Every household counts
Ensuring community participation in Orissa

It is not difficult to understand why the 67 villages covered by the Rural Health and Education Program (RHEP) in Orissa have become favored destinations for prospective brides. The introduction of water and sanitation facilities by a local NGO, Gram Vikas, in collaboration with the community, has enhanced the quality of life, improved health conditions and reduced the drudgery of collecting water. The success of the scheme is evident - Gram Vikas no longer provides support to many of these villages, yet the schemes are fully operational through the collective efforts of the villagers. There are no conflicts over water and no significant problems operating and maintaining the schemes.

The approach of Gram Vikas is based on the participation of every member of the community and the creation of local institutional mechanisms to ensure sustainability of the project. Ownership and stakes are built by ensuring that all households contribute financially to the development of infrastructure and operation and maintenance of the scheme.

The RHEP initiative began in 1992 covering 337 families in five pilot villages in Ganjam and Bargah districts of Orissa. Today Gram Vikas covers 67 villages in the most backward districts of the state. When the program began, there was a complete absence of hygiene and sanitation, and no source of clean and safe drinking water. Using health and hygiene as an entry point to improve the lives of the people, Gram Vikas initiated its program by providing proper waste disposal, effective drainage systems and safe drinking water. Success in the field of health and sanitation soon led to demands for other changes and eventually to people's involvement in a multitude of development activities, such as housing, community infrastructure, education and livelihood programs.

The water and sanitation program is based on the principle of total coverage. Sanitation infrastructure (a separate toilet and bathing room for each family) is established and piped water supplied to every household in the village. All families must prepare a soak pit and the foundation for the toilet/bathing room before Gram Vikas begins intervention.

Construction is on a cost sharing basis. A typical household sanitation facility (latrine and bathroom) costs approximately Rs 4,000 depending on the type of material used. Gram Vikas contributes around Rs 2,500 and the household contributes the rest. Similarly, the community contributes about 30 percent of the capital cost of setting up a piped water supply system. Poorer families can offer material or labor as their contribution.

To ensure the commitment of the community to the project, clear-cut financial responsibilities

1. A project supplying water to 60 families with a 30,000-liter water tank and 120 ft borewell costs approximately Rs 150,000
and contributions from the community for the maintenance fund are agreed to before intervention can start. Each village decides its own method for collection to cover the repair and maintenance of pumps and the salary of the pump operator (Rs 300 – 500 per month). The current maintenance cost of RHEP facilities is an average of Rs 500 per family per year. Again, the poorer families contribute labor and materials as their share. Communities evolve penalties for families violating the norms.

The program generates employment opportunities and ensures sustainability by training local youth in masonry and plumbing, and to operate the pumps and maintain the pipelines. Minor repairs are attended to locally. To optimize the use of local resources and ensure total coverage, the technology package has been demystified and a standardized design for the toilet and bathroom is promoted.

A critical factor for project sustainability is the institution of a corpus fund. All families contribute an average of Rs 1,000 to the fund, which is used for water and sanitation activities. Since contribution to the fund is mandatory, the richer families subsidize poorer families or part support is extended from the community fund.

Setting up the corpus fund has led to enhanced village unity as all families are shareholders in the fund and have an equal stake in decision-making. Communities now work together, negotiate with each other and other players, and build independent institutions. Success in constructing and managing their own sanitation and water supply systems has fostered a strong community spirit and greater self-confidence.

To ensure that local voices are heard and the scheme is demand-responsive, village executive committees with equal representation of men and women are elected by the community. These are registered legal entities. Women's participation in village committees has enhanced their role in decision-making and given them a greater standing in the community. Women have also been encouraged to set up savings groups, which have, in many cases, become credit delivery mechanisms.

Today, the successful completion of projects has generated a demand from neighboring villages for the introduction of similar schemes. Gram Vikas is now poised to extend the program to a critical 1 percent of the poorest families in Orissa over the next ten years by replicating the model and influencing government and non-government agencies to implement the program. Links with local government could also be explored to upscale this initiative.

Although the program has been initiated by an NGO, this experience has shown that once systems are in place and local institutions developed, communities can successfully manage and maintain their facilities and ensure sustainability of the project even after external assistance is withdrawn.

For further information, contact
Gram Vikas
Mohuda Village
Via Behrampur
Orissa 760 002
Fax: 91-0980-309754
e-mail: info@gramvikas.org
Web site: www.gramvikas.org

To meet the 2015 development target of halving the fraction of the population without access to services in Africa, Asia, Latin America and the Caribbean, the number of people served by water supply must increase by 1.6 billion (32%) and those served by sanitation must increase by 2.2 billion (59%).

For water, this means providing services for an additional 107 million people each year, or 292,000 every day, until 2015.

For sanitation, services must be provided for an additional 145 million people each year until 2015, or 397,000 every day, until 2015.

NEWS BRIEFS

NEW MINISTER FOR RURAL DEVELOPMENT

Shri Shanta Kumar has joined as Minister of Rural Development, Government of India. Prior to this Shri Shanta Kumar was Minister of Consumer Affairs, Food and Public Distribution, Government of India and Chief Minister of Himachal Pradesh.

Shri Shanta Kumar takes over from Shri M. Venkaiah Naidu.

NEW SECRETARY, DEPARTMENT OF DRINKING WATER SUPPLY

Shri S.S. Meenakshi-sundaram has taken over from Shri A.K. Goswami as Secretary, Department of Drinking Water Supply, Ministry of Rural Development. Shri Goswami is now Secretary, Ministry of Water Resources.

Shri Meenakshi-sundaram was earlier Additional Secretary, Department of Space.

WATER MEDIA NETWORK

The Water Media Network is designed to help journalists examine the social, environmental, regulatory and financial issues relating to water, and understand the difference that water can make to the economy in their region. The program features workshops, field visits and distance learning courses.

This initiative is a program of the World Water Council’s 3rd World Water Forum, and is funded by the governments of the Netherlands and Japan, and the World Bank Institute. These activities will lead up to the 3rd World Water Forum in Kyoto in 2003.

www.worldbank.org/wbi/ sdwatermedianetwork/

NOTICE BOARD

2nd South Asia Water Forum
Organized by Pakistan Water Partnership

Main themes: Groundwater Management in South Asia; Water, Food and Environment; Water Institutions and Governance; Dams and Development; and Water and Youth

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e-mail: s.pwp@cgar.rg

28th WEDC Conference
Sustainability: Today’s Priorities for Basic Services
November 18-22, 2002
Kolkata, India
www.wedc.conf@iboro.ac.uk

Jalvaani editorial

With the growing scarcity of water in the country, there is an urgent need to implement sustainable water and sanitation schemes. In this issue of Jalvaani we share experiences of implementation of projects from across the country which could be of value to stakeholders in the sector. Community-managed piped water schemes were established in Uttar Pradesh as far back as the 1960s.

This issue reviews the key factors that led to the partial success and eventual failure of these schemes. Lessons from these experiences could inform the current demand-responsive projects that are being implemented.

In Orissa, Gram Vikas has achieved notable success by supporting the establishment of water and sanitation schemes in every household in 67 villages in 15 backward districts of the state. Their experience has shown that community participation and involvement are essential for long-term sustainability. Although Gram Vikas has withdrawn support after initial handing-off, most schemes have continued to operate successfully due to the sense of ownership which is developed at the inception of the project.

While there have been pockets of success in implementing demand-responsive schemes, progress of the sector reforms program has been patchy. A national conference was organized recently, under the chairmanship of the former Minister for Rural Development. Shri M. Venkaiah Naidu, to assess coverage and identify bottlenecks. Through deliberations at the conference, and a rapid review that was conducted earlier this year, a roadmap has now been evolved to speed up effective implementation of the program.

Nandigram II Block in East Medinipur district, West Bengal is a model where 100 percent household sanitation coverage has recently been achieved. We share the comments of block and district representatives on the key features that were instrumental in achieving total coverage. A crucial element for success was bringing together different political groups to work collectively to achieve a common goal.

Given the low coverage of sanitation, particularly in water-scarce areas, appropriate technologies will have to be explored. Ventilated improved pit (VIP) latrines do not need water for flushing and could provide an effective sanitation solution. A pilot has been launched in Rajasthan to promote the use of these latrines. Based on the response of the users, VIP latrines could be an alternative technology option in water-scarce areas.

As always, we look forward to feedback and comments from our readers.

R.C. Panda
Joint Secretary and Mission Director
Rajiv Gandhi National Drinking Water Mission
Department of Drinking Water Supply
Lessons from the past
The experience of older community-managed schemes in Uttar Pradesh

The concept of community-managed piped water schemes is not new to Uttar Pradesh. As far back as 1962, community-driven schemes were set up in the state to meet users' needs for safe and assured drinking water supply, and were based on their willingness to pay for services. The objectives, strategies and methodologies adopted for these schemes were similar to those of the schemes currently being implemented under the sector reform program. However, these schemes fell into disuse for various reasons. Water and Sanitation Program South Asia conducted a study to see what lessons could be learnt from this experience.

At the time, many rural communities in Uttar Pradesh did not have a safe source of drinking water. In an attempt to find sustainable solutions, community-based experimental schemes were set up in three districts. These schemes were implemented by the Planning Research and Action Institute (PRAI), Lucknow and the Local Self Government Engineering Department with assistance from WHO and UNICEF. The Banki scheme in Barabanki district covered seven villages, the Gorakhpur scheme in Pharenda Block serviced eleven villages and the Mokhampur project in Meerut district was a single-village scheme.

PRAI played an active role in convincing users of the health benefits of piped water and motivating them to accept and contribute towards the maintenance of a new system of water supply. Beneficiary participation was considered essential for project sustainability and the community was involved in each phase of the project. Users were motivated to donate land for the pump house and overhead tank, and contribute cash and labor for construction. Joint Action Committees were set up in each project area with elected representatives from the panchayats and the government to help develop institutions that were accountable locally.

During the first decade of its operation, the Banki scheme became a well recognized demonstration model for innovative approaches to rural development. The health awareness program changed the initially negative attitude of the residents and the number of household connections increased. By 1971 the entire project population was serviced by private house connections and public standposts. The excellent performance of the Banki scheme in the initial years can be linked to the activities of PRAI field workers in terms of building the skills and capacity of the community, monitoring the scheme and developing local management institutions.

Problems began when electricity supply dropped and providing consistent and reliable service became difficult. The viability of the scheme was further undermined by a conflict between the two panchayats managing the scheme, which led to non-payment of water tariffs by both groups. Although external institutional support was crucial for the initial success of the scheme, this support was not available when the scheme
## Key Dates and Details of the Three Schemes

<table>
<thead>
<tr>
<th>Features/Scheme</th>
<th>Banki</th>
<th>Pharenda</th>
<th>Mohkampur</th>
</tr>
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<tbody>
<tr>
<td>Scheme Commission</td>
<td>1965</td>
<td>1964</td>
<td>1966</td>
</tr>
<tr>
<td>Transfer of O&amp;M to Village Committee</td>
<td>1965</td>
<td>1966</td>
<td>1968</td>
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<tr>
<td>System Abandoned</td>
<td>1994</td>
<td>Ongoing</td>
<td>1976</td>
</tr>
<tr>
<td># Villages Involved</td>
<td>7</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td># Panchayats Involved</td>
<td>2</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>1962 Population</td>
<td>4,320</td>
<td>8,757</td>
<td>687</td>
</tr>
<tr>
<td>1962 Number of Families</td>
<td>800</td>
<td>1,500</td>
<td>125</td>
</tr>
<tr>
<td>30-year Design Population</td>
<td>5,425</td>
<td>11,000</td>
<td>1,000</td>
</tr>
<tr>
<td>Design Water Consumption (gpcd)</td>
<td>10</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td>Size of Overhead Tank (gallons)</td>
<td>5,000</td>
<td>20,000</td>
<td>5,000</td>
</tr>
<tr>
<td>Disinfection Method</td>
<td>Chlorination</td>
<td>Chlorination</td>
<td>Chlorination</td>
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<tr>
<td>Design Capital Cost (1962 Rs)</td>
<td>159,300</td>
<td>483,500</td>
<td>70,000</td>
</tr>
<tr>
<td>Design Annual Maintenance Cost (Rs)</td>
<td>4,400</td>
<td>8,000</td>
<td>2,470</td>
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<tr>
<td>Design Per Capita Capital Cost (Rs)</td>
<td>32</td>
<td>42</td>
<td>70</td>
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<tr>
<td>Design Per Capita Ann. Maint. Cost (Rs)</td>
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<td>1</td>
<td>3.5</td>
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<tr>
<td>Community Capital Contribution (Rs)</td>
<td>270</td>
<td>260</td>
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<tr>
<td>Community Labor Contribution (Rs Value)</td>
<td>500</td>
<td>427</td>
<td>-</td>
</tr>
<tr>
<td># Families Willing to Pay at First Survey</td>
<td>2,700</td>
<td>-</td>
<td>-</td>
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</tbody>
</table>

**Source:** Joshi (1988), Field Visits

Encountered problems. The Banki scheme was not able to sustain itself financially and was eventually discontinued in 1994 when power supply was disconnected for non-payment of dues.

The Pharenda scheme also experienced success in its early years. Demand overshoot expectations and the number of private household connections almost doubled in four years. In the first five years of operation, revenues exceeded expenditure.

However, persistent yield problems from the tube well led to poor service, and deteriorating power availability exacerbated the problem. Being a large multi-village scheme, it was difficult and expensive to provide adequate service to such a wide geographical area. As the number of connections increased, service quality declined, particularly in the peripheral areas. Poor service led to the non-payment of tariffs and disconnection. Due to the resultant financial crisis, the Pharenda scheme has been handed over to the Uttar Pradesh Jal Nigam. The large number of subscribers and strong connections to block personnel probably facilitated the takeover of the scheme.

The Mohkampur scheme was initiated at the request of the gram pradhan. Due to a lack of genuine need and involvement of the beneficiary population, and the absence of health education, the scheme was unable to develop a critical mass of subscribers. The single-village coverage meant higher per capita capital and operating costs. The scheme stopped operating when a new pradhan took over, as he did not ensure regular tariff collection or maintenance of the project.

The experience of these schemes illustrates that with the creation of awareness, rural communities understand and appreciate the health and other benefits of improved water supply. Rural communities are able to efficiently evaluate alternative sources of water supply and are willing to pay higher prices for assured and reliable services. However, once the reliability of service delivery is undermined, people seek alternative sources. It is also important to invest in basic infrastructure to ensure proper service delivery.

Institutions play a crucial role in sustaining the operation of schemes. The absence of formal institutional options to provide support to community-managed services after the completion and transfer of management to panchayats, as well as the absence of an inbuilt monitoring, feedback and evaluation system, contribute to the failure of small community-managed schemes.

The Uttar Pradesh experience illustrates that to ensure sustainability of water supply schemes, it is important to determine the type of institutions and the nature of support that should be provided. Such support could come from accountable, responsive local governments that now have the constitutional responsibility for water supply and sanitation through the 73rd Amendment.

Details of the study are available in a field visit and discussion paper.

Contact
Water and Sanitation Program-South Asia
55 Lodi Estate
New Delhi 110 003
Fax: 91-11-4628250
e-mail: wsspsa@worldbank.org
The sector reforms program
A performance review

NATIONAL REVIEW
OF 26 STATES

A national conference on Rural Drinking Water Supply Sector Reforms was held in New Delhi on June 28, 2002 under the
chairmanship of Shri M. Venkaiah Naidu, the former Minister for Rural Development, Government of India. The objective of the
Conference was to assess and evaluate the performance of 67 sector reform pilots in 26 states. Ministers of State for Rural Development, Shri Anna
Saheb MK Patil and Shri Subhash Maharia, Shri A.K. Goswami, former Secretary, Department of Drinking Water, State Government
Secretaries, and district and block representatives from all the sector reform project districts participated. Members of the National Core Team, National
Scheme Sanctioning Committee and support agencies also attended. The Conference was organized by the Rajiv Gandhi National Drinking Water Mission,
Government of India.

In his inaugural address, Shri Naidu stated that the slow progress of implementation of the sector reforms project in the rural water supply sector is due to the unwillingness of government agencies to fully own the reform initiatives and their lack of guidance and monitoring of projects. There is a need for a clear understanding of the concept, philosophy and principles to be adopted by district-level implementing agencies and to create awareness among the people. He also highlighted the need for coordination among the key players at the state and district levels.

He urged the states to make midcourse corrections and encourage communities to ‘own, operate and manage’ water and sanitation schemes according to sector reform principles. He also cautioned representatives of non-performing districts that if they failed to show progress within three months, their projects would be terminated and funds withdrawn.

The Conference deliberated on strategies to build the skills of key stakeholders involved in implementation. The need for capacity development and sustainable development models was emphasized.

RAPID REVIEW OF FIVE STATES

A rapid assessment of the rural water supply sector reforms program was conducted in October 2001 to evaluate progress, identify key constraints and issues and make recommendations. Five pilot districts were randomly selected from five states. The findings of the review were disseminated at a workshop on February 26, 2002 in Delhi where representatives from the five states participating in the review, and six other states, external support agencies and NGOs attended.

It was found that implementation across the five districts was patchy. The state public agency (PHED) still dominated the program and the approach continued to be supply-driven. Many key demand responsive issues were not included in the design, for instance, offering communities a choice of technology or developing community-managed systems for operation and maintenance. Moreover, there was no clear focus on sustainability, in particular of sources and systems.

It was recommended that detailed guidelines on capacity-building measures and participatory techniques are developed at the national level; the role of support organizations and local government institutions clarified; approaches for integrating drinking water supply, household sanitation and environmental sanitation developed; the monitoring mechanism for future review and evaluation improved; and field support and supervision missions organized to monitor implementation at the state level.

As a result of the review and the workshop, there have been some positive changes in program implementation in a few of the states that were reviewed.

Details of the rapid review are available in Jal Manthan 6.

For further information contact
Water and Sanitation Program-South Asia
55 Lodi Estate
New Delhi 110 003
Fax: 91-11-4628250
e-mail: wspsa@worldbank.org
Hygiene without water
VIP latrines in water-scarce areas

Ventilated improved pit (VIP) latrines are low-cost hygienic latrines that do not require water for flushing. These latrines are a simple and effective sanitation option in areas of extreme water scarcity. They have low capital and operating costs, and are easy to build with locally available materials. Depending on the size of the pit and the number of users, a VIP latrine can be used for 5-7 years.

KEY FEATURES
The basic components and functioning of a VIP latrine are similar to a traditional pit latrine. Both have a pit, a pit cover slab and a drop hole. Solids or sludge accumulate in the latrine pit which decompose over time. Liquids flushed into the pit, such as urine and water, soak into the surrounding area through the pit walls. Once the pit is filled another pit must be dug and used. Other options are to have a partially off-set pit with a removable cover slab which allows easier decomposition, or to construct twin-pits which are used alternately.

A ventpipe is an important feature that is installed in VIP latrines to deal with odor and flies. Wind blowing across the top of the ventpipe sucks foul air out of the pit. On still days, ventilation takes place when the sun heats the air in the ventpipe, causing it to rise. The ventpipe also serves as an insect trap. A fly screen is attached at the top of the ventpipe which traps flies and other insects traveling out of the dark pit up the ventpipe towards the light. The fly screen also prevents insects from entering the pit through the ventpipe.

To ensure adequate ventilation, the ventpipe should be higher than the roof of the shelter. The drop hole should not be closed with a lid as this stops the ventilation. Care should be taken to ensure that the leach pit does not pollute the groundwater table. In areas where the soil is unstable, the pit walls may need to be lined with brick or concrete.

VIP latrines require very little maintenance. Regular cleaning is essential to reduce flies and smells. The fly screen also needs to be checked regularly.

VIP TOILETS IN RAJASTHAN
The Rajasthan Government, in collaboration with UNICEF, recently piloted a demonstration project of VIP toilets in Alwar district. The pilot is coordinated by the panchayat. Matashree Gomti Devi, a local NGO, is motivating communities and facilitating the implementation of the project. UNICEF is supporting a training program for village masons and the setting up of local production centers/marts. The functioning and use of toilets is being monitored by Matashree Gomti Devi, with the involvement of the community.

The cost of building a VIP latrine without the superstructure ranges between Rs 1,000 - 2,200 depending on the materials used. A latrine with a 5x4 ft platform and a 10 ft ventpipe costs approximately Rs 2,150 to construct. Communities are encouraged to construct the superstructure of their choice. In order to include poorer families and ensure total sanitation coverage, a subsidy of Rs 500 is paid to BPL families.

With increasing awareness of the health benefits of fixed sanitation, communities in rural Rajasthan are willing to pay the cost of constructing toilets. So far communities have responded positively and there is a demand for VIP toilets in other districts of Rajasthan like Tonk, Dungarpur and Raasamand. If this model proves effective in Rajasthan, it could be adopted in other water scarce states as well.

For further information contact
UNICEF, B 9 Bhawani Singh Lane
C Scheme, Opposite Nehru Sakhar Bhavan
Jaipur - 302 001, Rajasthan
Tel: 91-141-382894/383154/383165
Fax: 91-141-382810
e-mail: jaipur@unicef.org
The initiative of local leaders is crucial for total sanitation coverage

Nandigram II Block in East Medinipur district, West Bengal has recently achieved 100 percent sanitation coverage. The program was implemented by panchayati raj institutions and facilitated by Ramkrishna Mission Lok Shiksha Parishad, a local NGO. We share the views of the key players in this initiative, Shri Madhusudan Roy, BDO, Smt Smritikana Acharya, Sabbapati, and Shri Durga Shankar Giri, Sabakari Sabbapati.

Nandigram has recently been declared a total sanitation block. What were the strategies adopted to achieve 100 percent coverage?

In 1990 the State Government, in collaboration with UNICEF, launched a pilot with the nodal NGO to motivate communities to adopt household sanitation and construct their own toilets. From the outset, every member of the community was co-opted to work towards the shared goal of total sanitation coverage. Obstacles to sanitation coverage were also identified and addressed. A key feature was the involvement of all political parties and the mobilization of political will.

The program is demand-driven and based on the willingness of communities to meet the cost of constructing toilets. A subsidy, covering part of the cost, is provided only for BPL families. The focus of the program is to motivate households to change behavior patterns and to adopt hygienic sanitation practices. Initially a team of government officials, motivators, teachers and panchayat members visited individual families to motivate households to install toilets and pay for their construction. Social pressure and mobilization were built up through an extensive awareness program. A strong IEC component was developed and messages on health and hygiene were reinforced through a variety of media.

The extensive network of youth clubs was used to reach out to villages and families. Child-to-parent messages were disseminated through the school sanitation initiative. Motivators also played a key role in promoting sanitation coverage.

To ensure a dependable delivery system, rural sanitary marts have been set up. Basic low-cost sanitary units are being promoted and options for upgradation provided.

How did you convince every household to adopt sanitation?

Some families could not afford to build toilets and a few were not convinced of the need for household sanitation. As far as possible, poorer households were given assistance. In some cases, the community made a donation or youth clubs motivated their members to contribute. The panchayat also created employment opportunities locally so that members of these households could earn and pay for toilet construction. House-to-house visits reinforced the sanitation message. Social pressure was also created by representatives from political parties, the police and schools to ensure compliance. Innovative methods were used to influence the community, such as asking private medical practitioners to ‘prescribe’ toilets as a preventive measure for diarrhea.

What are the key features that have led to the success of this initiative?

The joint initiative of the panchayat and the NGO was crucial for achieving total sanitation coverage. The strong delivery mechanism set up at the district level, and implemented at the panchayat level, ensured sustainability. Motivators played a crucial role in generating demand at the grassroots level. Another key factor was the commitment and dynamic leadership of the pradhans. As a result, owning a toilet is now a status symbol and households are willing to pay for construction. Our model has now been adopted in all TSC districts in the state.

Contributions, comments, suggestions and requests for subscription may be sent to:

INSDOC
c/o RGNVWM, Block 11, 8th Floor, CGO, New Delhi 110 003
Tel: 436 1556, 1950 & 2166; Fax: 436 4115/4427;
e-mail: atm@water.in.nic.in; ddawsp@water.in.nic.in

INDIA COUNTRY TEAM
WSP-SA, 55 Lodi Estate, New Delhi 110 003
Tel: 465 0888-9; Fax: 462 8250; e-mail: wspsa@worldbank.org

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