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India:
Water Supply, Sanitation and Hygiene
Moving towards the 21st Century

The Environment of the Child
in
Gujrat

Water Supply and Sanitation Programmes
and
UNICEF's role and contributions

UNICEF -Gandhinagr
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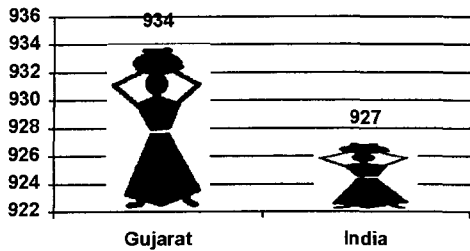
GUJARAT

Demographic details, key socio-economic and health indicators

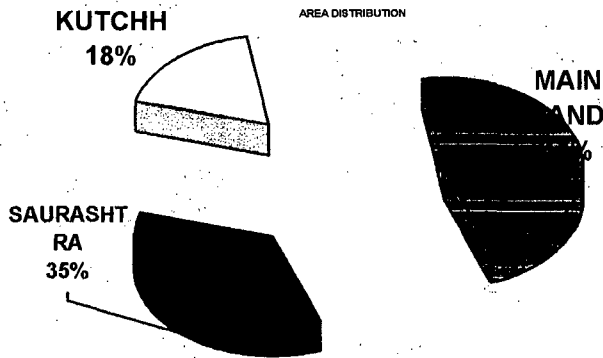
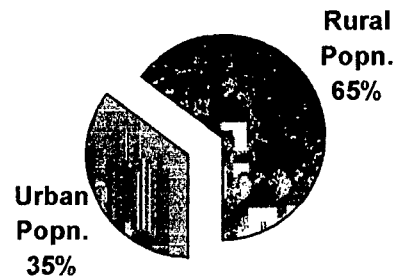
| S.No | Indicators | Status | Source |
|-----------------------|---|------------|---------------------------------------|
| Demographic | | | |
| 1. | Population | 41,309,582 | Census 91 |
| 2. | % of India total population | 4.88% | „ |
| 3. | No. of districts | 19 | „ |
| 4. | No. of development blocks | 184 | „ |
| 5. | No. of main villages(inhabited) | 18,028 | „ |
| 6. | No. of habitations | N.A. | „ |
| 7. | No. of Gram Panchayats | 58,600 | |
| 8. | No. of towns | 264 | „ |
| Socio-economic | | | |
| 1. | Rural Population on % of total population | 65.51% | „ |
| 2. | % scheduled caste population | 7.41% | „ |
| 3. | % scheduled Tribe Population | 14.92% | „ |
| 4. | No. of Primary Schools | 13,582 | 6 th All-India Edn. Survey |
| 5. | No. of Upper Primary Schools | 18615 | „ |
| 6. | No. of Secondary Schools | n.a. | |
| 7. | No. of Higher Secondary Schools | n.a. | |
| 8. | No. of Pry. Health Centres | 936 | DGHS/ MOH&FW, 1994 |
| 9. | No. of Health Sub-Centres | 7284 | „ |
| 10. | Sex Ratio | 934 | Census, 1991 |
| 11. | Population below poverty line | 17.07 | GOI report 1997 |
| Health | | | |
| 1. | Overall Literacy | 61.3 | Census '91 |
| 2. | Female Illiteracy | 48.6 | „ |
| 3. | IMR (per 1000 live birth) - 1996 | 62 | SRS, 1996 |
| 4. | Under 5 Mortality Rate (per 1000) | 104.0 | NFHS, 1993 |
| 5. | Malnutrition among children under 4 years of age (Weight-for-age) | 50.1% | „ |
| 6. | Children fully immunized by 2 yrs | 64.9% | MICS, 1995-97 |

As per the 1991 census, the population of Gujarat was 41.3 millions and had shown a growth of 21.19 % (India - 23.85) over the previous decade (1981-1991). The State has a higher degree of urbanization (35%) as compared to the all India average of 25.71. The Sex ratio (female population per 1000 males) for the state is 934, and is slightly higher than the National average of 927.

Sex Ratio: 1991 Census



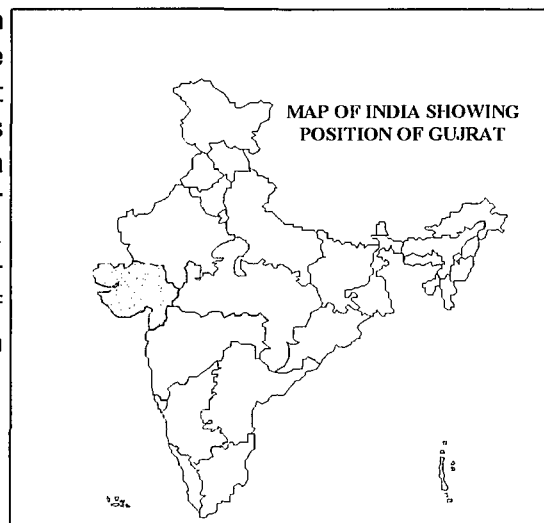
Population distribution: 1991 Census



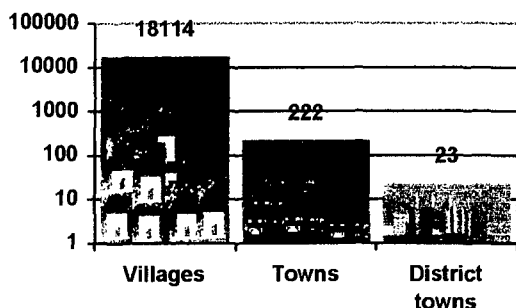
The State consists of three geographic regions viz. Main land, Saurashtra peninsula and Kutchh. The respective land area distribution in these regions is 59,360, 44,203, and 22617 Square Kilometers. These areas have typical hydro-geological features. In the absence of any perennial surface sources, there is a heavy dependence on the groundwater.

Status of WES Programmes

Universal access to safe water and provision for sanitation facilities for every child by the 2000, were accepted as the global goals at the World Summit on Children (1990). This was endorsed by the Government of India under the National Plan of Action (NPA) for Women and Children in 1992. Subsequently, the Government of Gujarat made their commitment to the goals and objectives of the NPA under the State Plan of Action (SPAC) for Women and Children.



The WATSAN sector goals are recognized as crucial components of the SPAC. The underlying principles of decentralization through Community Convergent Action, Local Capacity building and partnerships for alternative delivery systems; were followed in formulating the project and sub-project profiles in this sector. The State is divided in 18,114 villages, 255 towns and 23 district places. Of the 14,503 villages which were identified as "No Source" (NC) villages in 1992, only 247 villages remain to be provided by safe water supply at the beginning of 1998.

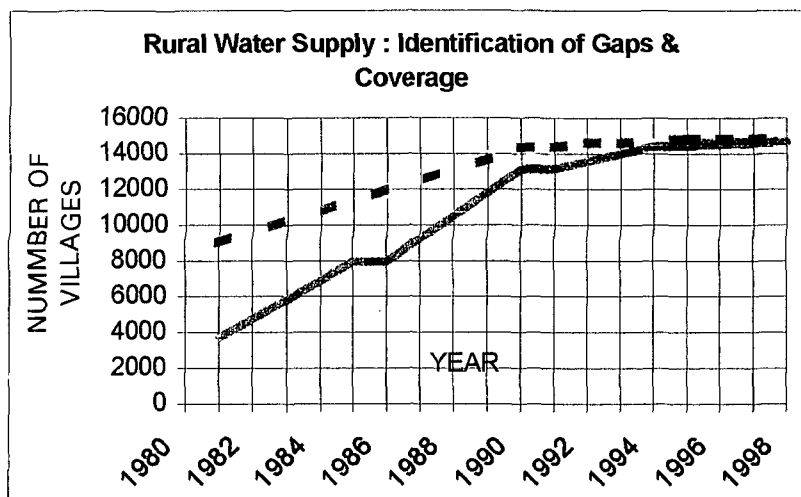


Although coverage is reported to be good, the quality of the service is generally poor and the supply is affected badly during the summer period. As per the GWSSB's monitoring system 98 % of the population is covered with safe water through the rural water supply programme. The good water supply coverage in rural Gujarat is qualified by the fact that, in a large number of villages the water

supply systems fail during the critical summer season. A number of water quality problems are also showing up in increasing number of villages, which indicates a gradual deterioration of the water environment.

It is also noticeable that the definition of water supply coverage has changed depending on the changing context and the associated strategy.

- In sixties and seventies, it was to provide at least some facility in each village
- In the eighties, it was to provide one source for a population of 250 within a mile
- In the nineties, it is to provide at least one safe source for a population 150 within 1 Km.



The process of identification of villages in the 'No Source' category and their coverage with water supply system as per the changing norms is depicted in the graph. The red line (dotted line) indicates the number of villages included in the "NC" (Not covered) category, and the green line (Solid line) indicates the number

of villages covered.

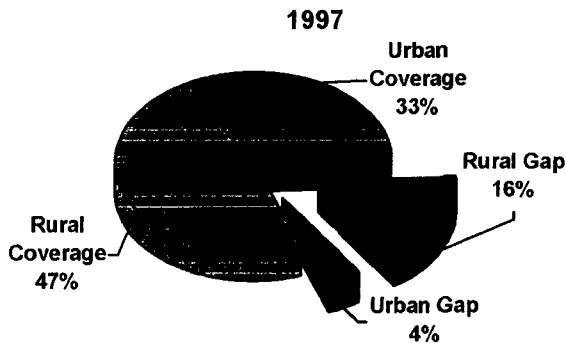
Urban sanitation has always been an active ongoing program in the State. There have been many subsidized funding and schemes for household sanitation facilities on 80:20 - 90:10 bases in the cities. The major area of concern had been the poor coverage in the burgeoning urban poor pockets (69 % 1997 MICS). In the rural areas, a package of Low Cost Twin-leach pit toilets was accepted as an appropriate solution. Since 1986, the GWSSB has constructed 247,828 (183,798 rural and 82,111 urban) household toilets through the government funded program. The progress on sanitation through private initiative was much higher than the achievements of the government funded program. The coverage of rural sanitation was reported to be 11.2 % in Census(1991) and 21.9% in a subsequent survey by NCAER(1994).

However, there is a gap in the theoretical coverage indicated by the design coverage and the factual usage by the beneficiary due to various reasons. The government keeps on assessing this gap and make changes in the systems design norms to reduce it.

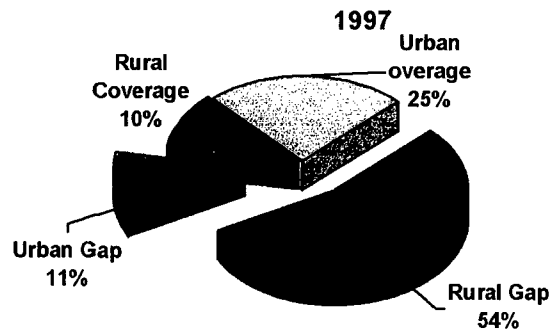
As per the latest MICS (1997) sponsored by UNICEF indicates following coverage

| | Water supply | Sanitation |
|-------|---------------------|-------------------|
| Rural | 74 % | 15.5 % |
| Urban | 96 % | 70.0 % |

Water Supply : Coverage Status as per MICS



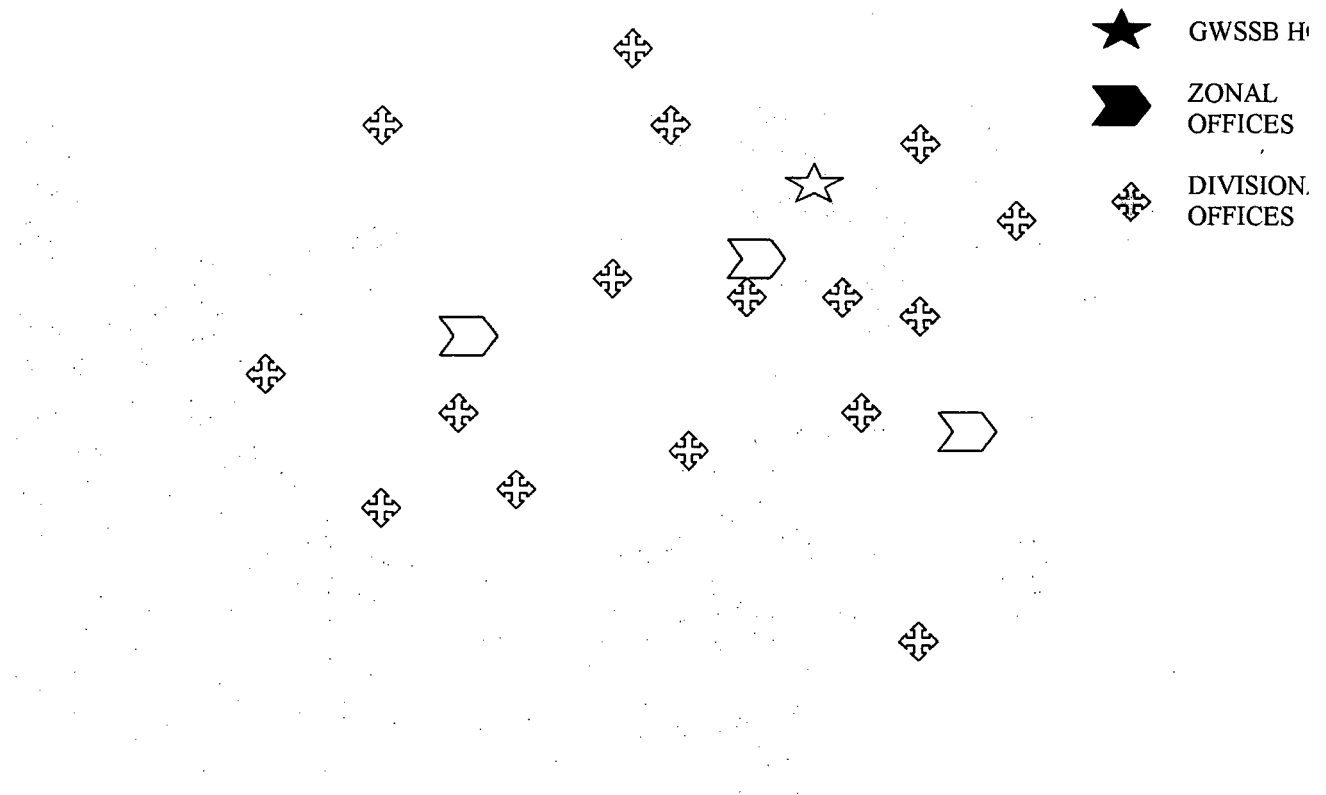
Sanitation : Coverage Status as per MICS



As per the current profiles of rural sanitation coverage prepared by the GOI, the Gujarat State is the second best overall performer in the rural sanitation program in the country. However, there is scope for accelerating development of this component by increasing the delivery capacity through a strategic shift from 'High' to 'Low or No' subsidy, adoption of 'Sanitation up-gradation' approach, and forging new institutional partnerships. This also applies to the sector status in the urban poor pockets in the state

Sector management:

In Gujarat, the Statewide WATSAN program is the responsibility of the Gujarat Water Supply and Sewerage Board (GWSSB). Until recently, this agency worked under the Department of Health but is currently attached to the Department of Narmada, Water Resources and Water Supply of GOG. The Board of Directors of the GWSSB is headed by a chairperson who is appointed by the Government, which is in power at any given point of time.



Institutional Structure: Gujrat Water Supply & Sewerage Board (GWSSB)

The GWSSB organization covers the entire state through three Zonal headquarters located in Rajkot, Ahmedabad and Vadodara (Baroda). Each of these zones is headed by Chief Engineers, and has further divisions, namely Circles (headed by Superintending Engineers) and Divisions (headed by Executive Engineers). Due to the expansion in the water-well drilling and groundwater development activities in the Eighties, two new wings namely the Mechanical and Geo-hydrology which are headed by Chief Engineer(s) and Superintending Geo-hydrologist. One more addition to the organization has been in the form of scientific officers working in the zonal and district water testing laboratories.

The GWSSB is essentially responsible for the capital works, the responsibility of operation and maintenance of the capital works rests with the local bodies viz. Municipal Corporations, municipalities and Village Panchayats. However, due to the lack of capacity at the village level, the responsibility of operation and maintenance of Handpumps and Regional Rural Water Supply systems is handled by GWSSB.

Till the local bodies (particularly the municipalities and Panchayats (PRI)) build the capacity to effectively manage the water supply and sanitation facilities the GWSSB will continue playing a major role in the sector management.

Rural water supply is a politically sensitive subject in Gujarat, and the preoccupation of the GWSSB with scarcity-relief works (starting from January to June/July) is an annual feature. During this period (every year), the department functionaries exclusively work on emergency works sanctioned by district level committees chaired by the respective District Magistrates.

Unicef GOG co-operation in WES sector:

The ongoing WATSAN program in the state can be classified under following (sub) project heads. In line with the overall program framework of WATSAN India country program, there are three major project heads, namely Water Supply, Environmental Sanitation and Communication/Social mobilization. The major activities under these three areas are:

- CDD WATSAN strategy in Panchmahal (Godhra) district
- CBHMS (Community based handpump maintenance system) in Rajkot district
- Program support to the water well drilling operations of the Gujarat Water Supply and Sewerage Board
- Support to Water quality monitoring program of GWSSB
- Demonstration project for slum infrastructure development in Ramdevnagar slum of Baroda city
- Environment protection and related water management projects (for selected micro-watersheds in Rajkot and Jamnagar districts)
- Schools sanitation project in Junagarh district
- Alternative delivery system for rural sanitation through the district level network of NDDB.
- A village based project initiative in Mehsana and Banaskantha districts (CCA-READ)

The Unicef-GWSSB GOG co-operation program, prior to the middle of 1995 was implemented with supplementary assistance from SIDA, EEC/EU and Japanese donors. In addition, UNICEF's General Resources were also made available to the State Programme. In the current year (1998), a substantial part of the program is funded by the Dutch funds.

Two major partnerships have been developed recently with the National Dairy Development (NDDDB) and the Baroda Citizen's Council (BCC) in the sector.

The National Dairy Development Board Anand, have an international reputation and nation-wide network of district-level milk cooperatives. The ICO-UNICEF had aimed at getting the NDDDB's involvement in the nationwide program for establishing the Rural Sanitary Marts. This advocacy was successfully carried forward in Gujarat in the form of two demonstration projects. These project aimed at starting a number of RSMs in Baroda(Vadodara) and Surat districts of Gujarat. The respective district cooperative dairies took the responsibility of implementing these projects.

Emerging Problems

The Saurashtra region is faced with problems of perpetual water scarcity during summers due to low rainfalls. The Main land faces the problems of increasing competition due to rapid urbanization, and intensive industrial/agricultural activities. The coastal Kutchh region faces the problem of high salinity.

Due to low rainfall and uneven frequency, particularly in the Saurashtra region, major portions of the state suffer from water scarcity during summer every year. This has adverse implications not only for the overall development process but also for the household level environmental sanitation practices.

The sector managers in the State are in agreement that even after a major inflow of freshwaters from mega-projects, such as Narmada and Kalp-Sarovar, becomes available in the State, a comprehensive water management strategy would need to be established.

The local bodies at the village and municipal levels have been politically empowered by 73rd and 43rd amendments to the Indian constitution. This is a positive shift towards decentralization of power, for management of welfare programs.

However, the capacity of these institutions (village Panchayats and Municipalities) to deliver the WATSAN services needs strengthening. Sustainable institutional partnerships with semi-government, non-government, private and co-operative organizations; could facilitate this process of effective empowerment of local bodies.

STATE PRIORITIES

The GWSSB is the department-designate for ensuring drinking and domestic water supply in the urban and rural areas in the rural areas of the Gujarat State. They have been facing the problem of unreliable water sources. The water sources determine the geometry of the schemes, which in turn contributes to the costs involved. They have

to design/execute rejuvenation schemes based on newer water sources, which can result in abandonment of already-laid components of old schemes.

The GWSSB, with their state-wide organisational structure, would like to translate this issue of sustainability of water supply sources and protection of their environment, in to a wider programme and follow-up projects for implementation. However, the focus of ongoing programme undertaken by GWSSB is essentially on groundwater recharge in the contingent environment of the supply sources.

Majority of the water sources of the existing and proposed GWSSB's water supply schemes are underground. To ensure sustainability of these, the department had evolved a mandate for undertaking ground-water recharge schemes. There is a 'Recharge-committee' established in GWSSB, which clears the related projects.

The State had established a network of NGOs, which was linked to the State level sanitation cell through a nodal NGO. However, the program was started on the bases of rather high subsidy and a rigid "Two-pit/Single-pit" toilet with high cost superstructure. This strategy needs to be reviewed for enhancing the coverage and usage. In this process, there are many outstanding issues, which need to be given due consideration, and the State Government is giving importance to these.

FUTURE PROGRAM STRATEGY

The primary project objective would remain to be the universal coverage (100 %) of safe water supply and sanitation in the State. However, the experience of implementing the ongoing program in the state has brought out following essential areas, which need strengthening through appropriate strategies.

Objectives

- Inter-sector co-ordination for linkages with other development programs
- Importance of community involvement for sustainability of facilities
- Advocacy for health, hygiene and environmental education
- Capacity building and empowerment at local level through training and technical support
- Newer partnerships for accelerated and effective delivery systems for program coverage in urban poor pockets and the rural area.

Effectively addressing these would be the strategic objective of the proposed sector Plan of Co-operation in the Gujarat State. The sub-projects would aim demonstration of specific strategies and would be followed-up by dissemination for wider replication and coverage.

Activities

As a matter of policy, the program focus would be on promotion of judicious

management of water resources, with an emphasis on the drinking/domestic water and basic sanitation needs of the state. This would be put in the larger context of the water environment within the households, and further expanded to the boundaries of water regimes viz. Micro/macro-watersheds.

Added emphasis will be laid on promotion and expansion of sanitation, starting from the south Gujarat to cover the state in phases.

For the urban areas, potential approaches (like Slum networking) for integration of urban poor in the city level infrastructure will be promoted.

The ongoing CDD-WATSAN strategy was one of the major initiatives in the direction of convergent action to address the multi-sector goals (Health and WATSAN). The emerging mandate for CCA-Urban/Rural as a major programming strategy would be actively pursued for demonstration followed by active advocacy for wider coverage.

The main emphasis would be on local level empowerment and skills development for effective management of the sector. The focus also would be on the processes and technical inputs for capacity building within the government and non-government institutions to tackle the emerging challenges in the sector.

The sub-project profile would include the following and would strive to build the state program as a center of excellence in the field of sector achievements in the fields of rural sanitation and urban initiatives

- Micro-watershed based Environmental Protection and Water Management Strategy for demonstration and state-wide sector policy
- Integrated and inter-sector development in the increasing urban poor pockets in partnership with local industry and community
- Alternative Delivery system for accelerated rural sanitation coverage in partnership with the Dairy co-operatives.
- School sanitation to set healthy toilet facilities among the school children and more dignified environment for girl-children.

UNICEF would continue to support in the monitoring of crucial sector operations to provide an effective decision support (RIMS, HFU, Water Quality monitoring etc.). In addition, support to evaluation studies (Fresh water studies, MICS, Environmental impact assessment focused on water etc.) would continue.