17. Rural Development with Special Reference to Drinking Water, Health and Agriculture in India

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ABSTRACT: Rural India comprises 73 %of the country's population, but its share in the total national income is less than 45 %. The rural sector is characterized by low income levels, poor quality of life and a weak human capital-base. There are many problems in rural India related with the health, agriculture & drinking water. Generally rural public health facilities across the country are having a difficult time attracting, retaining, and ensuring regular presence of highly trained medical professionals. The higher the level of training required for the position, the greater is this need gap. It is true that providing drinking water to such a large population is an enormous challenge. The health burden of poor water quality is enormous. It is estimated that around 37.7 million Indians are affected by waterborne diseases annually, 1.5 million children are estimated to die of diarrhoea alone and 73 million working days are lost due to waterborne disease each year. Indian agriculture has taken a big leap in the last 60 years. Agriculture which had the responsibility to feed 350 million in 1947 has now 1,100 million people to feed, which is a huge responsibility. Indian agriculture is facing a policy paradox. In spite of that we should discuss on these three elements.

Keywords: Rural India, Health, Agriculture, Drinking Water, Employment & Awareness

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FULL TEXT

1. Introduction

Rural development has always been an important issue in all discussions pertaining to economic development, especially of developing countries, throughout the world. In the developing countries and some formerly communist societies, rural mass comprise a substantial majority of the population. Over 3.5 billion people live in the Asia and Pacific region and some 63% of them in rural areas. Although millions of rural people have escaped poverty as a result of rural development in many Asian countries, a large majority of rural people continue to suffer from persistent poverty.

The socio-economic disparities between rural and urban areas are widening and creating tremendous pressure on the social and economic fabric of many developing Asian economies. These factors, among many others, tend to highlight the importance of rural development. The policy makers in most of the developing economies recognize this importance and have been implementing a host of programs and measures to achieve rural development objectives. While some of these countries have achieved impressive results, others have failed to make a significant dent in the problem of persistent rural underdevelopment.

1.1 Rural

Rural areas are sparsely settled places away from the influence of large cities and towns. Such areas are distinct from more intensively settled urban and suburban areas, and also from unsettled lands such as outback or wilderness. People live in village, on farms and in other isolated houses. Rural areas can have an agricultural character, though many rural areas are characterized by an economy based on logging, mining, oil and gas exploration, or tourism. A society or community can be classified as rural based on the criteria of lower population density, less social differentiation, less social and spatial mobility, slow rate of social change, etc. Agriculture would be the major occupation of rural area.

1.2 Development

It refers to growth, evolution, stage of inducement or progress. This progress or growth is gradual and had sequential phases. Always there is increasing differentiation. It also refers to the overall movement towards greater efficiency and complex situations.Rural development designates the utilization of approaches and techniques under one single

programme, which rally upon local communities as units of action. It provides a large umbrella under which all the people engaged in the work of community organizations, community progress and community relation. The main objective of the rural development programme is to raise the economic and social level of the rural people.

1.3 Need and Importance of rural development

Rural development is a national necessity and has considerable importance in India because of the following reasons.

1. To develop rural area as whole in terms of culture, society, economy, technology and health.
2. To develop living slandered of rural mass.
3. To develop rural youths, children and women.
4. To develop and empower human resource of rural area in terms of their psychology, skill, knowledge, attitude and other abilities.
5. To develop infrastructure facility of rural area.

1.4 People related Problems in Rural Development

1. Traditional way of thinking.
2. Poor understanding.
3. Low level of education to understand developmental efforts and new technology.
4. Deprived psychology and scientific orientation.
5. Lack of confidence.
6. Poor awareness.
7. Low level of education.
8. Existence of unfelt needs.
9. Personal ego.

2. Objectives of Study

1. To analyze the problems faced in growth of rural people in India.
2. To find out the remedies to solve the problems of rural development.
3. To present the conditions of rural people.
4. To explain the problems related with health, agriculture & drinking water.

3. Methodology

This paper attempts to explore the concept of rural development, its need and importance vis-to-vis with health, agriculture & drinking water. It's an exploratory research where present conditions of rural people have been explored. The study explores the progress of rural development also.

4. Health

The healthcare services are divided under State list and Concurrent list in India. While some items such as public health and hospitals fall in the State list, others such as population control and family welfare, medical education, and quality control of drugs are included in the Concurrent list. The Union Ministry of Health and Family Welfare (UMHFW) is the central authority responsible for implementation of various programmes and schemes in areas of family welfare, prevention, and control of major diseases. Healthcare centres, dispensaries, or hospitals need to be manned by well trained staff with a service perspective. The current conditions of physical infrastructure, staff, access, and usage are laid out here before identifying critical gaps and requirements in infrastructure and services. Issues related to institutions, financing, and policy are discussed in the context of these critical need gaps and the potential role of the private sector in healthcare provisioning in villages is explored.

4.1 Physical Infrastructure

The healthcare in rural areas has been developed as a three tier structure based on predetermined population norms. The sub-centre is the most peripheral institution and the first contact point between the primary healthcare system and the community. Each sub-centre is manned by one Auxiliary Nurse Midwife (ANM) and one male Multi-purpose Worker [MPW (M)]. A Lady Health Worker (LHV) is in charge of six sub-centers each of which are provided with basic drugs for minor ailments and are expected to provide services in relation to maternal and child health, family welfare, nutrition, immunization, diarrhea control, and control of communicable diseases. Sub-centers are also expected to use various mediums of interpersonal communication in order to bring about behavioral change in reproductive and hygiene practices. The sub-centers are needed for taking care of basic health, needs of men, women and children. As per the figures provided by the UMHFW there were 146,026 sub centers functioning in September 2005—about 12 per cent lower than the prescribed number as per government norms.

4.2 Absenteeism

In addition to the shortage of service providers, the system is plagued by poor involvement and participation of those who are employed. There is a great degree of absenteeism among education and health providers that has been the focus of research in recent times.

4.3 IT for Accessible Healthcare Provisioning

It is well known that many doctors are not willing to serve in the rural areas due to lack of facilities even if they are paid high salaries. However, as telecom network is spreading swiftly and the government is keen to provide broadband connectivity to all parts of the country, information technology can be effectively harnessed to improve the delivery of health services.

4.4 Primary Healthcare

The objective would be to equip PHCs with basic diagnostic equipment that can be operated by paramedics or ANMs, with doctors providing expert interventions from a distance. Remote diagnostic devices like ReMeDiTM, made by Neurosynaptic (www.neurosynaptic.com) allow even novices to measure and record basic parameters like blood pressure, temperature, and chest sounds. The device has a stethoscope, sphygmomanometer, and thermometer, along with a simple video-conferencing application that can connect over even a basic dial-up line. The patient's medical history and a record of every consultation is stored, thus building up a patient database for future reference. A simple computer-based symptom-based diagnostic application can guide the paramedic/nurse in handling common ailments directly by administering simple remedies, and only refer to secondary care for the more complex problems. The system, SYMPED-II, developed by Dr Antia of the Foundation for Research in Community Health provides just such an application.

4.5 Secondary Care

OPDs of all government hospitals, whether at the block or district level, are overcrowded. There are queues for registration, consultation with the doctor, undergoing diagnostic tests, meeting the doctor with test results and buying medicines. As is often the case, these take more than one visit and each visit is a loss of a workday for the patient and/or the attendant. Online connectivity of the hospitals to the PHC can reduce these queues, as primary diagnosis is completed at the village itself. Only patients referred to a

doctor by the nurse/paramedic will need to visit the hospital. Registration can be completed at the village and the patient given an ID, in the form of a printed card or (preferably) a smart card, and thus the queues at the hospitals can be reduced. The patient directly visits a doctor with whom an appointment has already been fixed. If the preliminary examination by the nurse/paramedic has already established the need for additional tests, these can be booked online and the patient told how much money he needs to carry with him while visiting the hospital. In fact, the Neurosynaptic kit also has a 12 channel ECG.

4.6 Finding Quality Healthcare Solutions

Ideally the presence of public health care should take care of both the ability to pay and ability to process information on the quality of health care. But it so happens that especially for those residing in the smaller and far off villages, many public services are out of reach geographically and often such consumers are left with their needs unmet. The private sector cannot emerge in such areas because of lack of adequate scales. In other words, more important than the price is the issue of geographical accessibility for many rural residents. Lack of physical infrastructure and staff both contribute to this problem of access. While economic history is full of examples of how in such situations some market solutions emerge that are in the interests of both providers as well as consumers, we do not have to wait for such solutions to emerge by themselves, where there arebroadly three areas where proactive policy-making can make a difference. The Govt. should plan for the development in rural areas.

5. Drinking Water

Rural India has more than 700 million people residing in about 1.42 million habitations spread over 15 diverse ecological regions. Meeting the drinking water needs of such a large population can be a daunting task. The non-uniformity in level of awareness, socio-economic development, education, poverty, practices and rituals and water availability add to the complexity of the task. Despite an estimated total of Rs. 1,105 billion spent on providing safe drinking water since the First Five Year Plan was launched in 1951, lack of safe and secure drinking water continues to be a major hurdle and a national economic burden. Around 37.7 million Indians are affected by waterborne diseases annually, 1.5 million children are estimated to die of diarrhoea alone and 73 million working days are lost due to waterborne disease each year. The resulting economic burden is estimated at $600 million a year.1.While ‘traditional diseases’ such as diarrhoea continue to take a heavy toll, 66 million Indians are at risk due to excess fluoride2 and 10 million due

to excess arsenic in groundwater. In all, 1, 95,813 habitations in the country are affected by poor water quality.3 It is clear that the large investments have not yielded comparable improvements in health and other socio economic indicators.

5.1 Water Resources and Utilization

India has 16 per cent of the world's population and four per cent of its fresh water resources.

1. Estimates indicate that surface and ground water availability is around 1,869 billion cubicmetres (BCM). Of this, 40 per cent is not available for use due to geological and topographical reasons.

2. Around 4,000 BCM of fresh water is available due to precipitation in the form of rain and snow, most of which returns to the seas via rivers.

3. Ninety two per cent groundwater extracted is used in the agricultural sector, five and three per cent respectively for industrial and domestic sector.

4. Eight nine per cent of surface water use is for agricultural sector and two per cent and nine per cent respectively are used by the industrial and domestic sector.

5.2 Rural Water Supply

The provision of clean drinking water has been given priority in the Constitution of India, with Article 47 conferring the duty of providing clean drinking water and improving public health standards to the State. Some Rural water supply (RWS) programmes in India are following:

2002: Nationwide scaling up of sector reform in the form of Swajaldhara.

2002: The National Water Policy is revised, according priority to serving villages that did not have adequate sources of safe water and to improve the level of service for villages classified as only partially covered.

2002: India commits to the Millennium Development Goals to halve by 2015, from 1990levels, the proportion of people without sustainable access to safe drinking water and basic sanitation.

2004: All drinking water programmes are brought under the umbrella of the RGNDWM.

2005: The Government of India launches the Bharat Nirman Programme for overall development of rural areas by strengthening housing, roads, electricity, telephone, irrigation and drinking water infrastructure. The target is to provide drinking water to 55,069 uncovered habitations; those affected by poor water quality and slipped back habitations based on 2003 survey, within five years.

2007: Pattern of funding under the Swajaldhara Scheme changes from the previous 90:10 central-community share to 50:50 centre-state share. Community contribution is now optional.

5.3 Reasons behind the Affection of Water Quality

5.3.1 BACTERIAL CONTAMINATION

Bacterial contamination of water continues to be a widespread problem across the country and is major cause of illness and deaths with 37.7 million affected by waterborne diseases annually. The major pathogenic organisms responsible for water borne diseases in India are bacteria (E Coli, Shigella, V cholera), viruses (Hepatitis A, Polio Virus, Rota Virus) and parasites (E histolytica, Giardia, Hook worm).

5.3.2 CONTAMINATION DUE TO OVER-EXPLOITATION

In the 1980s and 1990s, groundwater tables buckled under increased extraction as water tables started to decline and bore wells ran dry. What was more disturbing was that by then, 80 per cent of drinking water sources were groundwater-dependent. As a result, habitations and villages that were 'covered' with a safe water supply by the government started 'slipping back'.

5.3.3 EFFLUENTS AND INDUSTRIAL WASTE

Another major cause for concern is the pollution of ground and surface water from increased fertilizer and pesticide use in agriculture and from industrial sources. The consumption offertilisers shot up from 7.7 million tonnes in 1984-85 to 13.9 million tonnes in 1994-95 and that of pesticides from 24,305 tonnes in 1974 to 85,030 tonnes in 1994-95.

5.3.4 BEHAVIORAL PRACTICES

Interventions for providing safe drinking water can become ineffective in the absence of improved sanitation. In order to provide access to sufficient quantities of safe water, the provision of facilities for a sanitary disposal of excreta, and introducing sound hygiene behaviour are of utmost importance. The ways and means by which water is collected also has an impact on its quality. It is essential to have a clean surrounding around the source to prevent contamination.

5.3.5 CULTURAL PRACTICES

There are various religious practices that revolve around sources of water. Immersion of idols in surface water bodies is a prime cause of deteriorating water quality. Water bodies have been used as dumping grounds for various offerings that have degraded the portability of surface water. Defecation on boundaries of water bodies results in bacteriological contamination.

In India, investments in community water supply and sanitation projects have increased steadily from the 1st plan to the 10th plan. However, the health benefits in terms of reduction in waterborne disease have not been commensurate with the investments made. Though health sector is bearing the burden of water and sanitation related infectious diseases, presently it does not have adequate institution or expertise for monitoring and surveillance of community water supply programmes in the country. India has witnessed significant improvement in rural water supply with increasing coverage of areas and a large volume of financial resources made available. A series of schemes are aimed at improving the supply of drinking water for rural habitations and now for monitoring and ensuring quality. The past few years have seen greater emphasis on water quality monitoring and surveillance with specific allocation being made under Central grants. There has been great focus on setting up and upgrading laboratories at the state and district levels, and on water monitoring through field testing kits.

6 Agriculture

6.1 THE PARADOX AND CHALLENGES OF INDIAN AGRICULTURE

Indian agriculture is facing a policy paradox. Although several forecasts of the 1990s predicted that India would be a large importer of grains in the years to follow, in fact from 2001 to 2004 India exported around 30 million tons of food grains. It was seeking primarily

to liquidate its bulging grain stocks, which reached 63 million tons in July 2002. Whereas India's agricultural policy is still rooted in the goal of self-sufficiency in grains, consumption patterns are changing fast toward high-value agricultural products such as fruits and vegetables, livestock products, and fish.

The policy environment is lagging behind the structural change occurring in India's consumption and production baskets. On another front, foreign exchange reserves, which had reached a rock-bottom US$1.2 billion in July 1991, climbed to more than US$120 billion by the end of 2004.What are the reasons behind this paradoxical situation? The answer presumably lies in the neglect of, as well as misallocation of resources in, agriculture and rural development, especially in the later phase of the reform process initiated in 1991.

The average annual rate of growth in agriculture fell from more than 4 %per year during 1992/93 to 1996/97 to less than 2 % per year during the period 1997/98 to 2002/03, and it remains low. What led to this dramatic decline in the growth of agriculture since 1997/98? How can it be revived? How can growth in agriculture and rural development diminish poverty quickly**?**

6.2 ENHANCING PRO-POOR RURAL AND AGRICULTURAL INVESTMENTS AND CUTTING SUBSIDIES

Since the early 1980s public investment in agriculture has experienced secular decline, while input subsidies (on fertilizers, power, and canal irrigation) have been rising. In the early years of economic reforms, an attempt was made to arrest and reverse these trends, but this effort could not be sustained. As a result the gap between investments and subsidies kept widening. Today input subsidies, together with food subsidies, amount to roughly five to six times the public investment in agriculture. With a burgeoning subsidy bill and shrinking public investment, the growth impetus for agriculture has been declining. Private investment in agriculture has been increasing, yet it has not fully compensated for the loss from falling public investment.

6.3 REFORMS WITH A HUMAN FACE; ADDRESSING THE LANDLESS POOR

Reforms in the agricultural sector are an important step toward increasing growth rates in the Indian economy and thus reducing poverty sustainably. But many households are not in a position to share in economic growth because of their low asset base (for

example, poor nutrition, low education, and few physical assets).Studies reveal that there is typically little mobility out of extreme poverty, and many households remain poor for generations. Indeed, low human capital status and an inability to build up a minimum physical asset base play a key role in the intergenerational transmission of poverty. Any credible, broad-based development strategy must therefore involve public policies aimed directly at promoting asset accumulation by chronically poor households.

6.4 TOWARD HIGH-VALUE AGRICULTURE

Given sustained increases in per capita incomes of about 4 % per year during the past two decades, consumption patterns in India are changing away from cereals to high-value agricultural products. How fast has the consumption basket of an average Indian changed? Data from the National Sample Survey Organisation (NSSO) show that per capita consumption of cereals from 1977 to 1999, for example, declined from 192 to 152kilograms per year in rural areas and from 147 to 125 kilograms in urban areas. The consumption of fruits, on the other hand, increased by 553 %, of vegetables by 167 %, of milk and milk products by 105 %, and of meat, eggs, and fish by85 % in rural areas over the same period. Similar changes occurred in urban diets. These dramatic changes indicate a structural shift in Indian diets. Add to this the new export market opportunities for many of the same products, owing to trade liberalization and there is a happy match between the demands of the market and the need for farmers to diversify into higher-value activities. Further, high-value agricultural products have higher employment elasticity and can be suitable for smallholders, if they can participate.

6.5 TRADE AND MARKET POLICY REFORMS

The policy reforms of the 1990s more or less eliminated the bias against agriculture by lowering industrial tariffs and liberalizing exports of agricultural commodities. This change improved the relative incentives environment (measured as the ratio of agricultural prices to prices of manufactured goods) in favor of agriculture, providing a strong boost to private sector investments in agriculture. The liberalization of agricultural exports also led to a major upswing in agricultural exports, at least from 1992/93 to 1996/97.But the years 1997/98 through 2002/03 did not augur well for agricultural exports. The world prices of most agricultural commodities fell sharply, primarily triggered by the East Asian crisis. This decline highlighted the difficulties in integrating domestic agricultural markets with world markets. Whereas developed countries such as the United States and the European Union

countries resorted to subsidizing their farmers, developing country policy-makers did not have many options and accepted the loss of those markets.

7. Conclusion

Thus in conclusion we can say that there are in India the basic structure of health, agriculture & drinking water is weak. There are many problems related with these three factors. All policies and enacted laws are not sufficient to improve the rural areas. There should be make best policies and laws and should be implementation in proper way. So these three most important issues of rural development should be the subject matter of Govt. policies, debates & bills.

REFERENCE

1. INDIAN AGRICULTURE AND RURAL DEVELOPMENT STRATEGIC ISSUES AND REFORM OPTIONS, A STRATEGY PAPER PREPARED BY IFPRI'S SENIOR MANAGEMENT TEAM FOR CONSIDERATION BY THE POLICYMAKERS OF THE GOVERNMENT OF INDIA.
2. KURUKSHETRA, A JOURNAL ON RURAL DEVELOPMENT, JAN 2010.
3. DRINKING WATER QUALITY IN RURAL INDIA: ISSUES AND APPROACHES, INDIRA KHURANA AND ROMITSEN, WATERAID.
4. GUPTA AKHILESH, MALL R.K., SINGH RANJEET, RATHORE L. S., SINGH R. S., WATER RESOURCES AND CLIMATE CHANGE: AN INDIAN PERSPECTIVE; CURRENT SCIENCE, VOL. 90, NO. 12, JUNE 2006.
5. DRINKING WATER AND SANITATION STATUS IN INDIA, WATERAID INDIA, 2005.
6. HEALTH INFRASTRUCTURE IN RURAL INDIA, LAVEESHBHANDARI AND SIDDHARTHA DUTTA.
7. WORLD BANK (2006)—INDIA: INCLUSIVE GROWTH & SERVICE DELIVERY: BUILDING ON INDIA'S SUCCESS, WORLD BANK, WASHINGTON D.C.
8. WEBSITE
    1. HTTP://WWW.MOHFW.NIC.IN
    2. HTTP://WWW.CORECENTRE.ORG/NRHM
    3. HTTP://WWW.EXPRESSHEALTHCAREMGMT.COM
    4. WWW.GOOGLE.CO.IN
    5. WWW.WIKIPEDIA.COM

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