

2.2 Accelerated Rural Water Supply Programme

Highlights

With the objective of providing 40 litres per capita per day of safe drinking water to all the rural habitations and ensuring sustainability of the systems and sources and also to supplement the efforts of the State Government taken up under Minimum Needs Programme, the Government of India reoriented the Accelerated Rural Water Supply Programme with a mission approach. The implementation of the programme suffered as a consolidated annual action plan was not prepared at the State level and the action plans prepared by the Zilla Panchayats were not based on critical data regarding status of habitations, schemes in operation, etc.

During 2002-07, annual action plans were not prepared at the State level and annual action plans prepared by the Zilla Panchayats were defective. The Zilla Panchayats failed to analyse the reasons for slip back of habitations. SC/ST habitations were not prioritised.

(Paragraph 2.2.6)

In the test-checked Zilla Panchayats, though the utilisation of available funds was to the extent of 98 per cent, there were instances of irregular utilisation of funds (Rs.3.62 crore) for other activities, inadmissible expenditure (Rs.66.93 lakh) and lapsing of grants (Rs.8.84 crore).

(Paragraphs 2.2.7.1 to 2.2.7.4)

Although 28024 works were executed in the State incurring an expenditure of Rs.650.02 crore, the programme was implemented without basic data such as the details of water supply schemes in operation during the years 2002-06.

(Paragraph 2.2.8.1)

The norms of Accelerated Rural Water Supply Programme were flouted in 13 Taluk Panchayats and 879 schemes were executed in excess of the admissibility.

(Paragraph 2.2.8.2)

Sachethana and Suvarnajal water supply schemes failed to achieve the objectives inspite of huge expenditure incurred on them as the quality of water supplied to habitations/schools was not potable or was not tested before supply.

(Paragraphs 2.2.8.4 and 2.2.8.5)

In the absence of proper data regarding the number of schemes/source in operation and those requiring maintenance, only eight *per cent* of the available funds was utilised towards operation and maintenance of the schemes in the State while in the test-checked districts, the expenditure was only six *per cent* of the funds released as against the stipulated fifteen *per cent*.

(Paragraph 2.2.9)

2.2.1 Introduction

The Government of India (GOI) introduced (1972-73) the Accelerated Rural Water Supply Programme (ARWSP), a centrally sponsored scheme to supplement the efforts of the State Government to provide safe drinking water to the rural population under Minimum Needs Programme (MNP). The programme was given (1991) a mission approach with the following objectives.

- To ensure coverage of all rural habitations with access to a minimum of 40 liters per capita per day (LPCD) of safe drinking water
- To ensure the sustainability of systems and sources
- To institutionalise the water quality monitoring and surveillance
- To tackle the problem of water quality in affected habitations.

According to the ARWSP guidelines, the main objective of the programme was to ensure full coverage of all habitations of the State by selecting suitable source (ground or surface water source) and schemes (hand pump/MWS/PWS[£]) in a scientific and cost effective manner so as to ensure supply of the required quality and quantity of water besides ensuring sustainability of sources and schemes.

[£] Mini Water Supply/Piped Water Supply

The scheme was implemented in all the 27 Zilla Panchayats (ZPs) of the State. The major components of the scheme were ARWSP (Normal), Submission Projects, Desert Development Programme, Swajaldhara and Calamity Relief Programme. The GOI was to release funds under ARWSP and State Government was to provide grants on the basis of 1:1 under MNP.

2.2.2 Scope and methodology of audit

A review on Drinking Water Supply (covering the period 1997-2001) was included in the Report of the Comptroller and Auditor General of India (Civil) for the year ended 31 March 2001 (Paragraph 6.1) which included the Rural Water Supply Programme implemented in the State. The review of the activities and schemes taken up during 2002-07 under ARWSP (Normal)[£] and MNP was conducted by test-check of records of seven[¥] ZPs alongwith the Panchayat Raj Engineering Divisions (PREs) and 34 Grama Panchayats (GPs) under the jurisdiction of those ZPs. The ZPs were selected by adopting the 'simple random sampling without replacement' method. Besides, the records maintained by the Principal Secretary, Rural Development and Panchayat Raj (RDPR) Department and Chief Engineer (CE), PRE Department were also reviewed.

2.2.3 Audit objectives

The performance appraisal of ARWSP was conducted to ascertain whether

- planning for implementation of the programme was proper
- sufficient funds were available and utilised economically and effectively
- programme implementation was efficient and the objectives were achieved.

[£] The comments are restricted to implementation of water supply schemes under ARWSP (Normal) and MNP as the performance of Submission Projects, Desert Development Programme and Swajaldhara were commented in the earlier Audit Reports

[¥] Bangalore (Rural), Belgaum, Bellary, Gulbarga, Kolar, Koppal and Shimoga

2.2.4 Audit criteria

The following were the criteria for the performance review of ARWSP.

- Guidelines for implementation of Rural Water Supply Programme (August 2000)
- Guidelines on Survey of Drinking Water Supply status in Rural Habitations (February 2003)
- Guidelines for National Rural Drinking Water Quality Monitoring and Surveillance Programme (January 2006).

2.2.5 Organisational structure

| Level | Authority responsible for implementation of the scheme | Functions and responsibilities |
|----------|--|---|
| Village | Grama Panchayat | Operation and maintenance of schemes and arranging for testing of water quality periodically |
| District | Panchayat Raj Engineering Divisions | Proposing works depending on the status of habitations, selection of site for works based on scientific analysis of water yield/potability and suitability and execution of works |
| | Zilla Panchayat | Preparation of annual action plan for the district and according approval for works. Timely release of funds to Panchayat Raj Engineering Divisions. Monitoring of progress of works, operation and maintenance, and testing of quality of water periodically. Timely submission of utilisation certificates to Chief Engineer, Panchayat Raj Engineering Department |
| State | Chief Engineer, Panchayat Raj Engineering Department | Maintenance of database regarding status of habitations, ground water level, water quality. Planning at the State level and preparation of consolidated annual action plan for the State. Watching of timely receipt of utilisation certificates from Zilla Panchayats and their submission to State Government after due check/verification. Monitoring the implementation, operation and maintenance, and water quality testing of the schemes at the field level |
| | Rural Development and Panchayat Raj Department | Approval of consolidated annual action plan and onward transmission to Government of India for obtaining funds. Timely release of Central and State funds to Zilla Panchayats and submission of utilisation certificates to Government of India. Overall monitoring of the implementation of the scheme. |

Acknowledgement

Audit is thankful for the kind co-operation extended by the officers of the Department in the conduct of the review. The Entry Conference of the performance appraisal was held (September 2007) with Officers of the RDPR Department to discuss the scope and methodology of the review. The points noticed during the review were communicated to the Government during December 2007. The Exit Conference was held on 14 January 2008 with the Secretary and other officers of RDPR Department. While generally accepting the observations of Audit, the Secretary stated that remedial action would be taken regarding non-preparation of annual action plans (AAPs), non-adoption of source sustainability measures and slip-back of habitations from 2007-08 onwards. Specific remarks of the Government are awaited (February 2008).

Audit findings

The findings of the performance review are narrated in the succeeding paragraphs.

2.2.6 Planning

❖ *Non-preparation of annual action plans*

Annual action plans were not prepared at the State level

The main objective of preparation of AAP was to provide a definite direction for the successful implementation of the programme and also to ensure regular monitoring of the progress during the course of the year. The scheme guidelines stipulated preparation of a consolidated AAP by the State Government before the commencement of the financial year on the basis of the shelf of schemes forwarded by the ZPs, likely size of the allocation under ARWSP and State sector MNP. On finalisation of the outlay, the AAP was to be reviewed/revised and forwarded to GOI. Though the Government stated (October 2007) that yearly financial and physical projections for registering the demand were sent to GOI, reference to the same were not on record.

It was noticed that the State Government did not prepare the consolidated AAP during the years 2002-07. Similarly, the ZPs were required to prepare an action plan at the district level and forward it to the State Government for

consolidation. It was observed in test-check that three ZPs did not comply with the provision of the guidelines and AAPs were not prepared by ZP, Bangalore (Rural) for 2005-06, Gulbarga for 2002-03 and Shimoga for 2002-03 and 2003-04. The basis of selection of schemes in the absence of AAPs for these years was not furnished to audit by the above ZPs.

❖ ***Defective preparation of action plans***

The AAPs were to be prepared clearly indicating the status of ongoing schemes, extent of proposed coverage, details of the existing scheme and yield, quantity of water being supplied, etc. Scrutiny of AAPs prepared by the ZPs revealed that these details were not available in the AAPs. There was no mention in the AAPs about the action proposed for sustainability of sources. Evidently, the AAPs were defective.

❖ ***Slip back analysis not conducted***

As of April 2001, there were 56682 habitations in the State, which were categorised as Fully covered (FC), Partially covered (PC) and Not covered (NC) depending on the quantity of water supplied to habitations. The ZPs were required to analyse the reasons for slip back of habitations and take adequate remedial measures. The position of coverage of habitations in the State during the period 2000-07, as compiled and submitted to GOI by the State Government was as under.

ZPs failed to analyse the reasons for slip back of habitations

| Year | Position at the beginning of the year | | | Habitations covered during the year |
|--------------|---------------------------------------|-------------------|-------------|-------------------------------------|
| | Fully covered | Partially covered | Not covered | |
| 2000-01 | 54629 | 1998 | 55 | Not furnished |
| 2001-02 | Details not available | | | |
| 2002-03 | | | | |
| 2003-04 | 43044 | 13638 | Nil | 5358 |
| 2004-05 | 43044 | 13638 | Nil | 6030 |
| 2005-06 | 45028 | 11606 | 48 | 2885 |
| 2006-07 | 49735 | 6947 | Nil | 2454 |
| Total | | | | 16727 |

As of March 2001, there were 2053 PC/NC habitations in the State. As against this, it was observed that 16727 habitations were covered during the period 2003-07 and 4493 habitations still remained as PC habitations. This indicated that 34 *per cent* of the habitations slipped back during the period

2001-07. This could be attributed to non-ensuring of sustainability of sources while designing the plans of the works.

Though large number of FC habitations slipped back to PC/NC, the ZPs did not conduct any analysis of the phenomenon and initiate adequate measures to avoid slip back of habitations.

❖ **Non-prioritisation of SC/ST habitations**

The guidelines stipulated that the State Government was to list out the SC/ST habitations separately and their coverage monitored as a distinct component of the programme. It was, however, observed that the required list was not prepared at State/ZP level and the approved AAPs in test-checked ZPs did not contain information relating to SC/ST habitations and their coverage.

2.2.7 Funds management

2.2.7.1 Financial achievement

Though utilisation of available funds was to the extent of 98 per cent, there were instances of diversion of funds to other activities, inadmissible expenditure, etc.

GOI was to release funds for the implementation of ARWSP (Normal) and the State Government was to provide matching grants on 1:1 basis under State sector MNP. Separate action plans were to be prepared for ARWSP and MNP and accounts were also to be maintained separately. During 2002-07, the GOI released an amount aggregating Rs.734.59 crore under ARWSP (Normal) (including Submission Projects) and State Government provided a matching grant of Rs.743.73 crore. The ZPs incurred an expenditure of Rs.734.17 crore and Rs.720.79 crore respectively. The details of funds released by GOI and the State Government and the expenditure incurred thereagainst by the test-checked ZPs during 2002-07 were as below.

(Rupees in crore)

| Year | ARWSP (Normal) including Submission Projects | | | MNP | |
|--------------|---|-----------------|---------------|------------------------------|---------------|
| | Opening balance | Released by GOI | Expenditure | Released by State Government | Expenditure |
| 2002-03 | 5.23 | 43.71 | 37.61 | 35.10 | 32.03 |
| 2003-04 | 11.33 | 50.12 | 59.34 | 31.72 | 35.03* |
| 2004-05 | 2.11 | 37.71 | 37.98 | 27.94 | 27.06 |
| 2005-06 | 1.84 | 63.01 | 64.07 | 60.90 | 60.12 |
| 2006-07 | 0.78 | 63.96 | 59.98 | 65.27 | 60.80 |
| Total | 21.29 | 258.51 | 258.98 | 220.93 | 215.04 |

* excess expenditure over the release was due to carry forward of closing balance of pervious year, with the specific approval of the Government

It could be observed from the table above that in the test-checked ZPs, the available funds were utilised to an extent of 98 *per cent*. Audit, however, noticed the following irregularities in financial management.

2.2.7.2 Irregular utilisation of funds

The Chief Executive Officers of ZPs, Kolar and Gulbarga irregularly utilised (July 2005 and August 2006) amounts aggregating Rs. 3.62 crore[^] of ARWSP funds for execution of works taken up under Calamity Relief Fund/MNP. The funds were yet to be recouped (July 2007).

2.2.7.3 Inadmissible expenditure

The scheme guidelines stipulated that ARWSP funds should not be utilised/adjusted against any cost escalation of schemes or excess expenditure over the approved cost of schemes. It was, however, noticed in six ZPs test-checked that a total amount of Rs.66.93 lakh had been incurred out of ARWSP funds towards excess expenditure or cost escalation in respect of 48 works instead of MNP funds.

2.2.7.4 Lapsing of grants

It was noticed in three test-checked ZPs that out of funds of Rs.27.22 crore released by GOI/State Government for the implementation of ARWSP/MNP during 2006-07, a total amount of Rs.8.84 crore was lapsed to Government as the ZPs failed to adjust the funds to ZP Fund. The details were as shown below.

| Zilla Panchayat | Period | Total amount released | Amount lapsed |
|-----------------|---------|-----------------------|---------------|
| | | (Rupees in crore) | |
| Belgaum | 2006-07 | 12.44 | 5.46 |
| Gulbarga | | 11.72 | 1.48 |
| Koppal | | 3.06 | 1.90 |
| Total | | 27.22 | 8.84 |

The ZPs attributed this to release of funds by State Government at the fag end of the year, technical problems in treasuries and non-approval of action plan.

[^] Gulbarga – Rs. 2.50 crore to CRF works and Kolar – Rs.1.12 crore for MNP works

2.2.7.5 Utilisation certificates

❖ Non-receipt of utilisation certificates for funds released towards operation and maintenance

Utilisation certificates were submitted to GOI without ascertaining actual utilisation of funds at the grass root level

According to scheme guidelines, the funds released under ARWSP and MNP towards operation and maintenance were to be released by ZPs to TPs/GPs based on the norms[¥] fixed. The CEO of the ZPs were to obtain the utilisation certificates from TPs/GPs and in turn forward the same to Chief Engineer, PRE Department for verification/consolidation and onward transmission to State Government/GOI through RDPR department. It was noticed in the test-checked ZPs that during 2002-07, the ZPs did not obtain utilisation certificates from the TPs/GPs for amounts aggregating Rs.29.37 crore released towards operation and maintenance charges. The ZP-wise details were as shown in the table below.

| Zilla Panchayat | Amount (Rupees in crore) |
|-------------------|--------------------------|
| Bangalore (Rural) | 5.66 |
| Belgaum | 7.83 |
| Bellary | 2.30 |
| Gulbarga | 5.06 |
| Kolar | 4.56 |
| Koppal | 3.51 |
| Shimoga | 0.45 |
| Total | 29.37 |

During 2005-06, based on an order (March 2006) of the State Government, the ZPs, Gadag, Kolar and Tumkur released (March/April 2006) a sum of Rs.two crore to BIRD-K[¶], a non-government organisation for providing safe drinking water to the quality affected habitations under Sachethana Scheme (launched under ARWSP-Normal). It was, however, noticed that the ZPs submitted the utilisation certificate to the State Government for the said amount though the amount released to the organisation remained unutilised and utilisation certificate was not received from the organisation.

[¥] Rs.8000 for each functioning PWS, Rs.3500 for each functioning MWS and Rs.600 for each Handpump

[¶] BAIF Institute for Rural Development - Karnataka

The State Government submitted the utilisation certificate for 2005-06 to GOI without verifying actual utilisation of funds by TPs/GPs. This procedure was fraught with the risk of incorrect reporting of expenditure to GOI.

2.2.8 Implementation of the programme

The audit observations on implementation of the programme are narrated in the succeeding paragraphs.

2.2.8.1 Physical achievement

The details of the schemes in operation during 2002-06 were not available at State Government/ZP level

As of April 2001, there were 56682 habitations in the State. As against 199309 works implemented in these habitations, 37439 remained non-functional. Similar details for the years 2002-06 was not maintained either at the State level or at the ZPs level. Evidently, the programme was implemented in the State without the basic data. As furnished by the CE, PRE Department, the number of schemes implemented in the State was 245205 as of March 2007 of which 54426 were non-functional. During 2001-07, the percentage of non-functional schemes increased from 19 in 2001-02 to 22 in 2006-07.

During the period 2002-07, a total number of 28024[¥] works were completed in the State at an expenditure of Rs.650.02 crore. Similarly, an expenditure of Rs.286.21 crore had been incurred on 9194 works in the test-checked ZPs. Year-wise details of works completed and expenditure incurred on them in the test-checked ZPs were as shown in the table below.

(Rupees in lakh)

| Zilla Panchayat | 2002-03 | | 2003-04 | | 2004-05 | | 2005-06 | | 2006-07 | |
|-------------------|-----------------|----------------|-----------------|----------------|-----------------|----------------|-----------------|----------------|-----------------|-----------------|
| | Works Completed | Expr. | Works Completed | Expr. | Works Completed | Expr. | Works Completed | Expr. | Works Completed | Expr. |
| Shimoga | 109 | 294.32 | 214 | 221.76 | 156 | 339.87 | 139 | 354.29 | 86 | 1194.70 |
| Bellary | 82 | 124.70 | 32 | 57.96 | 167 | 267.65 | 122 | 259.20 | 194 | 1507.65 |
| Koppal | 235 | 227.14 | 296 | 367.03 | 271 | 395.21 | 259 | 903.43 | 46 | 1342.05 |
| Gulbarga | 216 | 528.34 | 183 | 423.71 | 285 | 456.28 | 66 | 261.18 | 166 | 1868.33 |
| Kolar | 197 | 567.25 | 350 | 634.29 | 425 | 726.84 | 518 | 2010.88 | 306 | 2277.97 |
| Bangalore (Rural) | 269 | 575.06 | 442 | 704.34 | 391 | 501.64 | 231 | 574.28 | 228 | 1816.00 |
| Belgaum | 315 | 656.82 | 316 | 813.64 | 531 | 979.76 | 529 | 2316.73 | 822 | 2070.62 |
| Total | 1423 | 2973.63 | 1833 | 3222.73 | 2226 | 3667.25 | 1864 | 6679.99 | 1848 | 12077.32 |

Expr. – Expenditure

Audit scrutiny of records of completed works in test-checked ZPs revealed that these works were executed without indicating the reasons for their selection, the status of earlier schemes in existence in that habitation, whether

[¥] Borewells with handpump – 18593, MWS – 5863 and PWS - 3568

the new work was necessitated due to slip back of the habitation etc. The basis for selection of the water supply schemes was not forthcoming as the ZPs did not have the details of works in operation and the AAPs adopted were defective/deficient.

2.2.8.2 Non-adherence to norms

Contrary to norms, large number of water supply schemes were executed without regard to population of the habitations

According to ARWSP norms^Σ, habitations with a population between 500 and 1000 were eligible for a Mini Water Supply (MWS) and habitations with population more than 1000 were eligible for a Piped Water Supply (PWS). A borewell fitted with a handpump was to be provided to habitations with population less than 500. It was noticed in audit that in 13 taluks involving 828 habitations, 879 MWS/PWS were irregularly provided to habitations without regard to population in contravention of norms. The details were as under.

| Taluk Panchayat | Number of habitations | As per norms eligible for | | Actually provided with | | Excess | |
|-----------------|-----------------------|---------------------------|----------|------------------------|------------|------------|------------|
| | | MWS | PWS | MWS | PWS | MWS | PWS |
| Bailhongal | 7 | 7 | - | 1 | 7 | - | 7 |
| Belgaum | 13 | 8 | - | 7 | 14 | - | 14 |
| Chikkodi | 11 | 5 | - | 3 | 9 | - | 9 |
| Gulbarga | 41 | 1 | - | 36 | 7 | 35 | 7 |
| Aland | 24 | 4 | - | 16 | 7 | 12 | 7 |
| Yadgir | 70 | 5 | - | 65 | 6 | 60 | 6 |
| Shorapur | 21 | 1 | - | 16 | 6 | 15 | 6 |
| Siruguppa | 25 | 4 | - | 21 | 4 | 17 | 4 |
| Koppal | 25 | 4 | - | 21 | 4 | 17 | 4 |
| Shimoga | 62 | 15 | - | 47 | 15 | 32 | 15 |
| Sagar | 89 | 25 | - | 63 | 36 | 38 | 36 |
| Doddaballapur | 87 | 6 | - | 75 | 13 | 69 | 13 |
| Kanakapur | 353 | 29 | - | 432 | 53 | 403 | 53 |
| Total | 828 | 114 | - | 803 | 181 | 698 | 181 |

2.2.8.3 Source sustainability measures not adopted

As most of the water supply schemes under ARWSP/MNP were based on ground water, the scheme guidelines stipulated adoption of long term source sustainability measures like check dams, percolation tanks, rain harvesting,

^Σ As mentioned in the Annual Report of the Department for the year 2001-02

etc., to regulate the indiscriminate ground water exploitation. The scrutiny of the draft project reports of 70^o works executed in test-checked PREDs revealed that no provision was made in any of the reports for sustainability of sources which is indicative of faulty planning as detailed in paragraph 2.2.6.

2.2.8.4 Sachethana Water Supply Scheme - Non-achievement of the objectives

The scheme did not achieve the objective of providing safe drinking water as the test results were negative

With the objective of providing safe drinking water to the rural population coming under the jurisdiction of ZPs, Gadag, Kolar and Tumkur, the State Government launched (2005-06) Sachethana water supply scheme under ARWSP (Normal) with an outlay of Rs.14.34 crore and project period of five years. The expenditure on the project was to be shared at 50:50 between GOI and State Government. The scheme envisaged provision of potable drinking water through roof top harvesting and improving the level of ground water by artificial recharge measures. The administrative approval was accorded (March 2006) by the State Government. As per the directions of the State Government, the ZPs concerned entered into agreement with BIRD-K in March 2006 for execution of the works. Meanwhile, an amount of Rs.2 crore was released (March-April 2006) to BIRD-K with a stipulation to complete 557 structures during the first year. As against the target, it was noticed in audit that BIRD-K could complete only 80 structures during 2006-07 by incurring an expenditure of Rs.11.11 lakh.

Besides, the water quality test conducted (September-October 2007) at State Referral Institute[£] (SRI) of 18 of these 80 completed rain water harvesting (RWH) structures disclosed that the pH value^β of the water ranged from 8.86 to 10.52 in 12 structures as against the permissible limit of 6.5 to 8.5 and the water samples were certified as not potable.

On this being pointed out, BIRD-K replied (October 2007) that high pH value was due to newly provided lime wash to these structures and would come down gradually. The reply was not tenable as in that case high pH value should have been accompanied by high level of calcium also in the tested

^o At the rate of 10 works in each of the seven ZPs test-checked

[£] The water testing laboratory with the Department of Mines and Geology

^β A value to measure acidity or alkalinity of a substance

samples as lime contains calcium. However, the tested samples showed high pH value despite lower value of calcium. Hence, poor quality of work and seepage of extraneous pollutants into these RWH structures could not be ruled out. The samples of remaining 62 structures were not tested at the SRI. As all the 80 structures were stated to have already been commissioned, the people of concerned villages were supplied with unsafe drinking water. Thus, the Sachethana scheme so far implemented had not achieved its objective.

2.2.8.5 Supply of stored water to school children without ensuring potability under Suvarnajal water supply scheme

School children were supplied with stored rain water without ensuring its potability

The State Government launched (June 2005) Suvarnajal scheme (under ARWSP) to provide safe drinking water through Roof Top Rain Water Harvesting in rural schools which were not covered under regular water supply schemes. A total of 16556 schools in the State were provided with drinking water facility up to March 2007 (2005-06-7015: 2006-07-9541) incurring an expenditure of Rs.73.66 crore. The State Government also stipulated that the works were to be executed as per the design and technical guidance of Karnataka State Council for Science and Technology (KSCST). The KSCST had clarified to Government that the stored rain water was fit for drinking only for six months in a year provided the roof water was properly filtered and chlorinated before storage and the storage chamber was to be air-tight and sunlight-proof. Thus, testing the quality of stored water was imperative before being supplied to the school children.

It was noticed in test-check in Chikkodi taluk (Belgaum District) that as of March 2007, out of 454 works taken up during 2005-07, 353 works were completed at a cost of Rs.74.80 lakh. Scrutiny of records disclosed that the PRED, Chikkodi which executed these works had not conducted water quality tests of the stored water since inception. Thus, the school children were supplied stored rain water without conducting the envisaged quality test for ensuring its potability.

2.2.9 Operation and maintenance

The expenditure towards operation and maintenance of the schemes was far less than the admissible amount

As of March 2007, there were 245205 schemes in the State of which 54426 were non-functional. However, the data regarding number of sources which dried up and number requiring repairs and year-wise details for non-functional schemes during 2002-06 were not maintained both at ZP and State level. As of March 2007, the details of status of schemes in the State as well as ZPs test-checked were as follows.

| Schemes | State level | | | | Test-checked ZPs. | | | |
|-------------------------|-------------|-------|-----------|--------|-------------------|-------|-----------|-------|
| | PWS | MWS | Handpumps | Total | PWS | MWS | Handpumps | Total |
| Existing | 18592 | 32298 | 194315 | 245205 | 5577 | 10537 | 62828 | 78942 |
| Working | 17594 | 30373 | 142812 | 190779 | 5312 | 9967 | 42374 | 57653 |
| Defunct/ Non-working | 998 | 1925 | 51503 | 54426 | 265 | 570 | 20454 | 21289 |

The scheme guidelines stipulated that upto 15 *per cent* of the funds released under ARWSP (Normal) and MNP was to be utilised towards operation and maintenance of the schemes. It was noticed that during 2002-07 a total of Rs.1478.31 crore was released by the GOI and State Government under ARWSP (Normal) and MNP. Out of this, an amount of Rs.124.12 crore (8 *per cent*) had been utilised for the operation and maintenance as against stipulated 15 *per cent*. In the test-checked districts, as against the total release of Rs.479.44 crore, the expenditure incurred towards operation and maintenance was Rs.29.37 crore only (6 *per cent*). This could also partially explain the increase in cases of slip back of habitations as already discussed in Paragraph 2.2.6.

❖ *Poor utilisation of hydro fracturing units*

The PREDS resorted to drilling of borewells though hydro fracturing units procured at a huge expenditure remained idle

Hydrofracturing technology is used to improve water yield in yield depleted/dried up borewells by cleansing underground rock surface water inlets (technically called as Aquifers) by injecting water jet at high pressure. As of March 2007, there were 54426 non-working ground water based schemes in the State (21289 schemes in the test checked districts). The State Government had procured 10 Hydro fracturing units in 2003-04 under different programmes at a cost of Rs.85.00 lakh per unit and kept them at all

the ten PRE Circle Offices in the State for use by the PREDs of the respective Circles. Circular instructions were also issued by Government at regular intervals (December 2003, July 2004 and February 2005) to ZPs/PREDs to resort to hydro fracturing of dried up/yield depleted borewells on priority basis rather than opting for the costlier operation of drilling of new bore wells. However, as per data maintained at the State level, hydro fracturing was performed only in 3323 cases during the period 2003-07 with success rate of 91 to 100 *per cent*. In two test-checked ZPs, Gulbarga (having 3330 number of defunct borewells) and Belgaum (having 6098 number of defunct borewells), hydro fracturing was resorted to only in 36 (1 *per cent*) and 145 (2 *per cent*) cases respectively during 2003-07. Similar details in respect of other divisions were not available with the CE as the divisions did not submit the progress report. The CE also failed to insist for submission of regular progress reports. Poor utilisation of hydro fracturing unit not only resulted in taking up of new schemes at huge cost instead of hydro fracturing of existing schemes at cheaper cost but also resulted in idling of expensive hydro fracturing units.

2.2.10 Water Quality Monitoring and Surveillance Programme

The Water Quality Monitoring and Surveillance Programme (WQM&SP) under ARWSP contemplated establishment of a water testing laboratory both at the State and district levels to decentralise the water quality monitoring and to involve the PRIs in the process. Further, WQM&SP guidelines stipulated testing of water samples of each scheme annually at GP level apart from cross-verification at the district level and the State laboratory and taking up of region specific Information, Education and Communication (IEC) activities involving PRIs, etc. A Field Testing Kit was to be supplied to each of the GP. The water quality test arranged by the State Government during 2001 disclosed that the quality of water in 21008 habitations (out of total 56682 habitations) was not potable. As against this, up to March 2007, the State Government sanctioned 50 projects under Submission Projects[£] covering only

[£] to provide safe drinking water to quality affected habitations

265 habitations at a cost of Rs.135.95 crore (14 of these projects were still to be completed). Audit scrutiny revealed that

- Field Testing Kits were not supplied to any of GPs though GOI released (August 2006) an amount of Rs.2.07 crore for IEC and related activities
- The ZPs/CE failed to ensure testing of water quality annually at the GP level
- Of the 27 District Level Laboratories in the State, 12 remained non-functional (March 2007). In respect of the test-checked ZPs, while the laboratories at Kolar and Shimoga were not functioning, the number of samples tested in other ZPs ranged between 56 and 138 per year.

2.2.11 Monitoring and evaluation

The guidelines stipulated that a Monitoring and Investigating Unit (MIU) should be there at the State level with responsibility for planning and conducting feasibility studies of the schemes, collection of data/information from the executing agencies and monitoring at field level. The MIU was to have technical posts such as Hydrologists, Geophysicists, computer specialists, etc. Further, the MIU was to have a Quality Control Unit responsible for controlling/regulating the quality of construction of water supply works.

It was observed that though a MIU was in place at the office of the CE, the Unit was working without specialists like Hydrologist/Geophysicists and no field inspections were conducted during 2002-07 by the officers of the Unit except the CE, PRE Department. Though there were 2.45 lakh works in the State, the number of inspections conducted by the CE ranged from 10 to 19 during 2002-07. Evidently, the monitoring of the implementation of the programme was ineffective.

The State Government entrusted (October 2006) the conduct of evaluation study of implementation, efficiency and reactions of village community in respect of ARSWP to M/s.NABCONS, for submission of report thereon by the

first week of January 2007. The report was yet to be received by Government (October 2007).

2.2.12 Non-maintenance of inventory of assets created

The scheme guidelines prescribed that complete inventory of drinking water sources created under ARWSP/MNP was to be maintained at each level of PRIs and also at the State level. This requirement was not complied with in the test-checked ZPs as well as at the State level. Non-maintenance of envisaged inventory was fraught with the risk of overlapping/duplication of schemes in the habitations.

2.2.13 Other points of interest

❖ Non-preservation of survey documents

The State Government conducted (March 2003) the survey of the status of habitations in 51543[£] habitations of which 42183 conformed to ARWSP norms and 9360 did not conform. But the survey format filled up by the survey personnel in original which was the basic document to confirm the actual conduct of survey was not preserved either at the test-checked PREDs of districts responsible for conduct of survey or at the Office of the CE, PRE Department which was the nodal office. The CE stated that the model survey format as received from the GOI was circulated to each census village at the PREDs concerned and survey was got conducted and compilation of data was completed at his office by the end of February 2004, a copy of which was also forwarded to GOI. However, no documentation to this effect was maintained either at the PREDs or by the CE. Further, the Indian Institute of Public Administration which scrutinised the report found inconsistency in reporting which was yet to be rectified/revalidated (October 2007). The conduct of the survey in accordance with prescribed guidelines could not be ascertained by audit as survey documents were not preserved either at the test-checked ZPs or by CE, PRE Department.

[£] As published in the website (www.ddws.nic.in)

❖ ***Non-monitoring of utilisation of materials transferred to GPs***

Scrutiny of records in the 10 out of 17 test-checked PREDs disclosed that water supply materials such as pipes, collars, pumps etc., costing Rs.4.08 crore which were procured out of ARWSP/MNP funds prior to 2002-03 and were lying in divisions/sub-divisions as surplus materials were arbitrarily transferred to various GPs under their jurisdiction during 2004-05 in terms of Government Circular dated 20 January 2005. As these materials were received as surplus materials and were not indented by the GPs, the ZPs/EEs concerned were required to monitor proper utilisation of the same by the GPs concerned through periodical verification of stock. It was, however, noticed that ZPs/EEs did not monitor the utilisation of the materials.

2.2.14 Conclusion

The performance appraisal of the implementation of ARWSP (Normal) and MNP conducted through sample check of records in the PREDs under seven ZPs covering the period 2002-07 disclosed that the CE, PRE Department failed to prepare consolidated AAPs for the State and the ZPs also did not prepare the AAP regularly. The AAPs, wherever prepared, were defective as they did not contain all the relevant details. Planning for the implementation of the programme was faulty/inadequate as the analysis of slip back of habitations was not conducted in any of the test-checked ZPs/PREDs though 34 *per cent* of habitations slipped back during 2001-07. No measures were contemplated for sustainability of the water sources.

An amount of Rs.8.84 crore released by GOI/State Government lapsed to Government during 2006-07 as ZPs, Belgaum, Gulbarga and Koppal failed to adjust the funds to respective ZP Fund.

The details of the status of schemes for the years 2002-06 was not available either with the State Government or ZPs. In the absence of this critical information, it could not be ascertained in audit as to how schemes were

selected for execution in the first place. The percentage of non-functional schemes in the State increased from 19 in 2001-02 to 22 in 2006-07. The norms for the implementation of the scheme were grossly flouted in as much as 879 water supply schemes were provided to habitations with lesser populations than prescribed.

Sachethana and Suvarnajal water supply schemes failed to achieve the objectives in spite of huge expenditure for the implementation of the schemes as quality of water supplied to habitations/schools was not ensured thereby increasing the risk of health hazards.

2.2.15 Recommendations

- ✓ The ZPs may be instructed to prepare the envisaged AAPs for each year to provide a definite direction for the implementation of the programme
- ✓ The data on the schemes in operation/under-execution should be maintained at all levels and action may be taken to analyse the reasons for slip back of habitations and non-functioning of large number of schemes
- ✓ ZPs should be instructed to scrupulously follow the norms for the implementation of the programme
- ✓ The assets created under the scheme should be properly maintained to avoid slip back of habitations
- ✓ Monitoring mechanism at all levels should be strengthened.