinking water source										
District	Number	Number Very Near Near Far								
					Response					
Balangir	19	15.8	78.9	5.3	0.0					
Kalahandi	32	25.0	68.8	6.3	0.0					
Koraput	21	33.3	61.9	4.8	0.0					
Malkangiri	21	38.1	57.1	4.8	0.0					
Nabrangpur	21	33.3	47.6	19.0	0.0					
Nuapada	14	35.7	57.1	7.1	0.0					
Rayagada	20	30.0	55.0	15.0	0.0					
Subarnapur	16	31.3	56.3	12.5	0.0					
Total	164	29.9	61.0	9.1	0.0					

Table No-113 presents data on opinion of PRIs representatives on the average distance of safe drinking water source in KBK region. In this region, 29.9 percent PRI representatives have opined 'very near', 61.0 percent have viewed 'near' and only 9.1 percent have viewed 'far' on the average distance of safe drinking water sources. Among KBK districts, Nabarangpur reports highest (38.1%) and Balangir district reports lowest (15.8%) percentage in 'very near' on the average distance of safe drinking water source category. Maximum (78.9%) are viewed 'near' about on the average distance of safe drinking water source in Balangir district in contrast to the lowest (47.6%) percentage reported from Nabarangpur district. Similarly, Maximum (19.0%) has

viewed 'far' about the average distance of safe drinking water source in Nabarangpur district in contrast to the lowest (4.8%) reported in both Koraput and Malkanagiri district.

### Opinion of PRI representatives on the priority of safe drinking water

The Table No-114 presents the opinion of PRI representatives on the priority of safe drinking water in KBK region.

In this region, 43.3 percent PRI representatives have opined priority to be 'high', 48.8 percent have viewed 'medium' and only 7.3 percent have viewed 'low'.

Among KBK districts, Nuapada reports highest (57.1%) and Kalahandi district reports lowest (34.4%) percentage has viewed 'high' on the priority of safe drinking water category. Similarly,

Maximum (57.9%) has viewed 'medium' about priority of safe drinking water in Balangir district in contrast to the lowest (35.0%) percentage reported from Rayagada district.

Similarly, Maximum (10.0%) has viewed 'low' about priority of safe drinking water in Rayagada district in contrast to the lowest (4.8%) reported in both Koraput and Malkanagiri district. The percentage of non-respondents is only found (3.1%) in Kalahandi district to the above question.

Table: 114 Opinion of PRI representatives on the priority of safe drinking water										
District			Medium		No Response					
Balangir	19	36.8	57.9	5.3	0.0					
Kalahandi	32	34.4	53.1	9.4	3.1					
Koraput	21	42.9	52.4	4.8	0.0					
Malkangiri	21	38.1	57.1	4.8	0.0					
Nabrangpur	21	47.6	42.9	9.5	0.0					
Nuapada	14	57.1	35.7	7.1	0.0					
Rayagada	20	55.0	35.0	10.0	0.0					
Subarnapur	16	43.8	50.0	6.3	0.0					
Total	164	43.3	48.8	7.3	0.6					

## Opinion of PRI representatives on Health Education/ IEC activities on Water and Sanitation

Table: 115 Opinion of PRI representatives on Health Education/ IEC activities on Water and Sanitation									
District	Number Regular Occasional R				No				
					Response				
Balangir	19	15.8	42.1	36.8	5.3				
Kalahandi	32	15.6	68.8	12.5	3.1				
Koraput	21	19.0	61.9	9.5	9.5				
Malkangiri	21	23.8	57.1	14.3	4.8				
Nabrangpur	21	28.6	52.4	14.3	4.8				
Nuapada	14	21.4	64.3	7.1	0.0				
Rayagada	20	25.0	55.0	15.0	5.0				
Subarnapur	16	25.0	56.3	12.5	6.3				
Total	164	21.3	57.9	15.2	4.9				

Table No-115 presents the opinion of PRI representatives on the issue of Health Education/ IEC activities on Water and Sanitation in KBK region. In this region, 21.3 percent PRI representatives has opined such activities take place regularly, 57.9 percent has opined occasionally and only 15.2 percent has opined 'rarely'. Among KBK matters. districts, Nabarangpur reports highest (28.6%) and Kalahandi district reports lowest (15.6%) percentage has 'regularly'. Similarly, Maximum (68.8%) percentage has viewed occasionally about Health Education/ IEC activities on Water and Sanitation in Kalahandi district in contrast to the

lowest (42.1%) has viewed in Balangir district. Similarly, Maximum (36.8%) has viewed 'rarely' about Health Education/ IEC activities on Water and Sanitation in Balangir district in contrast to the lowest (7.1%) percentage reported in Nuapada district. The percentages of non-respondents are highest (9.5%) in Koraput district in contrast to the lowest (0.0%) in Nuapada districts on this issue.

### Opinion of PRI representatives on Operation and maintenance of Tube wells

Table No. 116 presents the opinion of PRI representatives operation and on maintenance of Tube wells in KBK region. In this region, 23.2 percent PRI representatives are very satisfied, 64.0 percent are just satisfied and only 10.4 percent are not satisfied about operation and maintenance of Tube wells. Among KBK districts. Nuapada reports district highest (35.7%)and Kalahandi district reports lowest (15.6%) percentage in very satisfied category. Similarly, Maximum (78.1%)

Similarly, Maximum (78.1%) are satisfied about operation and maintenance of Tube

District	Number	Very	Satisfactory	Not	No
		Satisfactory		Satisfactory	Response
Balangir	19	21.1	63.2	10.5	5.3
Kalahandi	32	15.6	78.1	6.3	0.0
Koraput	21	19.0	71.4	9.5	0.0
Malkangiri	21	23.8	66.7	9.5	0.0
Nabrangpur	21	28.6	52.4	14.3	4.8
Nuapada	14	35.7	57.1	7.1	0.0
Rayagada	20	25.0	55.0	15.0	5.0
Subarnapur	16	25.0	56.3	12.5	6.3
Total	164	23.2	64.0	10.4	2.4

wells in Kalahandi district in contrast to the lowest (52.4%) satisfy reported from Nabarangpur district. Similarly, Maximum (15.0%) are not satisfied about operation and maintenance of Tube wells in Rayagada district in contrast to the lowest (6.3%) percentage not satisfied reported in Kalahandi district. The percentage of non-respondents in Balangir, Nabarangpur, Rayagada and Subarnapur districts are 5.3 percent, 4.8 percent, 5.0 percent and 6.3 percent respectively to the above question.

### Awareness levels of PRI representatives on Total sanitation Campaign

Table: 117 Awareness levels of PRI representatives on Total sanitation Campaign										
District	Number			Not Aware	No Response					
Balangir	19	21.1	31.6	42.1	5.3					
Kalahandi	32	15.6	37.5	40.6	6.3					
Koraput	21	19.0	42.9	38.1	0.0					
Malkangiri	21	23.8	28.6	47.6	0.0					
Nabrangpur	21	19.0	28.6	42.9	9.5					
Nuapada	14	21.4	42.9	35.7	0.0					
Rayagada	20	15.0	30.0	50.0	5.0					
Subarnapur	16	18.8	31.3	43.8	6.3					
Total	164	18.9	34.1	42.7	4.3					

Table No 117 presents data on awareness levels of PRI representatives on Total sanitation Campaign in KBK region. It is very marginal compare to other programmes in this region. For instance, 18.9 percent PRI representatives are highly aware, 34.1% are aware and huge 42.7 percent are not aware about Total sanitation Campaign. Among KBK districts, Malkanagiri district reports highest (23.8%) and Rayagada district reports lowest (15.0%) percentage in highly aware category. Similarly, maximum (42.9%) are aware about Total sanitation Campaign in both Koraput and Nuapada district in contrast to the lowest (28.6%) aware reported from both Malkanagiri and Nabrangpur district. Maximum (50.0%) are not aware about Total sanitation Campaign in Rayagada district in contrast to the lowest (35.7%) not aware reported from Nuapada district. The percentage of non-respondents is highest (9.5%) in Nabarangpur district about Total Sanitation Campaign issue.

### Awareness levels of PRI on Nirmal Gram Panchayat Jojana

Table No 118 presents data on the awareness levels of PRI representatives on Nirmal Grampanchayat Campaign. It seems the awareness level is much lower than expected.

For instance, 14.0 percent PRI representatives are highly aware, 31.1% are aware and huge 48.2 percent are not aware about Nirmal Grampanchayat Scheme.

Among KBK districts, Nuapada district reports highest (21.4%) and Nabrangpur district reports lowest (9.5%) percentage in highly aware category.

Table: 118 Awareness levels of PRI on Nirmal Grampanchayat Jojana										
District	Number	Highly Aware	Aware	Not Aware	No Response					
Balangir	19	15.8	36.8	42.1	5.3					
Kalahandi	32	12.5	40.6	40.6	6.3					
Koraput	21	19.0	33.3	38.1	9.5					
Malkangiri	21	14.3	23.8	57.1	4.8					
Nabrangpur	21	9.5	28.6	57.1	4.8					
Nuapada	14	21.4	28.6	42.9	7.1					
Rayagada	20	10.0	25.0	60.0	10.0					
Subarnapur	16	12.5	25.0	50.0	12.5					
Total	164	14.0	31.1	48.2	7.3					

Similarly, maximum (40.6%) are aware about Nirmal Grampanchayat Jojana in Kalahandi district in contrast to the lowest (23.8%) aware reported from Malkanagiri district. Similarly, Maximum (60.0%) are not aware about Nirmal Grampanchayat Jojana in Rayagada district in contrast to the lowest (38.1%) not aware reported from Koraput district. The percentage of non-respondents is highest (12.5%) in Subarnapurpur district and lowest (5.3%) is reported from Balangir district about Nirmal Grampanchayat scheme.

### Awareness levels of PRI on components Nirmal Gram Panchayat Yojana

Table: 119 Awareness levels of PRI on components Nirmal Gram Panchayat Yojana										
District	Number	Baseline survey	IEC inputs	Village/GP/Bloc k WATSAN Committee	Rural Sanitary Mart	Awards and Incentives				
Balangir	19	15.8	21.1	52.6	5.3	5.3				
Kalahandi	32	18.8	25.0	46.9	6.3	3.1				
Koraput	21	23.8	28.6	42.9	4.8	4.8				
Malkangiri	21	19.0	28.6	47.6	4.8	0.0				
Nabrangpur	21	19.0	28.6	42.9	4.8	4.8				
Nuapada	14	21.4	35.7	35.7	7.1	0.0				
Rayagada	20	20.0	30.0	40.0	5.0	5.0				
Subarnapur	16	12.5	18.8	56.3	6.3	6.3				
Total	164	18.9	26.8	45.7	5.5	3.7				

Table No. 119 presents data on awareness levels of PRI representatives components Nirmal Gram Panchayat Yojana. It is found that awareness level is very low. For instance, only 18.9 percent PRI representatives are aware about Baseline survey, 26.8 percent are aware about IEC inputs, 45.7 percent are aware about Village/GP/Block WATSAN Committee and only 5.5 percent are aware about Rural Sanitary Mart, which are the major components of Nirmal Gram Panchayat Yojana.

Among KBK districts, Koraput district reports highest (23.8%) and Subarnapur district reports lowest (12.5%) percentage are aware about the Baseline survey components. Similarly, maximum (35.7%) are aware about the IEC inputs components of Nirmal Gram Panchayat Yojana in Nuapada district in contrast to the lowest (18.8%) aware reported from Subarnapur district. Similarly, Maximum (56.3%) are aware about village/GP/Block WATSAN Committee components of Nirmal Gram Panchayat Yojana in Subarnapur district in contrast to the lowest (35.7%) aware reported from Nuapada district. The percentage of non-respondents is highest (6.3%) in Subarnapurpur district and lowest (0.0%) is reported from both Malkanagiri and Nuapada district about the components of Nirmal Gram Panchayat Yojana.

#### Awareness levels of PRI on official incentives being given for construction of IHHL

Table 120 presents the awareness levels of PRI representatives on official incentives being given for construction of IHHL. The awareness about this is very good. In this region, 43.3 percent PRI representatives are highly aware, 48.8 percent are aware and only 7.3 percent are not aware about official incentives being given for construction of IHHL. Among KBK districts, Nuapada district reports highest (57.1%) and Kalahandi district reports lowest (34.4%) percentage in highly aware category. Maximum (57.9%) are aware about official incentives being given for construction of IHHL in Balangir district in contrast to the lowest (35.0%) aware reported from Rayagada district. Similarly, Maximum (10.0%) are not aware about official incentives being given for

Table: 120 Awareness levels of PRI on official incentives being given for construction of IHHL								
District	Number	Highly Aware	Aware	Not Aware	No Response			
Balangir	19	36.8	57.9	5.3	0.0			
Kalahandi	32	34.4	53.1	9.4	3.1			
Koraput	21	42.9	52.4	4.8	0.0			
Malkangiri	21	38.1	57.1	4.8	0.0			
Nabrangpur	21	47.6	42.9	9.5	0.0			
Nuapada	14	57.1	35.7	7.1	0.0			
Rayagada	20	55.0	35.0	10.0	0.0			
Subarnapur	16	43.8	50.0	6.3	0.0			
Total	164	43.3	48.8	7.3	0.6			

construction of IHHL in Rayagada district in contrast to the lowest (4.8%) not aware reported from both Koraput and Malkanagiri district. The percentage of non-respondents is only found in Kalahandi district i.e., 3.1 percent.

### Awareness levels of PRI on official grants being given for School Sanitation

Table: 121 Awareness levels of PRI on official grants being given for School Sanitation

being given for School Sanitation									
District	Number	Highly Aware	Aware	Not Aware	No Response				
Balangir	19	31.6	63.2	5.3	0.0				
Kalahandi	32	28.1	59.4	12.5	0.0				
Koraput	21	33.3	57.1	9.5	0.0				
Malkangiri	21	38.1	57.1	4.8	0.0				
Nabrangpur	21	23.8	57.1	9.5	9.5				
Nuapada	14	57.1	35.7	7.1	0.0				
Rayagada	20	30.0	60.0	10.0	0.0				
Subarnapur	16	31.3	50.0	12.5	6.3				
Total	164	32.9	56.1	9.1	1.8				

Table No. 121 presents the awareness levels of PRI representatives on official grants being given for School Sanitation in KBK region, It is also very good.

In this region, 32.9 percent PRI representatives are highly aware, 56.1 percent are aware and only 9.1 percent are not aware about official grants being given for School Sanitation.

Among KBK districts, Nuapada district reports highest (57.1%) and Nabrangpur district reports lowest (23.8%) percentage in highly aware category. Similarly, maximum (63.2%) are aware about official grants being given for School Sanitation in Balangir district in contrast to the lowest (35.7%) aware reported from Nuapada district.

Similarly, Maximum (12.5%) are not aware about official grants being given for School Sanitation in both Kalahandi and Subarnapur district in contrast to the lowest (4.8%) not aware reported from Malkanagiri district. The percentage of non-respondents is only found in Nabrangpur (9.5%)and Subarnapur (6.3%) district about official grants being given for School Sanitation question.

### Awareness levels of PRI on official grants being given for AWC Sanitation

Table No. 122 presents the awareness levels of PRI representatives on official grants being given for Aganwadi Centre's (AWC) Sanitation in KBK region. It is also very good.

In this region, 30.5 percent PRI representatives are highly aware, 57.9 percent are aware and only 9.8 percent are not aware about official grants being given for AWC Sanitation.

Among KBK districts, Nuapada district reports highest (50.0%) and both Rayagada and Subarnapur district report lowest (25.0 %) percentage in highly aware category. Similarly, maximum (65.0%) are aware about official grants being given for AWC Sanitation in Rayagada district in contrast to the lowest (42.9%) aware reported from Nuapada district.

Table: 122 Awareness levels of PRI on official grants being given for AWC Sanitation									
District	Number	Highly Aware	Aware		No Response				
Balangir	19	31.6	63.2	5.3	0.0				
Kalahandi	32	28.1	59.4	12.5	0.0				
Koraput	21	33.3	57.1	9.5	0.0				
Malkangiri	21	28.6	61.9	4.8	4.8				
Nabrangpur	21	28.6	52.4	14.3	4.8				
Nuapada	14	50.0	42.9	7.1	0.0				
Rayagada	20	25.0	65.0	10.0	0.0				
Subarnapur	16	25.0	56.3	12.5	6.3				
Total	164	30.5	57.9	9.8	1.8				

Similarly, Maximum (14.3%) are not aware about official grants being given for AWC Sanitation in Nabrangpur district in contrast to the lowest (4.8%) percentage not aware reported from Malkanagiri district. The percentage of non-respondents in Malkanagiri, Nabrangpur and Subarnapur districts is 4.8 percent, 4.8 percent and 6.3 percent respectively on the above question.

### Awareness levels of PRI on official grants being given under Swajaldhara scheme

Table: 123 Awareness levels of PRI on official grants being given under Swajaldhara scheme

bein	being given under Swajaldhara scheme									
District	Number	Highly Aware	Aware	Not Aware	No Response					
Balangir	19	15.8	52.6	31.6	0.0					
Kalahandi	32	21.9	34.4	37.5	6.3					
Koraput	21	19.0	42.9	38.1	0.0					
Malkangiri	21	23.8	33.3	42.9	0.0					
Nabrangpur	21	19.0	38.1	38.1	4.8					
Nuapada	14	21.4	35.7	42.9	0.0					
Rayagada	20	20.0	30.0	45.0	5.0					
Subarnapur	16	12.5	31.3	50.0	6.3					
Total	164	19.5	37.2	40.2	3.0					

Table No. 123 presents the awareness levels of PRI representatives on official grants being given under Swajaldhara scheme. In KBK region it is not so good.

In this region, only 19.5 percent PRI representatives are highly aware, 37.2 percent are aware and huge 40.2 percent are not aware about official grants being given under Swajaldhara Scheme.

Among KBK districts, Malkanagiri district reports highest (23.8%) and Subarnapur district reports lowest (12.5 %) percentage in highly aware category. Similarly, maximum (52.6%) are aware about official grants being given under Swajaldhara Scheme in Balangir district in contrast to the lowest (30.0%) aware reported from Rayagada district.

Similarly, Maximum (50.0%) are not aware about official grants being given under Swajaladhara Scheme in Subarnapur district in contrast to the lowest (31.6%) percentage not aware reported from Balangir district. The percentage of non-respondents is highest (6.3%) in Subarnapur district about official grants being given under Swajaladhara Scheme.

### Opinion of PRI representatives on quality of toilets being constructed under TSC

Table No 124 presents data on the opinion of PRI representatives on quality of toilets being constructed under TSC. It seems they are not very happy with the quality.

In this region, only 22.6 percent PRI representatives opine that quality is good, 43.3 percent say average and 30.5 say poor.

Among KBK districts, Balangir district reports highest (31.6%) and Subarnapur district reports lowest (12.5 %) percentage in good category. Similarly, maximum (56.3%) call it average quality in Kalahandi district in contrast to the lowest (28.6%) reported from Nabrangpur district.

Table: 124 Opinion of PRI representatives on quality of toilets being constructed under TSC									
District	Number	Good	Average	Poor	No Response				
Balangir	19	31.6	52.6	15.8	0.0				
Kalahandi	32	21.9	56.3	21.9	0.0				
Koraput	21	23.8	42.9	28.6	4.8				
Malkangiri	21	19.0	38.1	33.3	9.5				
Nabrangpur	21	19.0	28.6	42.9	9.5				
Nuapada	14	35.7	42.9	21.4	0.0				
Rayagada	20	20.0	40.0	40.0	0.0				
Subarnapur	16	12.5	37.5	43.8	6.3				
Total	164	22.6	43.3	30.5	3.7				

Similarly, Maximum (43.8%) call it poor quality in Subarnapur district in contrast to the lowest (15.8%) percentage reported from Balangir district. The percentage of non-respondents is highest (9.5%) in both Malkanagiri and Nabrangpur district. This is a major concern since poor and average quality will not sustain the structures for long causing a lapse to open air defecation.

## Experience of PRI representatives in organizing/ attending any meeting to advance TSC at ZP/PS/GP levels

Table: 125 Experience of PRI representatives in organizing/ attending any meeting to advance TSC at ZP/PS/GP levels

ZP/PS/GP levels									
District	Number	Number Frequent Oc		Rare	No				
					Response				
Balangir	19	21.1	63.2	10.5	5.3				
Kalahandi	32	15.6	46.9	34.4	3.1				
Koraput	21	14.3	38.1	42.9	4.8				
Malkangiri	21	19.0	33.3	42.9	4.8				
Nabrangpur	21	14.3	23.8	52.4	9.5				
Nuapada	14	14.3	50.0	28.6	7.1				
Rayagada	20	15.0	30.0	50.0	5.0				
Subarnapur	16	12.5	25.0	56.3	6.3				
Total	164	15.9	39.0	39.6	5.5				

Table No 125 presents data on the experience of PRI representatives in organizing/ attending any meeting to advance TSC at ZP/PS/GP levels. The experience reported is marginal. In this region, 15.9 percent PRI representatives are organizing/ attending such meetings frequently. 39.0 percent report occasionally and 39.6 percent admit rarely. Among KBK districts, Balangir reports highest (21.1%) and Subarnapur lowest district reports (12.5%)percentage in organizing/ attending in frequently category. Maximum (63.2%) occasionally in organizing/ say attending any meeting to advance TSC at ZP/PS/GP levels in Balangir district in contrast to the lowest (23.8%) occasionally reported from Nabrangpur district.

Similarly, Maximum (56.3%) are rarely organizing/ attending any meeting to advance TSC at ZP/PS/GP levels in Subarnapur district in contrast to the lowest (10.5%) rarely reported in Balangir district. The percentages of non-respondents are highest (9.5%) percentage in Nabrangpur district in contrast to the lowest (3.1%) percentage in Kalahandi district.

## Views of PRI representatives on constraints being faced to advance TSC in respective areas

Table No 126 presents data the views of PRI representatives on constraints being faced to advance TSC in respective areas. In this region, 22.0 percent PRI representatives has viewed faulty policy on subsidy, 37.2 percent has viewed "ignorance" huge 40.9 percent has viewed the habit of open air defecation as constraints being faced to advance TSC in respective areas. Among KBK districts, Balangir reports highest and Subarnapur (31.6%)district reports lowest

Table: 126 Views of PRI representatives on constraints being faced to advance TSC in respective areas										
District	Number	Faulty policy on subsidy	Ignorance	Habit of open defecation	No Response					
Balangir	19	31.6	47.4	21.1	0.0					
Kalahandi	32	15.6	46.9	37.5	0.0					
Koraput	21	23.8	42.9	33.3	0.0					
Malkangiri	21	23.8	33.3	42.9	0.0					
Nabrangpur	21	23.8	23.8	52.4	0.0					
Nuapada	14	21.4	42.9	35.7	0.0					
Rayagada	20	20.0	30.0	50.0	0.0					
Subarnapur	16	18.8	25.0	56.3	0.0					
Total	164	22.0	37.2	40.9	0.0					

(15.6%) percentage for 'faulty policy on subsidy'. Similarly, Maximum (47.4%) has viewed 'ignorance' as the constraints being faced to advance TSC in respective areas in Balangir district in contrast to the lowest (23.8%) percentage reported from Nabrangpur district. Maximum (56.3%) has viewed the habit of open air defecation as the constraint in Subarnapur district in contrast to the lowest (21.1%) percentage reported in Balangir district.

### Awareness levels of PRI representatives on funds being allotted for rural water and sanitation activities under RLTAP

funds being allotted for rural water and sanitation activities under RLTAP NO Highly District Aware Not No Aware Aware Response Balangir 19 31.6 52.6 15.8 0.0 32 21.9 56.3 21.9 0.0 Kalahandi Koraput 21 23.8 42.9 28.6 4.8

Table: 127 Awareness levels of PRI representatives on

Malkangiri 21 19.0 33.3 9.5 38.1 Nabrangpur 21 19.0 28.6 42.9 9.5 14 35.7 42.9 21.4 0.0 Nuapada Rayagada 20 20.0 40.0 40.0 0.0

37.5

43.3

43.8

30.5

Table No. 127 presents data on the awareness levels of PRI representatives on funds being allotted for rural water and sanitation activities under RLTAP in KBK region. In this region, only 22.6 percent PRI representatives are highly aware, 43.3 percent are aware and huge 30.5 percent are not aware about the funds being allotted for rural water and sanitation activities under RLTAP. Among KBK districts. Nuapada district reports highest (35.7%) and Subarnapur district reports lowest (12.5 %) percentage in highly aware category. Maximum (56.3%) are aware about funds being allotted for rural water and sanitation activities under RLTAP in Kalahandi district in contrast to the lowest (28.6%) aware reported from Nabarangpur district. Similarly, maximum (43.8%) are not aware about funds being allotted for rural

water and sanitation activities under RLTAP in Subarnapur district in contrast to the lowest (15.8%) percentage not aware reported from Balangir district. The percentage of non-respondents is highest (9.5%) in both Malkanagiri and Nabarangpur district about funds being allotted for rural water and sanitation activities under RLTAP.

6.3

3.7

### Suggestions of PRI representatives on achieving Nirmal Gram Panchayat

Table No 128 presents data on the various suggestions of PRI representatives on achieving the goal of Nirmal Gram Panchayat in KBK region. 37.2 percent PRI representatives has suggested Free toilet to all poor households, 40.9 percent has suggested the regular IEC/ Health Education activities and 21.3 percent has 'Inter-sectoral suggested coordination' to achieve the goal Nirmal Gram Panchayat. Among KBK districts, Koraput, Nabrangpur and also Nuapada report highest (42.9%)Subarnapur district reports lowest (31.3%) percentage has suggested 'Free toilet to all poor households'. Maximum (52.6%)

Subarnapur

**Total** 

16

164

12.5

22.6

Table: 128 Suggestions of PRI representatives on achieving the goal of Nirmal Gram Panchayat										
District	NO.	Free toilet to all poor households	Regular IEC/ Health Education activities	Inter - sectoral coordination	Monitoring / Social Audit					
Balangir	19	36.8	52.6	10.5	0.0					
Kalahandi	32	34.4	40.6	21.9	3.1					
Koraput	21	42.9	42.9	14.3	0.0					
Malkangiri	21	33.3	38.1	28.6	0.0					
Nabrangpur	21	42.9	23.8	33.3	0.0					
Nuapada	14	42.9	35.7	21.4	0.0					
Rayagada	20	35.0	45.0	20.0	0.0					
Subarnapur	16	31.3	50.0	18.8	0.0					
Total	164	37.2	40.9	21.3	0.6					

has suggested regular IEC/ Health Education activities on achieving the goal of Nirmal Gram Panchayat in Balangir district in contrast to the lowest (23.8%) percentage reported from Nabrangpur district. Similarly, Maximum (33.3%) has suggested 'Inter-sectoral coordination' for achieving the goal of Nirmal Gram Panchayat in Nabrangour district in contrast to the lowest (10.5%) percentage reported from Balangir district. The percentage of non-respondents is only found in Kalahandi district i.e., 3.1 percent.

### VIEWS OF GOVERNMENT OFFICIALS

Table: 129 Views of officials on the possibility to ensure universal access

District	Number	Certainly possible	_	Not Possible	No Response
Balangir	29	13.8	75.9	10.3	0.0
Kalahandi	59	18.6	72.9	8.5	0.0
Koraput	24	37.5	58.3	4.2	0.0
Malkangiri	31	22.6	61.3	16.1	0.0
Nabrangpur	30	26.7	63.3	10.0	0.0
Nuapada	63	23.8	74.6	1.6	0.0
Rayagada	32	28.1	62.5	9.4	0.0
Subarnapur	25	32.0	64.0	4.0	0.0
Total	293	24.2	68.3	7.5	0.0

Table No 129 shows the views of officials on the possibility to ensure universal access to safe drinking water and sanitation facilities in KBK region. 24.2% officials viewed 'certainly possible', 68.3% viewed "may be possible" and 7.5 percent as 'not possible'. In Koraput district highest 37.5% and Balangir lowest 13.8% officials are in "certainly possible" category. Highest 75.9% in Bolangir and lowest 58.3% in Koraput district viewed 'may be possible'. Similarly, highest 16.1% in Malkanagiri and lowest 1.6% in Nuapada district viewed 'not possible'. None was in "No response category.

### Table:130 Views of officials on priority attached to Water and Sanitation needs

The above table shows the Views of officials on priority attached to Water and Sanitation needs under RLTAP in KBK region. 19.5% officials strongly agree, 73.4% agree and 7.2% are in disagree category. Koraput district reports highest 37.5% and Balangir district lowest 13.8 % in strongly agree category. Similarly Kalahandi reports highest 81.4% and Koraput lowest (58.3%) in the "Agree category" Likewise Malkanagiri reports highest 16.1% and Koraput lowest 4.2% in "Disagree category".

	Number	Strongly	Agree	Disagree	No
District		agree			Response
Balangir	29	13.8	79.3	6.9	0.0
Kalahandi	59	15.3	81.4	3.4	0.0
Koraput	24	37.5	58.3	4.2	0.0
Malkangiri	31	16.1	67.7	16.1	0.0
Nabrangpur	30	20.0	70.0	10.0	0.0
Nuapada	63	17.5	77.8	4.8	0.0
Rayagada	32	25.0	65.6	9.4	0.0
Subarnapur	25	20.0	72.0	8.0	0.0
Total	293	19.5	73.4	7.2	0.0

## Table: 131 Views of officials on timeframe to achieve Nirmal Gram Panchayat Goal

District	Num	3	5	7	Never	NR
	ber	Years	Years	Years		
Balangir	29	62.1	17.2	17.2	3.4	0.0
Kalahandi	59	71.2	10.2	8.5	10.2	0.0
Koraput	24	75.0	20.8	4.2	0.0	0.0
Malkangiri	31	45.2	29.0	16.1	9.7	0.0
Nabrangpur	30	63.3	30.0	6.7	0.0	0.0
Nuapada	63	60.3	23.8	9.5	6.3	0.0
Rayagada	32	53.1	31.3	9.4	6.3	0.0
Subarnapur	25	56.0	32.0	12.0	0.0	0.0
Total	293	61.4	22.9	10.2	5.5	0.0

Table No 131 shows the Views of officials on time frame to achieve Nirmal Gram Panchayat Goal in KBK region. 61.4% officials viewed '3 years', 22.9% viewed '5 years', 10.2% viewed '7 years' and only 5.5% viewed 'never'. Koraput district reports highest 75.0% and Rayagada district the lowest 53.1% in '3 years' category. Highest 32.0% in Subarnapur district and lowest 10.2% in Kalahandi district say 5 years. Highest 17.2% in Bolangir district and lowest 4.2% in Koraput district say 7 years. Interestingly, 10.2% in Kalahandi, 9.7% in Malkangiri, 6.3% in Nuapada and Rayagada and 3.4 % in Balangir say never. None say never in Koraput. Nabarangapur and subarnapur districts.

Table: 132 Views of officials on progress achieved towards Nirmal Gram Panchayat

Table No 132 shows the views of officials on progress achieved towards Nirmal Gram Panchayat Goal in KBK region. Out of total 293 respondents 29.0% are "very satisfied"; 62.5% are "satisfied" and 8.5% are "not satisfied". Subarnapur reports highest 44.0% and Balangir district reports lowest 13.8% in very satisfactory category. Highest 16.1% in Malkangiri district and lowest

	Number	Very Satis	Satis	Not Satis	No
District		factory	factory	actory	Response
Balangir	29	13.8	79.3	6.9	0.0
Kalahandi	59	15.3	81.4	3.4	0.0
Koraput	24	37.5	58.3	4.2	0.0
Malkangiri	31	16.1	67.7	16.1	0.0
Nabrangpur	30	20.0	70.0	10.0	0.0
Nuapada	63	17.5	77.8	4.8	0.0
Rayagada	32	25.0	65.6	9.4	0.0
Subarnapur	25	20.0	72.0	8.0	0.0
Total	293	19.5	73.4	7.2	0.0

<sup>3.4%</sup> in Bolangir district comes under "Not satisfactory" category.

Table: 133 Views of officials on coordination among departments/ agencies

	Number		Adequate	Not	No
District		Adequate		Adequate	Response
Balangir	29	13.8	79.3	6.9	0.0
Kalahandi	59	15.3	78.0	6.8	0.0
Koraput	24	37.5	58.3	4.2	0.0
Malkangiri	31	16.1	67.7	16.1	0.0
Nabrangpur	30	20.0	70.0	10.0	0.0
Nuapada	63	19.0	79.4	1.6	0.0
Rayagada	32	25.0	65.6	9.4	0.0
Subarnapur	25	20.0	72.0	8.0	0.0
Total	293	19.8	73.0	7.2	0.0

Table No 133 shows the views of officials on team spirit and coordination among departments/ agencies. 19.8% officials viewed the coordination highly adequate, 73.0% said "Adequate" and only 7.2% said not adequate". Koraput district reports highest 37.5% and Balangir district reports lowest 13.8 % in "Highly Adequate" category. 16.1% in Malkanagiri district and lowest 1.6% in

Nuapada district say "Not Adequate"

Table: 134 Views of officials on Cooperation received from PRIs

	Number	Highly	Adequate	Not	No
District		Adequate		Adequate	Response
Balangir	29	17.2	75.9	6.9	0.0
Kalahandi	59	16.9	76.3	6.8	0.0
Koraput	24	33.3	62.5	4.2	0.0
Malkangiri	31	16.1	74.2	9.7	0.0
Nabrangpur	30	20.0	73.3	6.7	0.0
Nuapada	63	15.9	82.5	1.6	0.0
Rayagada	32	15.6	75.0	9.4	0.0
Subarnapur	25	20.0	76.0	4.0	0.0
Total	293	18.4	75.8	5.8	0.0

Table No 134 shows the Views of officials on Cooperation received from PRIs in implementing water and sanitation activities in KBK region. 18.4% officials viewed highly adequate, 75.8% "adequate" and only 5.8% "not adequate". Koraput district reports highest 33.3% Rayagada district reports lowest 15.6 % in "Highly Adequate" category Highest 82.5%

Nuapada district and lowest 62.5% in Koraput district viewed as "Adequate". Again highest 9.7% in Malkangiri district and lowest 1.6% in Nuaguda district report as "Not Adequate".

Table: 135 Views of officials on Cooperation received from SHGs /CBOs/NGOs

District	Number	Highly Adequate	Adequate	Not Adequate	No Response
Balangir	29	17.2	6.9	75.9	0.0
Kalahandi	59	13.6	10.2	76.3	0.0
Koraput	24	33.3	4.2	62.5	0.0
Malkangiri	31	16.1	9.7	74.2	0.0
Nabrangpur	30	20.0	6.7	73.3	0.0
Nuapada	63	12.7	4.8	82.5	0.0
Rayagada	32	15.6	9.4	75.0	0.0
Subarnapur	25	20.0	4.0	76.0	0.0
Total	293	17.1	7.2	75.8	0.0

Table No 135 presents the Views of officials on Cooperation received SHGs/CBOs/NGOs from implementing water and sanitation activities in KBK region. 17.1 percent officials has viewed the cooperation as 'highly adequate', only 7.2 percent said adequate and huge 75.8 percent said 'not adequate'. Among KBK districts, Koraput district reports highest (33.3%) and Nuapada district reports lowest (12.7 %) percentage in 'highly adequate' views category.

Similarly, maximum (10.2%) has viewed 'adequate' in Kalahandi district in contrast to the lowest (4.0%) reported from Subarnapur district. Maximum 82.5 % said 'not adequate' in Nuapada district in contrast to the lowest (62.5%) percentage reported from Koraput district.

Table: 136 Views of officials on adequacy of resources

Table No 136 presents the Views of officials on adequacy of resources available to address water and sanitation needs in KBK region. Only 9.2 percent officials have viewed 'highly adequate', huge 70.6 percent said adequate and only 8.2 percent said 'not adequate'. Among KBK districts, Balangir reports highest (17.2%) and Koraput district reports lowest (4.2 %) percentage in 'highly adequate' views category. Similarly,

	Number	Highly	Adequate	Not	No
District		Adequate	-	Adequate	Response
Balangir	29	17.2	75.9	6.9	0.0
Kalahandi	59	10.2	76.3	10.2	0.0
Koraput	24	4.2	62.5	4.2	0.0
Malkangiri	31	9.7	74.2	9.7	0.0
Nabrangpur	30	6.7	73.3	6.7	0.0
Nuapada	63	4.8	76.2	4.8	0.0
Rayagada	32	9.4	56.3	9.4	0.0
Subarnapur	25	16.0	56.0	16.0	0.0
Total	293	9.2	70.6	8.2	0.0

maximum (76.3%) has viewed 'adequate' in Kalahandi district in contrast to the lowest (56.0%) from Subarnapur district. Maximum 16 % said 'not adequate' in Subarnapur district in contrast to the lowest (4.2%) percentage reported from Koraput district.

Table: 137 Views of officials on timely release of allotted funds

District	Number	Always released in Time	Sometimes delayed	,	No Response
Balangir	29	75.9	17.2	6.9	0.0
Kalahandi	59	76.3	20.3	3.4	0.0
Koraput	24	62.5	20.8	16.7	0.0
Malkangiri	31	67.7	16.1	16.1	0.0
Nabrangpur	30	60.0	13.3	26.7	0.0
Nuapada	63	65.1	19.0	15.9	0.0
Rayagada	32	50.0	25.0	25.0	0.0
Subarnapur	25	48.0	32.0	20.0	0.0
Total	293	64.8	20.1	15.0	0.0

Table No 137 presents the Views of officials on timely release of allotted funds for water and sanitation activities in KBK region. 64.8 percent officials has viewed 'always released in time', only 20.1 percent said 'sometimes delayed' and only 15.0 percent said 'always delayed'. Among districts. Kalahandi KBK district reports highest (76.3%) and Subarnapur district reports lowest (48.0%) percentage in 'always released in time' views category. Similarly. maximum (32.0%)viewed 'sometimes delayed' Subarnapur district and 26.7 % saying 'alwavs delayed' in Nabrangpur district.

Table: 138 Views of officials on planning at Village/ GP/Block and District levels

Table No 138 presents the Views on planning at village/GP/Block and district levels to address water and sanitation needs in KBK region. 15.0 percent officials have viewed very effective, 64.8 percent said effective and only 20.1percent said not effective. Among KBK districts, Nabrangpur district reports highest (26.7%) and Kalahandi district reports lowest (3.4%) percentage of views effective' 'verv category. Maximum 32 % said 'not effective' in Subarnapur district in contrast to the lowest (13.3%) percentage reported from Nabrangpur district.

District	Number	Very Effective	Effective	Not Effective	No Response
Balangir	29	6.9	75.9	17.2	0.0
Kalahandi	59	3.4	76.3	20.3	0.0
Koraput	24	16.7	62.5	20.8	0.0
Malkangiri	31	16.1	67.7	16.1	0.0
Nabrangpur	30	26.7	60.0	13.3	0.0
Nuapada	63	15.9	65.1	19.0	0.0
Rayagada	32	25.0	50.0	25.0	0.0
Subarnapur	25	20.0	48.0	32.0	0.0
Total	293	15.0	64.8	20.1	0.0

Table No 139 Views of officials on their participation in the Village Micro Planning

District	Number	Very Often	Occasional	Rare	No Response
Balangir	29	6.9	75.9	17.2	0.0
Kalahandi	59	3.4	81.4	15.3	0.0
Koraput	24	16.7	62.5	20.8	0.0
Malkangiri	31	16.1	61.3	22.6	0.0
Nabrangpur	30	26.7	60.0	13.3	0.0
Nuapada	63	19.0	61.9	19.0	0.0
Rayagada	32	25.0	46.9	28.1	0.0
Subarnapur	25	20.0	40.0	40.0	0.0
Total	293	15.7	63.5	20.8	0.0

Table No 139 presents the views of officials on participation in the Village Micro Planning Exercise under Total sanitation Campaign (TSC) in KBK region. 15.7 percent officials say they participate "very often', 63.5 percent mention 'occasionally' and 20.8 percent admit rarely participating in the Village Micro Planning Exercise under TSC programme. Among KBK districts. Nabrangour reports highest (26.7%) and Kalahandi district reports lowest (3.4%) percentage in 'very often' participating category. Similarly, 81.4% say occasionally in Kalahandi district in contrast to (40.0%) reported from Subarnapur district.

Table No 140 Participation of officials in activities for demand generation

Table No 140 shows the participation level of officials in the activities for demand generation at community level for quality water and sanitation services in KBK region. 14.7 percent officials report participation as "very often', 45.4 percent say 'occasionally' and 39.9 percent admit they rarely participate in the activities for demand generation at community level for quality water and sanitation services. Among **KBK** districts. again Nabrangpur reports highest (26.7%) and Kalahandi district reports lowest (3.4%) percentage in 'very often'.

District	Number	Very Often	Occasional	Rare	No Response
Balangir	29	6.9	58.6	34.5	0.0
Kalahandi	59	3.4	40.7	55.9	0.0
Koraput	24	16.7	37.5	45.8	0.0
Malkangiri	31	16.1	38.7	45.2	0.0
Nabrangpur	30	26.7	50.0	23.3	0.0
Nuapada	63	14.3	55.6	30.2	0.0
Rayagada	32	25.0	37.5	37.5	0.0
Subarnapur	25	20.0	36.0	44.0	0.0
Total	293	14.7	45.4	39.9	0.0

Table No 141 Views of Officials on constraints being faced to advance TSC

Table: 141 Views of Officials on constraints being faced to advance TSC in respective areas

advance TSC in respective areas									
District	Number	Faulty policy on subsidy	Ignorance	Habit of open air defecation	No Response				
Balangir	29	6.9	58.6	34.5	0.0				
Kalahandi	59	3.4	40.7	55.9	0.0				
Koraput	24	16.7	37.5	45.8	0.0				
Malkangiri	31	12.9	41.9	45.2	0.0				
Nabrangpur	30	16.7	63.3	20.0	0.0				
Nuapada	63	14.3	50.8	34.9	0.0				
Rayagada	32	25.0	25.0	50.0	0.0				
Subarnapur	25	16.0	28.0	56.0	0.0				
Total	293	13.0	44.0	43.0	0.0				

Table No 141 presents the views of officials on constraints being faced to advance TSC in respective areas in KBK region. 13.0 percent officials blame faulty policy on subsidy, 44.0 percent blame "ignorance" and huge 43.0 percent blame the habit of open air defecation for constraints being faced to advance TSC in respective areas.

Among KBK districts, Rayagada reports highest (25.0%) and Kalahandi district reports lowest (3.4%) percentage opinion in favour of 'faulty policy on subsidy'. Maximum (63.3%) in Nawrangpur point 'ignorance' as the constraint in contrast to the lowest (25.0%) percentage reported from

Rayagada district. Similarly, 56 % blame habit of open air defecation in Subarnapur district in contrast to the lowest (20.0%) percentage reported from Nabrangpur district.

Table No 142 Suggestions of Officials on achieving the goal of Nirmal Gram Panchayat

Table No 142 presents various suggestions of officials on achieving the goal of Nirmal Gram Panchayat in KBK region. 12.6 percent officials has suggested Free toilet to all poor households, 38.6 percent has suggested the regular IEC/ Health Education activities and 37.2 percent has suggested 'Inter-sectoral coordination' to achieve the goal of Nirmal Gram Panchayat. Among KBK districts, Rayagada report highest (21.9%) and Kalahandi district reports lowest (3.4%) percentage of officials suggesting 'Free toilet to all poor households'. Similarly, 51.7% has suggested regular IEC/ Health Education activities in Balangir district in contrast to

Table: 1	Table: 142 Suggestions of Officials on achieving the goal of Nirmal Gram Panchayat									
District	Number	Free toilet to all poor households	Regular IEC/ Health Education activities	sectoral coordination	Monitoring/ Social Audit					
Balangir	29	6.9	51.7	34.5	6.9					
Kalahandi	59	3.4	33.9	52.5	10.2					
Koraput	24	16.7	37.5	37.5	8.3					
Malkangiri	31	12.9	35.5	32.3	19.4					
Nabrangpur	30	16.7	46.7	20.0	16.7					
Nuapada	63	14.3	44.4	31.7	9.5					
Rayagada	32	21.9	28.1	40.6	9.4					
Subarnapur	25	16.0	28.0	40.0	16.0					
Total	293	12.6	38.6	37.2	11.6					

the lowest (28.0%) percentage reported from Subarnapur district. Maximum (52.5%) suggested 'Intersectoral coordination' in Kalahandi district in contrast to the lowest (20.0%) percentage reported from Nabrangpur district. Interestingly the percentage of non-respondents is highest (19.4%) in Malkanagiri district and lowest (6.9%) percentage in Balangir district.

## **Chapter VIII**

## CONSTRAINTS, CONCLUSION AND RECOMMENDATIONS

Safe drinking water and proper sanitation and hygiene practices are critical for survival in all stages of an emergency. In many emergencies, people are very susceptible to illness and death from waterborne diseases. Women and children are particularly at risk because they are usually the largest percentage of the poorest of the poor and comprise the majority in rural areas, urban slums and displaced populations; in many cultures men have priority in the distribution of limited food and drinking water. Mainstreaming gender concerns in water and sanitation interventions are important for fair and equitable distribution. Some of the constraints faced by implementing agencies and key stakeholders are presented below:

#### Constraints poined out by field personnel/implementing agencies

- Shortage of adequate field personnel is a major constraint. One JE managing more than one block cause problem for O & M of Tube Wells and construction of sanitary latrines under TSC.
- Key functionaries like JE and senior officials of RWSS had difficulty in managing their key responsibility due to frequent transfers as well as multiple engagements.
- Transfer of O & M responsibility to Gram Panchayats caused some confusion about role of RWSS Via-a-vis Self Employed Mechanics (SEMs).
- Senior officials at district except RWSS and DWSM did not have sufficient awareness on water and sanitation issues in the district.
- The Database of various line departments available on website are not updated at periodical intervals causing problem in accessing information.
- In some blocks tube well records were not maintained with unique ID number and source of fund, for keeping systematic track on utilization and maintenance measures.
- Weak management of database at Block and Panchayat level on coverage under water and sanitation schemes create problem in taking follow up action to achieve the desired target.
- Due to Lack of water policy by the state a proper legal framework for regulating withdrawals of groundwater is not in place.
- Fragmentary approach both at the central and state levels involving various government agencies
  results in duplication and ambiguity of functions and discourages unitary analysis of these scare
  resources.
- Available infrastructure and staff is not adequate to monitor water quality and follow-up.
- Lack of independent assessment by the expert team comprising NGOs, experts, institutions, engineers to enable the VWSC and the DWSC to take corrective measures weaken the process of monitoring and implementation.

#### Constraints poined out by PRI representatives

- Majority of the PRI members lacked awareness on rural water supply and sanitation components in RLTAP.
- Only some of them were actively associated with DWSM activities.
- Transfer of O& M responsibility of Tube Wells to Panchayats has not been liked by many PRI representatives on the ground that they may not have fund and staff to manage SEMs.
- Lack of capacity of PRI members to negotiate with Officials on water and sanitation issues was a major hindrance in fulfilling the core objective of the programme.
- Many (48.2%) PRI members are not aware about Nirmal Gram Panchayat Campaign.
- As regards to slow progress of TSC, 22% of the PRI representatives put blame on faulty subsidy policy and 37.2 % blame to ignorance.

- Lack of coordination from SHGs/CBOs/NGOs in implementing TSC affects the progress in achieving the target within a stipulated time frame.
- Lack of appropriate planning on the basis of the ground reality through village level micro plans and involvement of government officials in this process is negligible.
- Lack of adequate demand generation drive and non involvement of government officials in the process make the programme only as symbolic, loosing the real essence of benefiting the masses.

#### Constraints poined out bybeneficiaries

- Lack of timely repair was a complaint of a minority of beneficiaries interviewed. Only about 42% of the tube wells are repaired within a week
- 32. 46 % beneficiaries complained about completely and partially damaged platforms whereas a majority complained about defunct soak pits.
- Lack of disinfection drives during pre monsoon and monsoon months was a major grievance.
- Among those who had toilets 78.27% has Barpalli type toilets and most of the Barpalli toilets were in defunct condition due to lack of supply water and water storage facility.
- Water level depletion poses serious problems especially during summer season to many of the beneficiaries.
- Water quality problems especially iron, fluoride and arsenic too create critical health problems to the beneficiaries in a few pockets.
- Lack of capacity and support service to the community on managing financial resources. A number of internal community dynamics can threaten community management e.g. conflicts, poor leadership, lack of transparency, equity issues, theft etc.
- Lack of bathing and washing facilities to retain privacy and dignity especially for girls and women don't find adequate space in the programme.
- Participation of vulnerable groups, women and girls in identifying risky hygiene practices and conditions are not given adequate importance. So many of their concerns remain unaddressed in planning and implementation.
- Lack of adequate water and sanitation facilities in schools / Anganwadis discourages the children to develop consistent the habits of using such facilities from early childhood.
- The facilities once created are not maintained and used properly by the target groups especially in schools and Anganwadies due lack of official supervison and community participation.

#### Conclusion

The study findings present a mixed picture on rural water and sanitation scenario in KBK districts. Going by coverage statistics performance is commendable in rural water supply sub sector. The imaginative programme design and sincere delivery has addressed the needs of even very small habitations taking advantage of flexibility granted to SC/ST habitations on application of standard norms on population per tube well. But the performance in sanitation sector is not that impressive. While open air defecation continues, the Nirmal Gram Panchayat goal is yet to gain strength by means of ownership and participation at the level of key stakeholders.

May be the age old habit, traditional world view and selective use of subsidy still create formidable road blocks for total sanitation. Someone needs to look at quality of assets created and usage else the massive investments may not yield desired results. One has to learn lessons from the first generation sanitation programmes and bridge the gaps as well as weakness making TSC a total success.

One of the major concerns remain is the issue of operation and maintenance. It can not be the sole responsibility of RWSS or SEM or even the GP. Water and Sanitation committees should be formed and made fully functional in every village and hamlet to mobilize community participation, community contribution and ownership of O & M responsibilities. This is possible when community, Gram Panchayat and RWSS converge and supplement each other in achieving targets.

#### Recommendations

- 1. Water being a state subject, the states are empowered to enact laws or frame policies related to water. Even then, only some of the states have set up organisations for planning and allocating water for various purposes. Though water policy for the country has been prepared by the MoRD, GoI, Orissa is yet to formulate its own state water policy. As a result, a proper legal framework for regulating withdrawals of groundwater is not in place. Though efforts have been made to check the overexploitation of groundwater through licensing, credit or electricity restrictions, there is no provision to regulate the quantum of water extracted. State should formulate a Water Policy to play its regulatory role effectively.
- 2. The major bottleneck in an effective policy formulation and implementation is the current institutional set-up involving various government agencies. Further, there is a separation of responsibilities based on water quality and quantity. As several agencies are involved in collecting data on the following water-related parameters: quality of surface water, ground water quality, monitoring of drinking water quality, sanitation and drinking water supply; such a fragmentary approach, both at the central and state levels, results in duplication and ambiguity of functions and discourages unitary analysis of this scarce resource. Hence, a single window approach may yield better results.
- 3. Knowledge/information/data gaps also plague the sector. Published data is not readily available. Though groundwater availability maps have been prepared for certain locations, extraction rates have not been defined. Information gaps on water consumption and effluent discharge patterns for industries also exist. A Newsletter may be published by RWSS highlighting progress, best practices and constraints to educate the stakeholders.
- 4. One of the most critical factors and the reason for the centre to adopt sectoral reforms is the overwhelming perception that water supply and sanitation is the responsibility of government, not of communities, households, and individuals. Massive awareness generation campaigns should be organized with the help of PRIs, NGOs and CBOs to mobilize community ownership and participation.
- 5. Other critical factors include water pollution, inter-sectoral imbalances, groundwater depletion, very inadequate price incentives for water conservation and efficient allocation between sectors (and conversely, not much disincentives for inefficiency, waste, etc). This calls for appointment of an expert committee with a mandate to recommend remedial measures.
- 6. Water quality problems, especially iron, fluoride and arsenic too are critical issues. Low levels of literacy and awareness of the health benefits of improved hygiene behaviour are a potential hindrance to the success of the restructured programming. Sustained professional advocacy, IEC and social marketing of filters, water purifiers etc are definitely needed to bring about an attitudinal and behavioural change.
- 7. Another highly critical issue is that water and sanitation programmes operate in isolation from programmes on health and education. This is a reflection of the fact that water and sanitation is not pursued with the aim of reducing disease, improving hygiene, improving educational levels or reducing poverty. Convergence should be a major strategy now.
- 8. Social and economic inequities will continue to remain major factors hindering effective and equitious implementation of programmes. While the ongoing Sector Reform programme places the responsibility of O & M on local institutions and communities, the pace of change has been slow. This is also reflected in the relatively low levels of expenditure under Sector Reforms and the TSC in target districts. More importantly, the reform initiatives need to be seen as a means of encouraging state governments to move ahead with decentralization to PRIs in line with the 73rd Constitutional amendment.

- 9. While the current approaches of Sector Reforms and TSC and the ARWSP and RCRSP draw on the inherent strength of community management, it must also be recognised that community management also has inherent weaknesses and these need to be addressed. Community management requires significant capacity building which requires substantial human resources. This is particularly so where technology is complex or the size of 'project' is large. Communities also need regular support.
- 10. Community management is vulnerable to local and external events and shocks and needs a strong supportive policy environment. It is therefore the role of the government to provide policies, regulations and a legal framework in which the water supply and sanitation sector, private sector, training sector, etc. can operate and which regulates the relations between the owners, implementers and financiers. Community management is heavily reliant on a supportive framework. Many communities lack the capacity to provide necessary support for technical design and supervision, facilitation and management, long-term training, legal issues, auditing, monitoring and evaluation.
- 11. Communities may not have the capacity to manage an increased amount of capital (for major repairs, replacement, or extension) over a long period. They need capacity building and support on managing of financial resources. A number of 'internal' community dynamics can threaten community management; e.g. conflicts, poor leadership, lack of transparency, equity issues, theft. Countering this threat again often calls for the presence of external support.
- 12. Members of all the VWSCs could be brought together at one forum periodically where they can exchange notes and share experiences one-day workshops could be organised at Block levels. Exposure Visits of selected Presidents/ members of VWSCs could also be organised to other SRP/TSC districts and States.
- 13. Each village must have a Community Fund where proceeds from social forestry, fisheries income from other common property resources should be deposited. The fund should supplement the O&M expenditures. Modest user fee also may be collected.
- 14. At the District level, a team of knowledgeable persons comprising of engineers, NGOs, experts, institutions could be constituted by the DWSC to inspect and certify the quality of construction as well as make an assessment of the implementation of the Programme. This team could be asked to visit all VWSCs at least once in a quarter. A similar arrangement could be put in place at the State level where a 4 member Team visits each SRP/TSC district every quarter and gives its report to the Secretary, RWSS.
- 15. Aspects of sustainability of sources, water conservation, water recharge, water recycling, water quality and hygiene need to be stressed upon. This is presently not being adequately covered in the IEC activities. There is a need for comprehensive integrated IEC activities encompassing both water supply and sanitation need in SRP villages.

#### **Relevant Action Points:**

- 1. Identify safety and security risks for women and girls that are relevant to water and sanitation systems to ensure the location, design, and maintenance programmes maximise safety and security of women and girls.
- 2. Special attention should be paid to the needs of vulnerable groups of women and girls, such as single female-headed households, adolescents, unaccompanied girl children, etc.
- 3. Mobilise women and men to participate in the location, design, and maintenance of water and sanitation facilities.
- 4. Ensure all users, and particularly women and girls, participate in identifying risky hygiene practices and conditions, and that all users share responsibility to measurably reduce these risks.

- 5. Establish water and/or sanitation committees comprised of 50% women. The committees are responsible for the maintenance of water and sanitation facilities.
- 6. Locate water points in areas that are accessible and safe for all, with special attention to the needs of women and children; no household should be more than 500 metres from a water point.
- 7. In situations where water is rationed or pumped at given times, plan this in consultation with all users, but especially with women.
- 8. Times should be set which are convenient and safe for women and others who have responsibility for collecting water. All users should be fully informed of when and where water is available.
- 9. Design communal bathing and washing facilities in consultation with women and girls to ensure that users have privacy and maintain dignity.
- 10. Determine numbers, location, design, safety, appropriateness, and convenience of facilities in consultation with the users. Facilities should be central, accessible, and well-lit in order to contribute to the safety of users. Bathing facilities should have doors with locks on the inside.
- 11. Design latrines in consultation with women and girls to maximise safety, privacy, and dignity.
- 12. Consider preferences and cultural habits in determining the type of latrines to be constructed. Install latrines with doors that lock from the inside.
- 13. Women and men should be fully informed of how to repair facilities and how to make/where to find spare parts. Determine timings of information sessions in consultation with the intended users, particularly women, so as not to conflict with their other responsibilities.
- 14. Use/adapt information and promotional materials to ensure they are culturally acceptable and accessible to all groups (e.g. women, illiterate members of the population). Use participatory materials and methods that allow all groups to plan and monitor their own hygiene improvements.
- 15. Ensure that women and men have equitable influence in hygiene promotional activities and that any benefits or incentives are distributed equally among women and men.
- 16. School Sanitation and Hygiene Education: Rural School Sanitation has been conceptualized as an entry point for wider acceptance of sanitation by the rural people by providing water and sanitation facilities in the schools/Aganwadis and, promoting the desired behavioural changes by imparting hygiene education, linking the same to home & community.
- 17. Ensure adequate water and sanitation facilities in all schools/Aganwadis so that children from their early childhood can use the facilities and develop consistent habits of using such facilities.
- 18. Promote usage of toilets/urinals among schools/Aganwadis students, hand washing at right times (before and after eating, and after using toilet) and sharing of tasks i.e. of collecting water and cleaning toilets by boys & girls equally.
- 19. Promote behavioral change by hygiene education in schools/Aganwadis & linking the same to home & community.
- 20. Develop a system within the schools/Aganwadis so that the facilities once created are maintained clean and used by the target groups.
- 21. Build the capacities of all stakeholders especially of teachers, PTA, PRI etc. ensuring sustainability of the system.
- 22. Sensitize and involve stakeholders at various levels- Community leaders, PRIs, CBOs, SHGs, NGO, Youth organizations, School children and teachers, Anganwadis, Scouts and guides, Health workers, Social workers/religious and sect leaders, Women workers etc

## **CASE STUDIES**

Sanitary Latrine: Malkangir turns the tide

Majority of the people in the villages like MV-7 and MV-13 of Tamasa GP of Malkangiri district are Bengali Refugees. They used to dig pits in their backyards covering the sides with polythene and bamboo. Those pits were used for defecation by the whole family. Poverty did not permit better options. None even told them about the hazards of unsanitary defecation.

Then came the message about Nirmal GramPanchayat. Everyone was enthusiastic about the package. They participated in the awareness meetings and applied for assistace. Very soon they achieved the target of 100 % coverage. Many contributed in cash and kind for the new household sanitation facility. 'We are happy and safe now-lt protects us in many ways and our dignity as well' is the message one gets from all.

#### School Sanitation: A Success story on public, private partnership

Nimna Govt. UGME School has student strength of more than 300 with 8 teachers. The School did not have either Tube well or toilet facilities for its students and teachers. They were using the school backside for defecation. Drinking Water had to be collected from the nearby village.

Subarnapur district RWSS provided a Tubewell in the school campus and sanctioned Rs.16,000/- for construction of a toilet for the students. But this amount became inadequate for the construction of the toilet. The enthusiastic Head Master of the school Mr. Surya Narayan Panigrahi in co-operation with other teachers arranged another Rs.16,000/- from individual contributions. He also arranged Rs.24, 000/- from other sources. By investing total amount of Rs.56, 000/- now the school has well structured tile used toilet and latrine for both boys and girls separately.

Now the students and the teachers are quite happy by getting this facility in their campus. All the students are washing their hands in the Tube well water before taking their MDM in the school. The school is observing every Wednesday and Saturday as school cleanness day. All the students are coming to school with clean dresses and with trimmed nailsc.

This is an example of successful implementation of government project with participation of community and individual teachers.

#### WHWERE THERE IS A WILL THERE IS A WAY

Kapsipali is a village under Odiapali G.P. of Khaparakhol block in Balangir district. This village has more than 200 households. They were depending only on 2nos. of tube wells for their drinking and cooking purposes. They were using the pond water for bathing purposes and the road side as their place for defecation. Unfortunately, one of the two tube wells (towards the end of the village) did not function due to defect in chain and some other technical faults. So the whole village was depending on only one Tubewell. Women had to stand for long time in the morning and evening hours to fetch water.

The people complained in the Grampanchayat many times. They also individually met the Gram Panchayat Sarpanch Mr. Tapan Kumar Sahoo to take steps for immediate repair of the Tubewell because the panchaytat executive officer was not co-operating and not purchasing any material to repair the damaged Tube well. But their repeated requests and meetings did not cut ice.

They had no other option, finally decided to repair the defect tube well themselves. At last the villagers raised some funds out of their own contribution and got the defunct tube well fully functional. Now they meet water scarcity from these tube wells.

They are confident to manage operation and maintenance responsibilities since they have the committee and funds for the purpose.

## **Quality and Motivation Counts**

Babupali is a village under Kalapathar G.P. of Sonepur Block in Subarnpur district. The village has 84 households. Most of the households are under BPL category. They were using Tube well water for their drinking and cooking purposes. As the village is situated in the bank of river Mahanadi, the people of this village and hamlet are using riverbed as the place for defection.

Sonepur District Water and Sanitation Mission provided assistance to this village for construction of Individual Household Latrine. Latrines were constructed for all BPL families during Nov.-December 2005. It was expected that the villagers would use these facilities by giving up open defecation.

Subsequently, it was found that the toilets were not used. On inquiry, people complained about poor quality, lack of privacy due to poor superstructure and age old habit for open air defecation. Quality and Motivation Building have no substitutes in Total Sanitation Drive.

#### SWAJALADHARA – A DISTANT DREAM

Kumbharpada, Salia Munda, Kandhapada and Bramhanimunda are four hamlets under the revenue village cum GP Resida under Karlamunda block of Kalahandi district. This revenue village has 20 nos of tube wells to cater the needs of it's people. But the major problem is that during summer majority of the tube wells get dried due to decrease in water level. This poses a serious problem in the part of the poor villagers to get drinking water. The deep bore well at Kumbharpada became defunct long ago.

So as an alternative the villagers have alternative except to collect the water from the Tel River which is two and half kilometer away from the village. The only alternative for the permanent solution is supply of river water through pipe system from river Tel. Many times the villagers have brought it to the notice of the government department official, elected representatives like local MLA etc. but no steps has yet been taken up except some lip promises. The innocent villagers wonder when they will get relief under Swajaldhara.

#### **EVEN THE POOR CAN AFFORD**

Ghasiram Pradhan aged about 44, lives in a remote Village Salepally, under Chandamati GP of sadar block in Bolangir district. He is suffering from abject poverty. He is an intermediate and having his prime occupation as agriculture. He often finds it difficult to manage his nine member family with the meager income generated out of it. But he seems to be a conscious about impact of water and sanitation on individual and family health.

He is a determined crusader for healthy and hygienic living. He takes all measures to aware other members in the community to follow the right path. What he said, is that "Children are provided boiled water during rainy season. No one of our family go for open defecation. Our's a healthy family and we take due care of health of our family members. We never suffer from any kind of infection since the time of using household latrine. It is now easy and convenient to use the latrine since it is close to house.

We don't have to move outside during night and adverse weather conditions which might have affected our safety and wellbeing. We encourage other households of the village to have a latrine for them. But water provision is a problem for the village as it is difficult and more expensive to dig a well in the backyard due to rocky layers in the earth. We had faced a lot of trouble to dig the well in our backyard but we have won!"

#### **VIEWS FROM GRASSROOTS**

Centre for Rural Poor Services (CRPS) is a grassroots NGO involved in implementation of sanitation programme since 2003. It's work executive Mr. Aswini Kumar Khamaria has been deeply associated with the construction of House Hold Latrine, School Sanitation Complex, Community Latrines and AWC Sanitation activities.

As per CRPS the major constraints during the implementation are as follows: Illiterate people do not accept the programme since they have less understanding level; Poverty stricken people could not afford it; some beneficiaries do not have space for the latrine and inability to go for a quality superstructure for want of money.

It also blamed administrative paraphernalia, lengthy procedure, low attention on IEC activities, lack of convergence among line departments, exclusion of non-BPL poor families from financial assistance for slow progress of sanitation programme in the district.

#### LISTEN TO LEARN

Rotapalli villagers under Sarabong GP of Nuapada district shared their views that availability of drinking water round the year is satisfactory. The ground water level is also accessible even during the summer season. Though there is little bit awareness among some people on different government schemes like water and sanitation but in practice many don't show any interest to install sanitary latrine due to inadequate financial help from the government.

The villagers expressed their resentment on poor maintenance measures taken by the government to repair the tube wells. Some of the households in the village don't have sufficient space to install latrine and many among them want the latrines to be installed in the adjacent public places but this is not possible as per the guidelines of the scheme, community conflict and nasty politics. Poor sanitation poses many health hazards to the people in the village and needed more attention by the government.

## **PHOTO GALLERY**



Great! Just push up and down- quench your thrust

We no more use pond or stram water for drinking!





We are proud to be a part of Nirmal Gram

Worry not I shall soon grow enough to take care!





We too can play and attend school- they are digging a tube well in our village

I too am willing to serve but give me life!





What is this we need to care more

What are we up to- this will not help!





We have to keep it clean Anybody listening?

## **Delapidated soakpit**





Can we see a better picture-Ofcourse, if take care

High investment little use!





This may not take TSC a long way!

We can make it much better!





This is much better

Yes, we want this under school sanitation drive





This explains sense of hygiene & cleanlineness

## **VISION FOR THE FUTURE**







IHL

School Toilet

Anganwadi Toilet

#### **Annex I Suggested Checklist to design Hygiene Interventions**

#### Sanitation, Excreta disposal

- Location of defecation sites
- Latrine maintenance (structure and cleanliness)
- Disposal of children's faeces
- Hand-washing at critical times (after cleaning children's bottoms; after Handling children's faeces; after defecation)
- Use of cleansing materials

#### Water, Water Source

- Protection of water source(s)
- Sitting of latrines in relation to water source(s)
- Maintenance of water source(s)
- Water use at the source(s)
- Other activities at water source(s)
- Water collection methods and utensils
- Water treatment at the source
- Methods of transporting water

#### Water, Water Uses

- Water handling in the home
- Water storage and treatment in the home
- Water use (and reuse) in the home
- Washing children's faeces
- Hand-washing at critical times (before or after certain activities, including religious rituals)
- Bathing (children and adults)
- Washing clothes

#### Food, Food Hygiene

- Food handling/preparation
- Utensils used for cooking, serving food, feeding young children, and storing leftover food
- Hand-washing at critical times (before handling food, eating, feeding young children)
- Reheating of stored food before serving
- Washing utensils and use of a dish rack

#### Environment Domestic and Environmental Hygiene

- Sweeping of floors and courtyards
- Household refuse disposal
- Cleanliness of footpaths, play areas and roads
- Management of domestic animals (cattle, dogs, pigs, chicken)
- Drainage of surrounding areas (location of stagnant water and other mosquito breeding sites)
- School and Anganwadi sanitation

## **ANNEX II**

Block	No. of	No. of habitations	FC habitation	PC habitation	NC habitation	Total no. of tube wells
	villages	nabitations	nabitation	nabitation	nabitation	tube wells
		BALAN	GIR DISTRIC	Т		
AGALPUR	102	180	167	7	6	
BALANGIR	183	296	259	28	9	
BANGOMUNDA	135	179	143	30	6	
BELPARA	108	275	258	1	16	
DEOGAON	127	152	144	1	7	
GUDVELLA	92	205	180	5	20	
KHAPRAKHOL	138	307	265	38	4	
LOISINGA	118	219	200	14	5	
MURIBAHAL	157	189	164	17	8	
PATNAGARH	163	289	226	47	16	
PUINTALA	137	366	321	35	10	
SAINTALA	136	194	182	2	10	
TITLAGARH	134	196	176	8	12	
TUREKELA	100	215	191	9	15	
Sub total	1830	3262	2876	242	144	9264
		KALAHA	NDI DISTRIC	т		
BHAWANIPATNA	261	363	336	8	19	
DHARAMAGARH	71	308	257	1	50	
GOLAMUNDA	121	398	363	0	35	
JAYAPATNA	90	311	282	9	20	
JUNAGARH	162	498	467	5	26	
KALAMPUR	55	137	127	0	10	
KARLAMUNDA	61	171	146	12	13	
KESINGA	99	266	243	9	14	
KOKASARA	69	250	227	2	21	
LANJIGARH	393	606	554	6	46	
MADANPUR						
RAMPUR	221	343	298	14	31	
NARALA	167	227	206	1	20	
THUAMUL RAM	251	304	249	25	30	

PUR						
Sub total	2021	4182	3755	92	335	11038
		KORAP	UT DISTRICT	·	·	
BANDHUGAON	146	167	153	4	10	
BOIPARIGUDA	223	590	559	7	24	
BORIGUMMA	146	407	388	0	19	
DASAMANTAPUR	162	377	364	3	10	
JEYPORE	112	364	345	1	18	
KORAPUT	91	209	197	2	10	
KOTPAD	93	237	219	3	15	
KUNDURA	85	264	260	4	0	
LAMTAPUT	166	274	261	2	11	
LAXMIPUR	102	191	178	0	13	
NANDAPUR	218	523	470	29	24	
NARAYAN PATANA	125	213	198	1	14	
POTTANGI	101	498	446	3	49	
SEMILIGUDA	84	245	216	4	25	
Sub total	1854	4559	4254	63	242	7493
		MALKAN	GIRI DISTRIC	т	,	
Kalimela	121	398	348	0	50	
Khairaput	93	225	155	12	58	
Korukonda	161	455	392	2	61	
Kudumulugumma	257	430	323	33	74	
Malkangiri	76	217	152	12	53	
Mathili	140	472	379	22	71	
Podia	55	186	151	0	35	
Sub total	903	2383	1900	81	402	
-		NABAR	RANGAPUR *			
CHANDAHANDI	86	227	211	10	6	4707
DABUGAM	66	215	168	36	11	
JHORIGAM	115	491	362	106	23	
KOSAGUMUDA	117	465	264	139	62	
NABARANGPUR	55	170	116	48	6	
NANDAHANDI	46	136	92	27	17	
PAPADAHANDI	88	301	261	18	22	

Total	11343	26754	23435	1508	1811	56678
Sub total	799	2452	2277	83	92	4158
ULLUNDA	187	385	369	6	10	
TARBHA	151	442	419	10	13	
SONEPUR	110	516	484	14	18	
DUNGURIPALI	107	388	365	11	12	
BIRAMAHARAJPUR	157	447	421	8	18	
BINKA	87	274	219	34	21	
		SONEP	PUR DISTRICT			
Sub total	2439	4410	3831	301	278	6794
RAYAGADA	271	383	311	59	13	
RAMANGUDA	117	328	304	19	5	
PADMAPUR	113	244	210	22	12	
MUNIGUDA	367	563	489	14	60	
KOLNARA	189	270	225	41	4	
KASIPUR	407	736	630	56	50	
KALYANSINGHPUR	224	369	312	12	45	
GUNUPUR	126	454	397	13	44	
GUDARI	153	299	275	12	12	
CHANDRAPUR	189	343	309	9	25	
BISHAMKATAK	283	421	369	44	8	
		RAYAGA	.DA * DISTRIC	СТ	1	
Sub total	634	2355	2186	42	127	5125
SINAPALI	123	518	463	16	39	
NUAPADA	163	406	385	1	20	
KOMNAM	150	552	515	11	26	
KHARIAR	112	323	298	5	20	
BODEN	86	556	525	9	22	
		ΝΙΙΔΡΔΙ	DA * DISTRIC		I	
Sub total	863	3151	2349	611	191	8099
UMERKOTE	106	374	273	89	12	
TENTULIKHUNTI	67	208	173	15	20	
RAIGHAR	117	564	429	123	12	

# ANNEX III: STUDY QUESTIONNAIRE HOUSEHOLD SCHDULE

## 1. Household Identification

1.1	State	
1.2	District	
1.3	Block	
1.4	GP/Council	
1.5	Village/Ward	
1.6	Hamlet	
1.7	Name of the head of Household	
1.8	Name of the Respondent	

## 2. Household Socio-Economic Background Profile

2.1	Religion	Hindu/Christian/Muslim/Other
2.2	Caste	SC/ST/OBC/OC
2.3	Land owned	0.25/0.25-1.0/1.0-2.5/2.5-5.0/7.5
2.4	Major Source of Income	Farm/Non-farm/Wage
2.5	Poverty Status	BPL/APL/Others

## 3. Demography Profile

3.1	Family Type	Nuclear/Joint/Extended					
3.2	Family Size	Adult		Children		Total	
		Male	Female	Male	Female	Male	Female

#### 4. Household Assets

SI.No.	Assets	Yes	No
1	Radio		
2	Television		

3	Cycle	
4	Wrist Watch/Wall Clock	
5	Motorcycle	
6	Chapel	
7	Water Filter	
8	Any other	

## 5. Environmental Sanitation

5.1	Type of house	Pucca/Semi Pucca/Kutcha/ hutmet	
5.2	Electrification Status	Electrified/Not Electrified	
5.3	Cowshed	Attached/Detached/Non-existence	
5.4	Disposal of Household Garbage	Compost Pit/Special Pit/Thrown outside	
5.5	Disposal of Waste water	Soak pit/Kitchen Garden/Left unused	
5.6	Disposal of Children's excreta	Compost Pit/Garbage Pit/ Thrown outside	
5.7	Place of Defecation	Household Latrine/Community Latrine/Open space	

## 6. Household Latrine

6.1	Household Latrines	Having/Not having
6.2	If Not having reason  No need/Not advised/No knowledge/Not affordable	
6.3	If having ?	
6.3.1	Type of Latrines	Safety /Barpali/Others
6.3.2	Month/Year of Construction	
6.3.3	Source of Funding	Own/Government Assistance/Other (Specify)
6.3.4	Reason for having	Better Health/Convenient/Privacy/For sick & Old/Social Status/Other
6.4	Unit Cost	
6.4.1	Government Assistance	Cash/Kind
6.4.2	Own Contribution	Cash/Kind
6.4.3	Who constructed Latrine	Village Trained mason/Village Non-trained mason/ Outside mason/ Others
6.5	Source of Motivation	Self/Village Motivators/Govt. Functionary/NGO functionary/Others
6.6	Location	Attached/Not attached

6.7	Overhead Roof	Open/Asbestos roofed/Cemented roof/Straw thatched/polythine matched/others
6.8	Wall	Brick wall up to 3'/Brick wall up to 6"/Mud wall/Polythin walled/other (specify)
6.9	Flushing Facility	Tap water connection/Other
6.10	Source of water for flushing	Tube well/Private Tube well/Public well/Private well/Tank/Others
6.11	Usage Pattern	Regular/Irregular/Seasonal rare
6.12	Users Category	All/Women/Men/Children/None
6.13	Convenience	Convenient to use/Non convenient
	Cleaning of Latrine	Regular/Irregular/Occasionally
	Material used for cleaning	Phenyls/Acid/Bleaching powder/Detergent/Other
6.14	Reason for Non-convenience	Lack of Water/Lack of super structure /Foul smells /Difficult for use by old and younger children/Pit filled up/Flooding during rainy/Other
6.15	How the latrine can be improved	Larger plinth area/Heightened walls/ Construction of super structure/Deeper pit/ Connected Tap water / Others (specify)
	What has been the impact on health?	Enhanced Self Esteem/ More cleanliness/ Reduce episode of diarrhea/ Behavioral changes/ Raised hygiene consciousness / Safety/ Other

## 7. Personal Hygiene

7.1	Do you wash hands after defecation?	Yes/No
	If Yes, with water	Soil/Ashes/Shop/Other
	Do you have Chapels?	Yes/No
	If Yes, do you use while going to defecation	Yes/No
	How do you cut your hair	Community Barber/Saloon/Self/Other
	How do you trim your nails	Community barber/self/Others
	How do you brush your teeth?	Tooth powder/Paste/Twig/Ashes/Others

#### 8. Household water

## A. Facilities:

Use Type	Sources (Tap/Tube well/Open well/Tank)	Ownership (Public/Private /Own)	Usage (Regular/ Occasional/ Rare)	Quality (Good/ Manageable/ Bad)	Availability Round the year/ Seasonal
Drinking					
Washing					
Bathing					
Flushing					

B. Usage

Storage of Drinking Water	Metal Vessels/Earthen Vessels/Other/None
Is the vessel covered	Yes/No
How frequency, the vessels is cleaned	Regular /Occasional/Rare
How is the water taken out	Slanting/Dipping/Specific devices /Other
How do disinfect water	Filtering/boiling/Chlorinating /Other/None
Who usually collect water	Women/Children/Other

## 9. Water Sanitation Borne Diseases

Did anybody suffer from diarrhea during last three months	Yes/No
If Yes, age of the person	
Duration of Illness	
Who was consulted	Govt. Doctor/Private Doctor/Other/None
Did you use ORS ?	Yes/No
Source of ORS supply	AWW/ANM/Medicine Store/Public Health facility/ Other
Total expenditure incurred for treatment	
Any Other (Specify)	
Duration of Illness	
Who was consulted	Govt. Doctor/Private Doctor/Other/None
Expenditure incurred for treatment	

Date

**Name Of the Investigator** 

## EVALUATION OF WATER AND SANITATION PROGRAMME IN KBK DISTRICTS OF ORISSA

## VILLAGE SCHEDULE

## 1. Village Identification Particulars:

1.1	State	
1.2	District	
1.3	Block	
1.4	G.P/Council	
1.5	Village/Ward	

## 2. Physiographic and Ecological Conditions:

2.1	Physiography	Plain/ Hilly / Valley / Forest / Reverie / Others
2.2	Drainage	Natural efficient/ Marshy/ Others
2.3	Rain Fall	Heavy / Moderate / Scanty
2.4	Settlement Pattern	Linear/ circular/ Cluster

#### 3. Amenities / Facilities:

SI	Facility	Distance	Interactions
No		(K.M.)	(Regular/Occasional /Rare)
3.1	Pre School		
3.2	EGS School		
3.3	Primary School		
3.4	M.E.School		
3.5	High School		
3.6	Health Sub-centre		
3.7	PHC (New)		
3.8	CHC		
3.9	ISM (Ayurvedic/Homeopathic		
	Clinic)		
3.10	Private Clinic/Hospital		
3.11	TBA		
3.12	Drug Distribution Centre		
3.13	Fair price shop		
3.14	Cooperative		
3.15	Market / Hat		
3.16	Bank		
3.17	Post Office		
3.18	Others		

#### 4. Electrification:

4.1	Is the Village Electrified	Yes/No
4.2	Year of electrification	

## 5. Village Demography

5.1	Total Population	Male	Female	Total	
5.2	Total Households	SC	ST	ОС	Total
5.3	Households by APL/BPL Status	APL		В	PL

## 6. CBOs:

SI. No.	Type of CBO	Membership Size	No. of Women members	Number trained by DWSM/Others	Present Status (Active/ Defunct)
6.1	Village Water				
	Sanitation				
	Committee				
6.2	VDC				
6.3	SHG				
6.4	Youth Club				
6.5	Mahila Mandal				
6.6	Other				

7 Drinking Water:

1 Dimming tre	Sources Number Ownership Supporti Functional Extent of Adequacy							
Sources	Number		Number Ownership		Functional Status	Extent of Use	Adequacy (Adequate /	
	Need ed	Existi ng	(Private/Pu blic/ Institutional	Scheme (DWSM/ SZD)	(Functional/ Defunct)	(Always/ Occasion al/rare)	Limited /Seasonal)	
Bore well with OHT								
Bore well with Hand pumps								
Tube Well								
Other (Specify)								

8. Village Sanitation:

Туре	Number		Source of support	Extent of Use (Always/	Adequacy (Supply) (Adequate / Limited
	Needed	Existing		Occasional /rare <b>)</b>	/Seasonal)
IHL					
Community Latrine					
Institutional Latrine					
Community Garbage Pits					
Community Bathing rooms					
Drainage with soak pits					
Washing Platform					

9. Training Imparted

SI.No.	Type of Training	Target Audience	No. Trained
9.1	Skill development	Mason	
		Plumbers	
		Repair/ Maintenance of Tube Wells	
9.2	Motivation	Motivators	
9.3	Sensitization	PRI Members SHGS/ BOs/ Teachers	

#### 10 Social Mobilization on Water and Sanitation:

SI	Type of Activities	No. of Activities	Frequency
No.			
10.1	Village Meetings		
10.2	Group Meetings		
10.3	Traditional folk media		
10.4	Wall writing		
10.5	Poster Display		
10.6	Leaflet distribution		
10.7	School Health Programme		

11. Community Views on Some Key Issues

11.1	Are you aware about official water and sanitation programme?	Yes/ No
11.2	If yes, Are you aware about the officials/ agencies associated with the programme?	Yes/No

11.3	If Yes, mention the designation of officials/ name of agencies?	
11.4	Has any official discussed water & sanitation issues with you?	Yes/ No
11.5	If Yes, mention the designation of officials/ name of agencies?	
11.6	Does any CBO, SHG or NGO taking up water sanitation activities in your village?	Yes/No
11.7	If yes, specify the activities and the agencies involved	
11.8	Do the village school/Schools have provision for water supply and toilets?	Yes/No
11.9	If Yes, Are these being regularly used and maintained?	Yes/No
11.10	Do you have provision for water supply and toilets in the Anganwadi Centre?	Yes/No
11.11	If Yes, Are these being regularly used and maintained?	Yes/No
11.12	Have you ever met any official to request for adequate provision of water supply and sanitation services?	Yes/No
11.13	If Yes, What is the response and outcome	
11.14	Have you ever met any PRI representative to request for adequate provision of water supply and sanitation facilities?	Yes/No
11.15	If Yes, What is the response and outcome	
11.16	Are you satisfied with the water supply and sanitation facilities in your village	Yes/ No
11.17	What are major constraints? Finance, Motivation, Habit, Space, Other (Specify)	
11.18	Do you have a village micro plan on water and sanitation	Yes/No

## 12. Suggestions for improvement to achieve the goal of Nirmal Gram

•	

Date

Name Of the Investigator

## **EVALUATION OF WATER AND SANITATION PROGRAMME IN KBK DISTRICTS OF ORISSA**

## SCHEDULE FOR ELECTED PRI REPRESENTATIVES

1. Respondent Particulars:

1.1	Name	
1.2	Designation	
1.3	Gender	
1.4	Qualification	
1.5	Village/Ward	
1.6	GP/Council	
1.7	Block	
1.8	District	

2. PIO	Diem Perception.	
2.1	Do you consider provisions on water and sanitation to be satisfactory in your village/GP/Area?	Yes/ No
2.1.1	If no, which village/ hamlets suffer from water scarcity?	
2.1.2	If no, which village/ hamlets suffer from inadequate sanitation facilit	ties?
2.2	If yes, is water available in sufficient quantity round the year?	Yes/ No
2.2.1	If not available in sufficient quantity round the year, specify causes.	
Α		
В		
2.2.2	Have you taken any step to address the causes? If yes specify.	Yes/ No
Α		
В		
2.3	Are you satisfied with the quality of water available?	Yes/ No
2.3.1	If no, state the reasons	
Α		
В		
2.4	Did you receive any advice from local doctors/ health staff on water quality? If yes, any follow up action taken by you?	Yes/No
Α		
В		

3. Awareness about official programme on water & sanitation:

Are you aware about any official water and sanitation programme?	Yes/ No				
If yes, Are you aware about the officials/ agencies associated with the programme?	Yes/No				
If Yes, mention the designation of officials/ name of agencies?					
Has any official discussed water & sanitation issues with you?	Yes/ No				
If Yes, mention the designation of officials/ name of agencies and is	ssues discussed?				
Are you aware about water and sanitation programme of District Water and Sanitation Mission?	Yes/ No				
If yes, Where from you got the information?					
Are you aware about the following components of the DWSM Progr	ramme?				
Motivational campaign, IEC Activities	Yes/No				
Base Line Survey	Yes/No				
Formation of village water & sanitation committee	Yes/No				
Skills Training (Motivator, Mason, Mechanic etc)	Yes/No				
Establishment of rural sanitary mart	Yes/No				
Facilitation by Block Team (CDPO/BEE/JE/SI/NGO)	Yes/No				
Who is eligible to get govt. grant under the scheme?					
What is the nature of support provided by DWSM to individual bene	eficiary?				
What is the nature of support provided by DWSM to schools?					
What is the nature of support provided by DWSM to Anganwadi Centres?					
Describe achievements made under Total Sanitation Campaign in your GP					
Any plans to address the gaps in coverage under TSC? If yes, spec	cify Yes/No				
	Are you aware about any official water and sanitation programme?  If yes, Are you aware about the officials/ agencies associated with the programme?  If Yes, mention the designation of officials/ name of agencies?  Has any official discussed water & sanitation issues with you?  If Yes, mention the designation of officials/ name of agencies and is Are you aware about water and sanitation programme of District Water and Sanitation Mission?  If yes, Where from you got the information?  Are you aware about the following components of the DWSM Programational campaign, IEC Activities  Base Line Survey  Formation of village water & sanitation committee  Skills Training (Motivator, Mason, Mechanic etc)  Establishment of rural sanitary mart  Facilitation by Block Team (CDPO/BEE/JE/SI/NGO)  Who is eligible to get govt. grant under the scheme?  What is the nature of support provided by DWSM to individual benefits the nature of support provided by DWSM to Anganwadi Cellonesciple achievements made under Total Sanitation Campaign in the programme?				

## 4. Support for water and sanitation facilities under RLTAP

4.1	Do you get RLTAP funds for water & sanitation?							Yes/ No	
4.1.1	If yes, is that adequate or Inadequate?							Adequat Inadequa	
4.2	Are you co	onsulted wh	nile decidi	ng use of F	RLTAP fui	nds in you	r GP?	Yes/No	
4.2.1	If Yes, Wh	at priorities	you fix fo	or utilization	า?				
	Drinking water, Sanitation, Irrigation, Roads, Buildings, Plantation, Land Development, any other-specify								
4.3	Specify ar	nount recei	ved and u	utilization U	Inder RLT	AP in last	5 years (	In Lakhs)	
20	001-02 2002-03		2003-04		2004-05		2005-06		
Allotte	d Spent	Allotted	Spent	Allotted	Spent	Allotted	Spent	Allotted	Spent
4.4	List the	l activities /a	ssets cre	l ated under	RLTAP fu	unds in wa	ter and s	l anitation s	ector
01-02									
02-03									
03-04									
04-05									
05-06									

5. Resource availability:

5.1	Do you get other government funds for water & sanitation?	Yes/ No
5.2	If yes, is that adequate and Inadequate?	Adequate/ Inadequate
5.3	Do you think all deserving individual beneficiaries are getting government fund for construction of toilets at home?	Yes/No
5.4	If not, What is your suggestion to address this issue?	
5.5	Are you aware about Swajaldhara scheme	Yes/ No
5.6	Have you taken up any project under swajaldhara	Yes/No
5.7	Have you conducted any meeting to discuss various issues including funds for water & Sanitation facilities	Yes/No
5.8	Have you mobilized any community contribution in cash and kind for water and sanitation activities	Yes/No
5.9	Have you created any arrangement to address operation and maintenance burden on regular basis	Yes/No
510	Have you involved community in O& M activities	Yes/No

#### 6. Observations:

6.1	Does any CBO, SHG or NGO taking up water sanitation activities in your village?	Yes/No			
6.2	If yes, specify the activities and the agencies involved				
6.3	Do the village school/Schools have provision for water supply and toilets?	Yes/No			
6.4	If Yes, Are these being regularly used and maintained?	Yes/No			
6.5	Do you have provision for water supply and toilets in the Anganwadi Centre?	Yes/No			
6.6	If Yes, Are these being regularly used and maintained?	Yes/No			
6.7	Have you ever met any official to request for adequate provision of water supply and sanitation services?	Yes/No			
6.8	If Yes, What is the response and outcome				
6.9	Are you satisfied with the water supply and sanitation facilities in your village/area	Yes/ No			
6.10	What are major constraints? Finance, Motivation, Habit, Space, Other (Specify)				

7.	Suggestions for	or improvement to	achieve the goal	of Nirmal Gram
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Date

Name Of the Investigator

## EVALUATION OF WATER AND SANITATION PROGRAMME IN KBK DISTRICTS OF ORISSA

## SCHEDULE FOR GOVERNMENT OFFICIALS

## 1. Respondent Particulars:

1 1	Name	
1.1	Ivame	
1.2	Designation	
1.3	Gender	
1.4	Qualification	
1.5	Block	
1.6	District	
1.7	Department	
1.8	Years spent in the present place of posting	

2. Vision and Approach

	The state of the s	
2.1	Do You think it is possible to ensure universal access to safe drinking water and sanitation facilities in your area?	Yes/ No
2.1.1	If No, Please specify reasons	
Α		
В		
С		
2.2	Do You think RLTAP has accorded due priority to Water and Sanitation needs	Yes/ No
2.2.	If No, Please specify reasons	
Α		
В		
С		
2.3	Do You think the design & strategy of SWSM and DWSM is effective and drawn in reference to RLTAP mandate?	Yes/ No
2.3.1	If No, Please specify reasons	
Α		
В		·
С		

2.4	Is it possible to achieve the Nirmal Gram Panchayat goal?	Yes/ No
2.4.1	If Yes, by what time frame? 3 years, 5 years, 7 years, 10 years or more	
2.4.2	If No, Please specify reasons	
Α		
В		
С		

#### 3. Views on role and Process:

3.1	Do you have any direct role and responsibility as regards provisions for water supply and sanitation facilities	Yes/ No
3.2	If Yes, Please specify	
Α		
В		
С		
D		
3.3	Whether you are satisfied with progress achieved? State reasons	Yes/ No
Α		
В		
С		
3.4	Do you think proper planning has been done at Village/ GP/Block and District levels to address water and sanitation needs?	Yes/ No
3.5	Do you think resources available are adequate to match needs	Yes/ No
3.6	Do you think allotted funds are being released in time at different levels?	Yes/No
3.7	If not, illustrate by sharing a few examples	
		<del>,</del>
3.8	Do you think departments/ agencies working in the programme have needed team spirit and coordination?	Yes/ No
3.9	Have you ever tried to involve PRIs in planning/ implementation and monitoring of the programme	Yes/ No
3.9.1	If Yes, What is the outcome? Very good, Good, Average, Poor	
3.10	Have you ever tried to involve CBOs in planning/ implementation and monitoring of the programme?	Yes/ No
3.10.1	If Yes, What is the outcome? Very good, Good, Average, Poor	

## 4. Observations:

		ı
4.1	Have you come across a baseline report indicating water and sanitation situation in GPs, Blocks, Districts in KBK region?	Yes/No
4.2	Have you come across concrete GP, Block and District level plans to address water and sanitation needs in KBK region?	Yes/No
4.3	Are you satisfied with the achievement made in water and sanitation sector under RLTAP during last five years?	Yes/No
4.3.1	If no, state reasons	
Α		
В		
С		
4.4	Are you aware of any effort to sensitize community/CBOs/PRIs/NGOs about the provision and use of water & sanitation facilities?	Yes/No
4.5	Are you aware of any effort for demand generation for quality water & sanitation facilities in your area?	Yes/No
4.6	Is there any plan to address water and sanitation needs in un-served /underserved pockets in your area?	Yes/No
4.7	What are the major constraints in ensuring universal access to quality sanitation facilities in your area?	water and
Α		
В		
С		
4.8	What are the specific suggestions for improvement in prevailing water and related problems in your area?	sanitation
Α		
В		
С		
4.9	Specify, best practices on water and sanitation in your area if any?	
Α		
В		
С		

Date

Name Of the Investigator

#### CHECKLIST FOR FOCUS GROUP DISCUSSION

- 1. Problem Perception
- 2. Awareness about Government schemes on water and sanitation
- 3. Views on effectiveness of individual schemes including RLTAP
- 4. Comments on social targeting and coverage plans under individual schemes
- 5. Comments on environment building and awareness generation activities
- 6. Comments on resource availability/ adequacy and utilization
- 7. Comments on planning and prioritization under water and sanitation sector
- 8. Comments on effectiveness of social mobilization strategies
- 9. Comments on policy issues posing problems for universal access
- 10. Comments on peculiar geo-physical features necessitating local micro planning
- 11. Comments on morbidity and mortality trends with reference to inadequate water and sanitation facilities
- 12. Comments on community participation/contribution
- 13. Comments on PRI performance
- 14. Comments on RWSS performance
- 15. Comments on operation and maintenance of assets
- 16. Comments on Convergence and coordination across multiple actors
- 17. Illustration of best practices, if any
- 18. Suggestions for improvement