International Journal of Home Science 2022; 8(2): 224-228

International Journal of Home Science

ISSN: 2395-7476
IJHS 2022; 8(2): 224-228

www.homesciencejournal.com
Received: 29-04-2022
Accepted: 30-06-2022

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Problems related to water and electric supply in housing at present time in rural areas of munge

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Abstract
Poor water quality spreads illness, kills people, and stymies socioeconomic development. Waterborne infections claim the lives of around five million people each year. Furthermore, chronic disorders have an impact on schooling and result in 180 million lost work days each year. The anticipated yearly economic loss is Rs.112 crores. Diseases caused by contaminated water are costly to both individuals and the economy as a whole. The expense of treatment and pay loss during sickness are included in the economic loss at the household level. Working days lost have an impact on national production. The government, on the other hand, invests a significant amount of money and effort treating the sick and providing other supportive services. While the need for rural electrification was recognised as early as the 1950s, the Rural Electric Corporation was formed in 1969 as the first serious effort. Its main objective is to support and promote rural electrification across the United States. It oversees the Ministry of Power's rural electrification programmes and provides finance to SEBs/state power companies, as well as equipment manufacturers.

Keywords: Housing problems, socio-economic impact, rural electrification

Introduction

Phase of consolidation

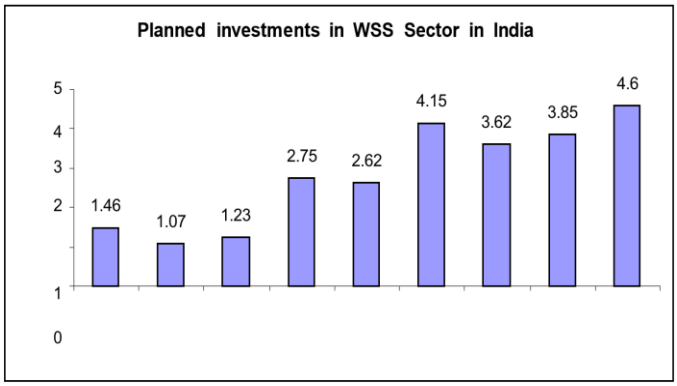
- Swajaldhara, a national scale-up of sector reform, was launched in 2002.
- 2002: The National Water Policy is amended, with a focus on servicing communities without adequate safe water sources and improving service levels for areas categorised as only partially covered.
- 2002: India pledges to meet the Millennium Development Goals of halving the proportion of people without access to safe drinking water and basic sanitation by 2015, compared to 1990 levels.
- All drinking water programmes are brought under the RGNDWM banner in 2004.
- 2005: The Bharat Nirman Programme is launched by the Indian government to improve housing, roads, power, telephone, irrigation, and drinking water infrastructure in rural areas. Within five years, the goal is to offer drinking water to 55,069 uncovered habitations, as well as those afflicted by low water quality and slipping back habitations, as determined by a 2003 survey.
- 2007: The Swajaldhara Scheme's funding pattern shifts from a 90:10 central-community share to a 50:50 central-state share. Contribution from the community is now optional.

Individual health care, public health, sanitation, safe drinking water, availability to food, and awareness of hygiene and feeding practises are all mentioned in the approach document for the 11th Five Year Plan.
It also emphasizes the need to scale up additional community water management plans to reduce the state's maintenance load and responsibilities. By the end of the 11th Plan, it is planned to offer clean drinking water to everyone and ensure that there are no setbacks.

Investment and coverage

According to the 2001 Census, 68.2 percent of Indian households have access to safe drinking water. According to the most recent figures, 94 percent of rural residents and 91 percent of city

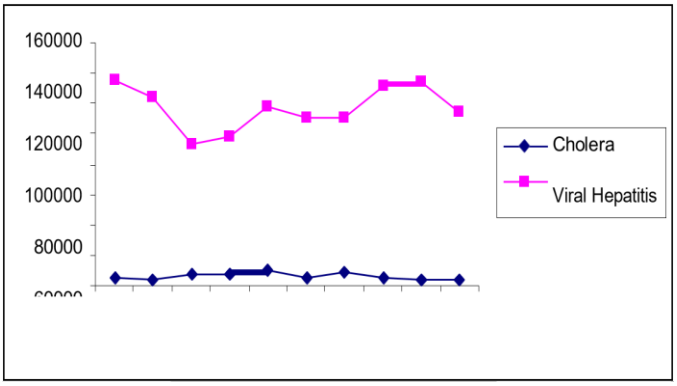
dwellers have access to safe drinking water. Water Aid India, 2005, Drinking Water and Sanitation Status in India.
Coverage, on the other hand, relates to built capacity rather than average actual supply over time or water quality.
The budget outlay in the Eighth Five Year Plan was Rs.16,711 crore, Rs.39,538 crore in the Ninth, and Rs.42,000 crore in the Tenth, as shown in Figure 1. Figure 1 depicts the projected percent outlay investment in the Watsan sector.



Data Source: http:// planningcommission..nnic.in / data/dataf.htm

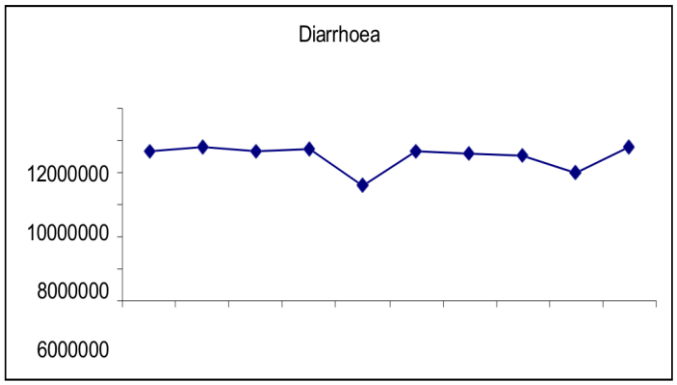
Fig 1: Investment in Watsan sector

Despite the large amounts of money allocated to several ministries, spending has been quite modest. In the first two plan periods, the Ministry of Water Resources spent only 22% of the total plan outlay of Rs.3,600 crores. The approved budget for water supply (rural and urban) was Rs.44, 206.55 crore, with expenditure accounting for 27% of the budget. Rural WATSAN was allotted Rs.14,200 crore by the Department of Drinking Water Supply (DDWS), with 36 percent of the funding used. The watsan sector's investment does not correspond to the health advantages. The morbidity of various water-borne diseases is depicted in Figures 2(a) and 2(b).



Data Source: Central Bureau of Health Investigation

Fig 2(a): Morbidity due to cholera and viral hepatitis



Data Source: Central Bureau of Health Investigation

Fig 2(b): Morbidity due to diarrhoea

The dual problems of water resource sustainability and water quality are becoming increasingly urgent. The Department of Drinking Water and Sanitation (DDWS) estimates a Rs.6,800 crore funding deficit to address rural water sustainability and water quality issues.

Concerns about Water Quality

While getting clean drinking water remains a struggle, ensuring that it is safe is much more difficult. Pollution and over-exploitation are to blame for poor water quality. Due to the quick pace of industrialisation and increased emphasis on agricultural growth, as well as financial and technological limits and non-enforcement of laws, enormous amounts of waste and pollution have been generated. Rainfall distribution is not always uniform, which exacerbates the problem. Individual practices play a significant effect in determining water quality.
Pollution from both point and non-point sources has an impact on water quality. These include sewage discharge, industrial discharge, agricultural run-off, and urban run-off. Floods and droughts can also impair water quality, as can a lack of awareness and education among users. The importance of user participation in water quality maintenance, as well as consideration of other factors such as hygiene, environmental sanitation, storage, and disposal, is key considerations in sustaining the quality of water resources.

Monitoring of Water Quality

In India, the central government provides financial and technical support for rural and urban water supply, while state government agencies are responsible for planning, designing, construction, operation, and maintenance. While larger cities have their own water testing laboratories, rural areas lack an institutional structure for water quality monitoring and data processing.

Priorities and initiatives

- Water quality monitoring has been a major focus since 2000, with institutional procedures in place at the national, state, district, block, and panchayat levels. The government has also detailed the necessary systems for monitoring drinking water quality and developing effective IEC interventions to communicate information and educate people about health and hygiene.

- In February 2006, the Indian government established the National Rural Drinking Water Quality Monitoring and Surveillance Programme. This plan calls for gramme panchayats and Village Water and Sanitation Committees to institutionalize community participation in the monitoring and surveillance of drinking water sources at the grassroots level, with the positively tested samples being checked at district and state level laboratories.
- Beginning in 2006-07, states must set aside up to 20% of funds from the Accelerated Rural Water Supply Program (ARWSP) to address water quality issues.
- The Government of India has approved the establishment of 430 district level laboratories, of which 252 have been created as of 2005. 158 laboratories have been established by various state governments and other organizations.
- For the current fiscal year (2007-08), the Indian government has allocated Rs.1,040 crore to states and union territories to address water quality issues caused by excessive fluoride, nitrate, arsenic, iron, and salinity.

Aiming towards cleaner water

It is a difficult effort to provide safe drinking water to everyone in rural India. Given the country's and people's diversity, solutions must also be diverse. An approach that seeks user participation through interventions that engage communities with various government initiatives and policies should be considered. Citizens should be made aware that they have a right to clean drinking water. An integrated approach like this would bring together the efforts of numerous sectors, including the government, civil society, and, of course, the people.

Role of Government

1. Supporting awareness drives
2. Testing and remedial action
3. Capacity building of communities
4. Making the service provider accountable
5. Water quality standards and provision of water under the Food Law Bill
6. School Water Supply Programme
7. Role of environment sanitation and hygiene

Role of Civil Society and Communities

1. Awareness
2. Accountability
3. Community Based Water Quality Monitoring
4. Looking for alternate water sources: Water Harvesting

Development of Rural Electrification

In today's context, rural electrification has five major facets

- Setting up of rural electricity infrastructure
- Providing connectivity to households
- Adequate supply of desired quality of power
- Supply of electricity at affordable rates
- Providing clean, environmentally benign and sustainable power in efficient way

India has long had a rural economy, and successive administrations have attempted to enhance rural infrastructure, especially electricity infrastructure, since independence. However, much work remains to be done in order to give the rural economy a significant boost.

India has only achieved 67.3 percent overall electrification despite initiating ambitious initiatives to reach 100 percent rural electrification (urban and rural together). More than 75 million rural households (45 percent of the total) are still without electricity (Census of India, 201a). According to the most recent data (Progress report on village electrification as of 31-01-2015 as per 2011), around 19,909 villages are still to be electrified. However, not all electrified villages receive reliable power, and it is estimated that over a third of the population is under-electrified, receiving less than 50 kWh of electricity per month per household.

Government Initiatives in Rural Electrification

While the need for rural electrification was recognised in the 1950s, the Rural Electric Corporation was established in 1969 as the first major attempt. Its primary goal is to fund and promote rural electrification throughout the country. It manages the Ministry of Power's rural electrification programmes in addition to providing credit support to SEBs/state power utilities, equipment manufacturers, and so on (MoP).

The Gol (Government of India) has also initiated a number of important programmes (Chandra Bhushan, 2014)

- Rural electrification under Minimum Needs Programme launched in 1974
- Kutir Jyoti Yojana to provide single point light to below poverty level (BPL) families in rural India launched in 1988.
- Pradhan Mantri Gramodaya Yojana to electrify un-electrified villages as per prevailing definition of electrification launched in 2003
- Remote Village Electrification Programme launched in 2001 by Ministry of New and Renewable Energy (MNRE). This programme focused on electrifying remote villages not connected to grid through use of renewable energy sources
- Accelerated Rural Electrification Programme in 2003
- Accelerated electrification of one lakh villages and one crore households launched in 2004
- Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY): Launched in 2005, this programme aimed at providing energy access to all by 2009 and at least one unit of electricity per household per day by 2012 as envisaged in NEP (National Electricity policy) 2005. All earlier programmes were merged in RGGVY
- In 2009, MoP launched Decentralised Distributed Generation Scheme under RGGVY to electrify un-electrified villages through mini grids. This also included villages which receive less than six hours of electricity per day
- In December 2014, current government announced Deendayal Upadhyay Gram Jyoti Yojana (DDUGJY) with major modifications in RGGVY.

It aims to achieve the following objectives:

- Separation of agriculture and non-agriculture feeders
- Strengthening and augmentation of rural sub-transmission and distribution infrastructure, including metering of distribution transformers feeders/consumers
- Rural electrification as per CCEA approval dated 1 August 2013 for completion of the RGGVY targets for the 12th and 13th Plan

Some of the primary legislative and regulatory actions supporting rural electrification programmes are the Electricity Act 2003 (EA 2003), National Electricity Policy 2005 (Power,

National Electricity Policy), National Tariff Policy 2006, and Rural Electrification Policy 2006.

Rural Electrification Policy aims at:

- Provision of access to electricity to all households by year 2009.
- Quality and reliable power supply at reasonable rates.
- Minimum lifeline consumption of 1 unit per household per day as a merit good by year 2012.

However, as can be seen from the data these targets are yet to be achieved.

The definition of electrified communities was also altered by the Rural Electrification Policy (REP). According to the REP, a village is classified as electrified if the Gram Panchayat issues a Certificate certifying that: a) Basic infrastructure such as distribution transformers and distribution lines are provided in the inhabited locality, as well as at least one Dalit Basti / hamlet where it exists; and b) Electricity is provided to public places such as schools, panchayat office, health centres, dispensaries, community centres, and so on; and c).

By 2019, the current government has promised that everyone will have access to power 24 hours a day, seven days a week. In collaboration with the states, comprehensive state-specific action plans for 24x7 power to all houses are being developed, encompassing generation, transmission, and distribution. Under its 'Electricity for All' plan, which intends to reach the entire state by October 2016, the power ministry has inked a memorandum of understanding with the Andhra Pradesh government. Plans for Delhi and Rajasthan are already finalised and ready to go, and plans for other states are in the works (Power).

Rural electrification must be accompanied with a concerted effort to develop income-generating enterprises in order to strengthen the rural economy.

Challenges in Rural electrification

Grid extension-based rural electrification promoted through the RGGVY and other programmes has faced significant challenges, including:

- High cost of grid extension and low recovery due to highly subsidized tariffs, low level of tariff collection resulting in negative return
- Supply rationing due to power shortages
- High operation and maintenance costs

Rural electrification through renewable

Since the early 1980s, MNRE has been pursuing rural electrification projects using renewable energy sources such as solar PV, biomass, and small hydropower. The first focus was on delivering solar lanterns and street lighting. The advancement of renewable energy technologies and products has ushered in new frontiers for renewable energy-based rural electrification, including pico solar lighting, DC and AC mini-grids, smart micro grids, and eventually grid interactive micro and mini-grids that can supplement the grid extension programme. Renewable energy-based decentralized systems have several distinct advantages, including:

- More rapid implementation, which can help to create jobs and promote the local economy by ensuring reliable access to electricity.
- Utilization of locally accessible resources, resulting in energy security and independence
- Pollution-free and long-term sustainability

In rural India, private firms such as Mera Gaon Power, DESI Power, Gram Power, Husk Power, and others have installed mini-grids and micro grids. These models, with a few exceptions, have yet to become commercially viable and sustainable. One of the primary issues that distributed generation faces is separating financial viability from the prospect of subsidised rates.

MNRE's recently announced increased renewable energy targets (175 GW by 2022) are intended to attract new investments and boost rural electrification through renewable energy.

The way forward

A single approach for implementation is required for speedier, more reliable, and effective rural electrification. In this case, an integrated policy framework would be beneficial.

We also require a regulatory framework to promote mini-grid-based rural electrification that is long-term viable. Mini grids rely on tiny local users who are mostly supported by agriculture. Disturbances in agricultural activities, which result in a loss of revenue for micro-grids, put these communities at risk. Such practical concerns must be addressed as soon as possible.

- Solar street lights and community lighting Introduced in the early 1980s for village electrification and communal lighting.
- Home lighting systems using solar lanterns
- Lantern charging stations, which operate on the tee tor service model and are managed by a local entrepreneur
- Mini grids, which are small grids powered by solar, wind, small hydro, or biomass. These are promising options for a long-term rural electrification business plan.
- Grids that are interactive
- MW-scale renewable energy grid with intelligent controllers and appropriate energy storage technologies
- Technology development in hybrid systems for micro grids and energy storage systems for balancing supply and demand in mini grids or distributed generation in remote areas is important for balancing supply and demand in tiny grids or distributed generation in remote locations.
- Creating quality consciousness among the players, as well as raising awareness and building capability, is an important component of the process. Rural electrification is complicated and difficult, but an integrated approach combining renewables with traditional grid extension and proactive policies to address integration and tariff difficulties is one of the best ways to move forward.

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