Issues in Promoting Rural Infrastructure in India

par

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Résumé :

Cinq décennies de planification du développement en Inde n’ont pas pu assurer une vie décente à un grand nombre de personnes résidant dans les zones rurales. En dépit de nombreux projets ruraux de développement à grande échelle, le nombre de personnes pauvres en termes absolus n'a pas sensiblement diminué ; les privations sévères demeurent toujours omniprésentes dans les régions rurales. Le manque et/ou l’inadaptation des infrastructures de base, sociales et physiques, constituent toujours une contrainte importante du progrès dans de nombreux villages. Même pendant la dernière décennie de réformes économiques, commencée en 1991, le déficit d’infrastructures rurales s'est à peine réduit. L'hésitation naturelle des investisseurs privés dans des projets ruraux d'infrastructure s’explique non seulement par le faible rendement du capital, mais également par les incertitudes et les retards inhérents à la réalisation des revenus anticipés des utilisateurs frappés par pauvreté. Ce papier met en évidence un effet d’éviction du capital privé des projets ruraux "non rentables" dans des secteurs importants tels que l'environnement sanitaire, l’eau potable, les routes et l’habitat. Alors que le rôle de l'état demeure crucial dans la promotion de ces secteurs, la réforme agraire est un aspect qui a été sérieusement négligé. Le rôle de la terre dans les zones rurales doit être reconsidéré, et apparaître comme une orientation majeure en termes de dotation d’actifs, option susceptible de créer en même temps une demande effective appropriée d'infrastructures rurales, tout en assurant un processus de production efficace.

Abstract :

Five decades of development planning in India has been unable to ensure a decent living for a large number of people residing in rural areas. Despite many large scale rural development schemes, the absolute number of people in poverty has not declined substantially; abject poverty still remains ubiquitous in rural regions. Lack of or inadequate basic infrastructure, both social and physical, continues to remain a major constraint to progress in numerous villages and their habitations. Even during the last decade of economic reform process, started in 1991, the dismal state of rural infrastructure has hardly improved. The natural reluctance of private investors in rural infrastructure projects has been based on not only no or low returns to their capital but also uncertainties and delays involved in realising anticipated revenue from the poverty-stricken users. This shying away syndrome of private capital from rural ‘unprofitable’ projects has been observed, in this paper, for such critical sectors as sanitation, drinking water, roads and housing. Whereas the role of the state remains crucial in promoting these sectors, an aspect which has been seriously neglected concerns land reforms. The significance of land as a key endowment in rural areas needs to be reconsidered as an important option, which will go a long way in creating effective demand for rural infrastructure and its efficient utilisation can be ensured at the grass root level.

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Sommaire

1. Introduction

In India, removal or reduction of poverty and provision of basic civic amenities to its population, especially those living in rural areas, have remained one of the most emphatic goals in Plan documents. Even the documents of the National Planning Committee, People's Plan and Bombay Plan prepared during the period prior to Independence, emphasizes the above objectives. The approach and agency for accelerating rural development, however, have varied across Plans. Despite their large scale of operations, the fact remained that state interventions never aimed at any basic structural changes in the agrarian society. The most important structural issue of land reforms, as it gradually vanished into thin air, remained the major hiatus in all the rural/ agrarian development efforts that the state attempted to achieve in so many different ways. Access to and ownership of land, the crucial economic endowment for survival and growth, continued to determine the degree and pattern of development of rural India.

The regional concentration of rural poverty largely reflected the truncated ownership of land. It is easy to assume that regions with people in poverty are also poor in endowments. Putting it differently, the problem therefore may not be so much of the rural-non rural divide as much as that of rich-poor. The real challenge is to enable the deprived, close to two fifths of the rural Indians, who do not have access to and/or are in no position to afford even basic infrastructure. Certainly, by no stretch of imagination, one bypasses the needy and indulges in devising mechanisms for efficient development of infrastructure. This is not to deny possibilities of learning from and/or replicating notable achievements in promoting infrastructure in quite a few rural and even poor regions in India.

The numerous programmes/ schemes that included massive interventions such as Integrated Rural Development Programme (IRDP), Minimum Needs Programme (MNP) and Public Distribution System (PDS), have, as both scholarly analyses and reports in the media would establish, generally failed. Such failures have been attributed to serious deficiencies/ loopholes in design, access and targeting. The ubiquitous scapegoat has invariably been identified as `poor implementation' -- a catch-all expression for corruption, leakages, selection bias, parochialism, vested interests and power politics.

Evaluations of schemes are carried out by the government; but beyond getting regular studies conducted through external agencies, little or no corrective measures, based on their recommendations have been pursued with effect. As it happens, more often than not, by the time the evaluation of a certain programme/ scheme is hardly over, the next programme gets launched, afresh and without reference to possible lessons learnt through a thorough evaluation of a previous programme.

Unfortunately, even after a decade of economic reform, hardly there seems any improvement so far as the basic infrastructure for rural areas is concerned. During the post-reform period, for instance, between 1993-94 and 2001-02, not only has the share of budgetary expenditure on all social services and poverty alleviation programmes declined from 2.08 to 1.87 per cent, but also the share of rural development in all social services and poverty alleviation programmes has fallen from about 32 to 25 per cent.

2. Planning and the Rural Sector

It is impossible to ignore the rural sector whenever strategies of development are pursued. That Indian planning has a history of emphasizing and intervening in the problems of the rural sector is well appreciated. It was around mid 1970s that the concept of basic minimum needs came into the policy frame, with an explicit acknowledgement of worsening rural poverty situation and large scale unemployment. During the Sixth Plan, issues relating to basic infrastructure were sought to be addressed in a rather cohesive and more direct manner than before. The Integrated Rural Development Programme (IRDP) was introduced as a major strategy to create gainful employment through helping generate resource base at the household level that would, ultimately, remove poverty.

In spite of a well spread and adequately staffed rural development machinery with a supposedly strong bureaucratic, administrative and training network, the results of the IRDP and related programmes were most unsatisfactory, with unbelievable stories of manipulation and misuse of funds being reported time and again. As the Draft Approach Paper to Tenth Plan (p. 5) has surmised,

'the projects undertaken under the programme suffer from numerous defects including especially sub-critical investment levels; unviable projects; lack of technological and institutional capabilities in designing and executing projects utilising local resources and expertise; illiterate and unskilled beneficiaries with no experience in managing an enterprise; indifferent delivery of credit by banks (high transaction cost, complex procedure, corruption, one-time credit, poor recovery); overcrowding of lending in certain projects such as dairy; poor targeting and selection of non-poor; absence of linkage between different components of the IRDP; rising indebtedness; and scale of IRDP outstripped capacity of government and banks to absorb...Besides, the programme for upgrading skills, TRYSEM, was not dovetailed with IRDP. One discovered non-existent training centres and non-payment of stipend in some cases.'

Reasons for such implementation failures varied extensively. Whereas many scholars and policy observers blamed it on a variety of problems inherent in the design and delivery mechanism of the *programme* (see, for instance, Rath, 1985; and Dreze, 1990), some located the glitch in the *system* itself. That is to say, for the state to conduct the 'passive revolution', 'irrational' politics was taking advantage of 'rational' planning not only to further the interests of the dominant ruling classes but also to legitimize their hegemonic rule, through involving the successful mobilisation and reproduction of the active consent of the dominated groups (Chatterjee, 1997: 94-9; and Byres, 1997: 71-2).

With the government and bureaucracy coming under severe criticism for their laxity, mismanagement and general distancing from the concerned people, the hither-to inconspicuous, the so called non-governmental and voluntary organisations (NGOs, for short), were considered to be 'closer' to the people and could deliver effectively. Through the Seventh Plan document, the government, formally acknowledged the importance of popular participation, especially in rural areas, for the successful execution of its programmes, and explicitly sought to engage NGOs in the implementation of various anti-poverty programmes and the MNP. Towards facilitating NGOs' involvement, especially since the mid 1980s, there has been both an increase and diversification of government funding made available to them. Grants to the NGOs are obtainable directly through the government as also para statal bodies like the Council for Advancement of People's Action and Rural Technology (CAPART), mainly for activities concerning infrastructure, both social and physical; for instance, to NGOs working in the areas of health care, drinking water, adult education, literacy, socio-economic welfare of women and children, rural housing and forest development. With the growing drift/ proclivity towards economic liberalisation and reforms, the state increasingly expected the NGOs not only to emulate its own agenda and pattern of development, but also to actually assume governmental role in rural development (Sen, 1999: 344). A large number of NGOs did, in fact, undertake implementation of governmental programmes. The Eighth Plan, by when the reforms process had formally begun, was clearer and keener than the previous Plan in stressing the critical role of NGOs in carrying out development programmes at the grass-roots.

Despite state's proclaimed inclusion of NGOs in rural development programmes, the former's attitude and treatment towards the latter, so far as micro level functional aspects are concerned, have come under much criticism. As one important study would put it, the state-NGO relationships have often been 'characterized by the hostility of politicians, party workers, local elites, lower level bureaucrats, and lower level employees of the state towards NGO activity' (Sen, 1999: 353).

3. Chronic Rural Poverty: The Bitter Reality

It is well known that the achievement through planned development till almost the early 1960s, i.e., during the Third Plan, was commendable, relative if not to what the contemporary fast growing less developed countries achieved, but certainly to what was the growth rate during the colonial period. Despite this, a high proportion of rural population remained below poverty line; between 1960 and 1964 the rural poverty ratio remained between about 57 per cent and 54 per cent, accounting for over 202 million people. The growth rate of GDP, subsequently, hovered around an almost fatalistic

Table 1: Dimensions of Poverty and Inequality in Rural India, 1973-2000

Year	Poverty Ratio	No. of Poor# (Million)	Poverty Gap Index	Lorenz Ratio	No. of Rural and Urban Poor# (Million)
1973-74	56.4	261.3	16.56	0.27581	321.3
1977-78	53.1	264.3	15.73	0.33861	328.9
1983	45.7	252.0	12.32	0.29759	322.9
1987-88	39.1	231.9	9.11	0.29826	307.1
1993-94	37.3	244.0	8.45	0.28190	320.3
1999-2000	27.1* 24.0**				

Notes: Numbers in millions ; * Based on 30 day recall ** Based on 7 day recall.
Source: Ninth Plan (1997-2002): Institutional Development at http://planningcommission.nic.in and Economic Survey 2000-2001 at http://www.nic.in.

and clearly ignominious 3 to 3.5 per cent per annum, reflecting the combined effect of not only a series of bad agricultural years, idle industrial capacity and an unfavourable terms of trade against agriculture, but also political instability as through the decline and division of the monolith of the Congress party and rise of regional contingent politics.

Between the late 1960s and late 1970s, probably the most difficult times that encountered Indian development, the populism of promise to eliminate poverty remained the ‘trump card’ of both the Congress (I) as well as the Janata Party, which came to power towards the end of the 1970s. With or without the slogan of ‘Garibi Hatao’, the proportion of rural poor, in fact, hardly declined; even by 1977-78, the proportion had remained high at over 53 per cent implying that over 260 million persons remained below the poverty line even towards the end of the 1970s (Table 1). The outcome was, unfortunately, not in keeping with the claims of the two parties. The early 1980s witnessed the return of the Congress Party with redoubled vitality derived from a massive mandate. And with that the platitudes and programmes to abrogate poverty were invigorated. Now, the percentage of rural population below poverty line did climb down somewhat, but, not again, commensurate with the efforts and the hype. As Table 1 indicates, in 1983 the number of rural poor remained as high as 252 million even as the poverty ratio declined to about 46 per cent. With further reduction in the ratio to 39 per cent in 1987-88 and 37 per cent in 1993-94, one could talk of a ‘secular’ decline in the incidence of poverty.

Equally importantly the Lorenz ratio, the most commonly used measure of inequality, for rural India has more or less remained stable. But this stability, especially for the recent years, has begun to be questioned; ‘there is reason to believe that the measures of inequality based on the NSS (National Sample Survey) consumption distribution may actually *understate* the true level of inequality in the country’ (Ninth Plan 1997-2002: Institutional Development, section on Growth Performance and Poverty, at *http://planningcommission.nic.in*).

The total (both rural and urban) number of poor has practically remained at a staggering 320 million throughout the two decades spanning between 1973-74 and 1993-94. As per the NSS 55th round of survey, during 1999-2000 the poverty ratio for rural India has been estimated at about 27 per cent (based on 30 day recall) or at 24 per cent (based on 7 day recall). The results of this specific survey round, stated to have used a different/innovative methodology, are still being debated as to their comparability with results of the previous ones. Meanwhile, the latest available World Bank data shows a clear rise in the incidence of poverty in India. Accordingly, with a GNP per capita of 440 dollars in 1999 India continued to have the highest concentration of poverty with more that 360 million people (about 36 per cent of its total – both rural and urban - population), living below the official poverty line (Das, 2001).

After a decade of economic reforms, it is fairly obvious that the grand neo-liberal proposition that growth shall trickle down to the poor and elevate their levels of living has not come true. In a detailed analysis of poverty statistics by S.P. Gupta (as reported in Das, 2001), it has been established that the 1990s have hardly done anything for the poor in India, the rural poor, particularly. In fact, data suggest that during the reforms period not only was there *no* secular decline in poverty but actually there was an addition of 70 million people to the poverty category, between 1989-90 and 1997. Importantly, during the 1980s, when between 1983 and 1990-91 the incidence of poverty declined by 3.1 per cent per annum, the GDP growth per annum was 5.6 per cent. Almost as a reversal of the situation, during the 1990s, between 1990-91 and 1997 the incidence of poverty increased by 1 per cent annually although the GDP growth had accelerated during the same period.

The focus of the reform has been away from poverty alleviation programmes, or for the rural sector particularly, or even agriculture, the backbone of Indian rural economy. Plan outlays for rural development hardly rose during the 1990s. The 'unmistakable' urban-industrial bias of the reforms strategies have further accentuated rural-urban disparities in income (Bhaduri and Nayyar, 1996: 111; and Nagaraj, 2000: 2838). Moreover, the differences between per capita income of the rich and poor states have been on the rise during the reform period. As Jha (2001: 8) points out, 'regional inequality in the incidence of rural poverty is increasing over time, particularly since the reforms began. Thus not only are the poorest of the poor getting ignored, they are also getting regionally concentrated'.

More by design and less by default, that the economic opportunities for the rural poor, who are anyway disadvantaged by high incidence of illiteracy, ill health and constricted access to basic physical infrastructure, failed to be created in a manner that would have energised the rural economy. This underscores the fact that growth of GDP *per se* does not automatically 'pull up' people into gainful employment or root out chronic and abject rural poverty (Dreze and Sen, 1995; Guhan, 1995; and Dev and Ranade, 1999).

4. State or Market ?

It may be pertinent to note that in order to counter the criticism of the government's apathy towards social sectors during the first five years of the reforms process (this was amply reflected through the pattern and quantum of Plan expenditure on this sector and also the low ratio of this expenditure to the GDP at current prices), during 1996-97, an all-out effort was made to increase investment in social sectors towards "achieving distributive justice". As most of these sectors came under the domain of the State List, a conference of chief ministers on Basic Minimum Services, held in July 1996, recommended the adoption of a set of objectives so as to strive towards their attainment by 2000. For our present purpose, these objectives included, *100 per cent* coverage of provision of safe drinking water in rural areas, provision of Public Housing Assistance to *all* shelterless poor families, provision of connectivity to *all* unconnected villages and habitations. In addition to continuing all centrally sponsored schemes relating to the aforesaid basic minimum services, the states were to raise their annual entitlement by 15-20 per cent annually. Further, it endorsed that 'the funds allocated for these Basic Minimum Services in the States' and Central Plans should not be diverted' (Economic Survey 1997 at *http://www.nic.in/indiabudget/es97/CHAP10.HTM*, pp. 1-2).

By 2001 the claims about fulfilling all the gaps in infrastructure for the rural poor have, literally, fallen by the way side. Not only has rural poverty persisted but there remain innumerable villages (not to mention their many habitations) which lack even the most basic facilities. It will be naive to state that there is no need for the same. But why did not the private capital flow to these regions? It is instructive to take note of the following from the 'Draft Approach Paper: Tenth Five Year Plan 2002-2007' (at *http://planningcommission.nic.in*,):

'There are many areas, e.g. the social sectors, where its (the government's) role will clearly have to *increase*. There are other areas, e.g. infrastructure development, where gaps are large and private sector cannot be expected to step in significantly. In these areas the role of government may have to be restructured. It will have to increase in some areas of infrastructure development which are *unlikely to attract private investment* e.g. rural infrastructure and road development' (Chapter 1, p. 2. Emphasis ours).

In what follows, we shall discuss a few selected basic infrastructures with special reference to the issue of private sector participation. These infrastructural facilities in rural areas relate to sanitation, drinking water, roads and housing.

5. Sanitation Facilities

Probably one of the most dismal records that India has relates to sanitation, especially in rural areas. As per the Census of India 1991, it is truly a shame that a staggering 91 per cent of households in Indian villages did not have toilet facilities! As may be seen from Table 2, even at the turn of the

Table 2: Population Covered by Sanitation Facilities in Rural India, 1985-99 (Percentages)

Year	Population Covered
1985	0.7
1990	2.4
1995	3.6*
1998	8.1*
1999	9.0*

Note: * With government initiative only. Authentic data on coverage through private initiative is not known. Percentage coverage is based on population covered in current year to corresponding 1991 Census.
Source: Government of India, Economic Survey 2000-2001, p. 208.

new millennium and almost a decade since the reforms began, a meagre 9 per cent of rural population had been covered by some form of sanitation.

This is an infrastructure of utmost urgency and no time needs to be wasted over such issues as whether there exists a demand for it, whether class and caste factors prevail upon the decision to possess and use such facilities. In a country where rural infant mortality rate has remained as high as 82 per thousand live births (1993 figure based on Sample Registration Survey prepared by the Registrar General of India) and a major cause of mortality is diarroheal diseases (occurs mostly due to oral faecal infection) sanitation remains the crucial option. It is rather unfortunate that when Indian scholars and planners debated for decades over rural poverty and its correlates hardly one comes across a study that has undertaken careful analysis of the pathetic performance in rural sanitation (this was despite valuable data being made available in the NSSO, Census and other rural development data sources).

Notwithstanding the dearth of studies in this field, especially relating to demand for and willingness to pay in the rural Indian context, it will be worthwhile to consider provision of household level facilities, rather than common toilets. In case of common toilet arrangements in urban and semi-urban areas, mostly through the very successful Sulabh International efforts, the facility is mainly used by a non-resident and transient population. However, in rural areas, at a residential level, such a concept will be difficult to operationalize. In fact, maintenance on a regular basis will remain the most ticklish issue to handle.

In an extensive field survey based study (Das and Visaria, 1998), concerning evaluation of an intervention under the Integrated Rural Sanitation Programme conducted in north Gujarat, it was learnt that most beneficiary households reported the use of latrine facility by all members of the household. What is interesting to note, however, is that among the reasons given for the use of facility, hygienic considerations did not receive prime attention. Whereas this could be reflective of laxity in efforts at IEC (information, education and communication) the clear preference for the facility, presumably, indicates that once a facility is created its advantages begin to be recognized and it gets used. This was an instance of hardware-induced change in sanitation practices.

The provision of latrines under this scheme to some households had generated a high demand among the non-beneficiaries to have them. Nearly 90 per cent of those surveyed indicated their willingness to have latrines constructed. About 40 per cent wanted some subsidy but the rest were willing to pay the full amount themselves, although opting for a variety of modes of payment. The spokespersons of the nodal agency also confirmed this observation and indicated that they had been approached by non-beneficiary households for toilet components, design and possible subsidies. Such demand was articulated by all households regardless of their socio-economic status. Also, contrary to popular belief, there was no social inhibition about having a latrine within one's house premise. However, for some who face the space constraint, provision of community latrines on the common village land, although attractive, is not an effective solution because of the problems with regard to maintenance, and the sharing of responsibilities.

It seems possible that in future similar projects can be viably implemented on almost self-financing basis. Therefore, creation of a revolving fund or establishment of a sanitary mart, where latrine components can be made available at reasonable price and on an instalment basis, may also promote the adoption of sanitary facilities among many segments of the people. However, the problem remains for those poor households who do not have enough land for constructing the toilets. Whether inexpensive or free land provisioning is possible is a matter that needs attention. As private investment would certainly be disinterested in this sphere, the state has to devise mechanisms to address this issue.

Table 3: Sources of Drinking Water in Inhabited Villages in India

Source	Villages (%)
Well	69.8
Hand pump	55.9
Tube well	21.1
Tap	18.2
Tank	14.3
River	10.0
Nala	3.6
Canal	3.5
Fountain	2.6
Spring	1.7
Lake	0.1
Others	4.5

Source: Das (2000)

6. Drinking Water Supply[1]

In the face of fast deterioration of quantity and quality of groundwater resource, mainly attributable to overdrawal, wastage and polluting by competing sectors and/or individuals (typically, industrial units, large farmers and irresponsible urban dwellers) providing clean and safe drinking water has emerged as a major challenge, especially in rural areas. The dual phenomena of scarcity and use inefficiency qualify drinking water for an 'economic' good. However, unlike the urban situation, levying user charges for using water for domestic purposes in rural areas has not been quite acceptable in rural regions. The public good character of water is more pronounced at low incomes in rural settings.

Given the massive backlog in coverage in Indian villages, improvement of infrastructure for rural water supply would naturally involve large capital investment and long payoff period. It would, therefore, be difficult to attract private investors in to such a sector where returns to investment would not only be uncertain but be delayed. 'High-risk, long payback periods and pricing limitations of the RWSS (Rural Water Supply and Sanitation) sector as presently structured, serve as serious disincentives to potentially interested parties. Such disincentives discourage even government-sponsored credit facilities…' (World Bank, 1999: 41). Further, rural water supply has the characteristics of both public and open access goods. This dual identity renders its excludability low.

Considering Plan investment for rural water supply as a proportion of public sector Plan, it may be seen that there has been a slow rise from 0.15 to 2.47 per cent during the eight Plans. State expenditure can grow much more in this sector. However, the case for recognizing the growing cost and its sharing by the beneficiaries has been gaining strength, particularly in various global fora on the problem. Supply driven approach has been undermined for its inefficiency and demand responsiveness and involvement of local community have been underscored as the most effective mechanism for providing drinking water in rural areas (Pendley, 1997: 10). In fact, during the International Drinking Water Supply and Sanitation Decade (1980-1990) a variety of modes and mechanisms of charging user costs had been experimented with. However, it was learnt that implementation of effective pricing policies remained an "intractable" problem. 'Many pricing policies have failed to generate the volume of revenue anticipated or to ensure the long-term sustainability of services. In addition, the poor have in many instances failed to pay for or benefit from expanded services' (Secretariat for the Global Consultation, 1990: 42).

An important loophole in India in the conventional estimates of investment requirements and price fixation is the inclusion of only "public safe" sources of drinking water, i.e., hand pumps and piped systems. Such an approach can lead to gross errors about the costs to be borne by users as it does not consider alternative local sources of drinking water (especially in areas with little groundwater, or polluted aquifers) those would substantially influence not only the quantum of water use but also the type of system used/required. The costs would go up in such cases. Table 3 provides an idea about the different sources of drinking water prevalent in rural India. The most prominent

1 This sub-section is based on relevant portions of a detailed paper on the subject (Das, 2000).

source, evidently, is the well, which is used by about 70 per cent of rural households; this figure is higher than that for either hand pumps or taps.

Moreover, 'water available from a well within the household premises -- which is, in fact, the main source in most rural areas – must also be regarded as being reasonably safe. In some States like Assam, Orissa and Kerala, the inclusion of water available from wells within the premises makes a significant difference; the percentage of rural households with access to safe drinking water rises then from about 43 to nearly 61 per cent in Assam, from a little over 35 to nearly 47 per cent in Orissa and from as low as 12 to over 71 per cent in Kerala. These are areas with heavy rainfall and where it is customary for rural households to have wells within their premises' (Raj, 1996: 3). Quite different from the approach adopted for urban water pricing, the estimation of user charges in rural areas must consider the potential of these alternative sources of water as these can considerably reduce user costs. The investment requirement of installing piped water system for all or most rural population could not only be huge but may also be unwarranted. The plausibility of provision of hand pumps (with the average cost of a hand pump being around Rs. 20000) at household level will also depend crucially upon the effective demand, especially from the poor.

The major issue in rural water sector especially in dryer areas is enhanced supply of fresh water by both augmenting (maintaining the operational sources, rejuvenating the defunct ones and developing alternative sources) and effectively preventing (through legislation) misuse/ overuse of the resource by the influential and vested interests. Mispricing has resulted in excessive use of water for irrigation when drinking water needs are taken care of. The enormous costs of unchecked tapping of fresh water bodies, and pollution by competing sectors not only amounts to shifting the financial burden to the hapless and underprivileged, but also increasing their vulnerability to ill health, and even death. Moreover, such irresponsible water use can actually result in degradation of the resource.

7. Roads

In an interesting analysis of effect of infrastructural expenditure by government on rural poverty reduction and productivity growth, it has been shown that promotion of rural roads has one of the most beneficial impact on rural development. 'Investment in roads reduces rural poverty through productivity growth, but also through increased non-agricultural employment opportunities and higher wages' (Fan *et al*., 2000: 3587). Numerous studies have established the positive relationship between rural connectivity and development; rural roads provide vital links that foster effective access to and utilization of a host of important social and physical infrastructure. A multitude of benefits are attributed to rural road development including increased agricultural production, better farm prices, growth of dairying, rural industrialization, better educational standards and higher life expectancy; in short, balanced and faster development of rural areas.

Construction and maintenance of rural roads have remained an important component and have received impetus through increased state funding in a number of development schemes, including the Food for Work Programme, MNP, National Rural Employment Programme (NREP), Rural Landless Employment Guarantee Programme (RLEGP) and Jawahar Rozgar Yojana. The ambitious Lucknow Plan (1981-2000) even had estimated rural road requirement for the country and had spelt out various measures to develop rural roads. Further, the Basic Minimum Services Programme (Rural Roads) envisaged connectivity of *all* villages and habitations by all-weather roads by 2002, although under the recently announced Prime Minister's Rural Road Development Project the targets, as usual, have changed. According to this new centrally sponsored programme, whereas *all* villages with minimum 1000 population will be connected by all-weather roads by 2003, settlements with minimum 500 population will be connected by 2007, i.e., by the end of the Tenth Five Year Plan. Notwithstanding these many programmes and pronouncements, as per most recent information, only about 56.5 per cent of villages had been connected by end March 1997. As the NATPAC Report (at *http://www.panasia.org.sg/nird/natpact.htm*) observes, the tardy progress of rural roads can also be gauged from the fact that several states have less than 50 per cent settlement connectivity!

The big question is whether private investment will come forward to this sector. Going by Plan documents, it is understandable that private sector participation in road sector has been confined to development, maintenance and operation of specified highways (national and state), expressways, bridges and bypasses. Rural roads, particularly, those needed to link remote, hilly and backward

Table 4: Profile of Housing Loans Advanced by GRUH

Year	Cost/ Unit (Rs.)	Loan/ Unit (Rs.)	Monthly Family Income of the Applicant (Rs.)	Area of Dwelling Unit (Sq.m.)
1994	121712	85596	4234	47.95
1995	139606	74596	3735	40.67
1996	152130	97674	4863	51.53
1997	197097	119920	6209	56.65
1998	235980	149843	7401	69.73

Source: Nair (1999: 1871)

settlements are hardly *profitable* to the private operator. Public investment must have to come in a big way and without further delay. This crucial rural infrastructure, neglected during the reforms decade, has to be state financed in a time bound manner, if only to prevent further rise in urban-rural disparities in growth and resultant dysfunctionalities.

8. *Housing*[2]

The rural sector accounts for about 65 per cent of the shortage in housing stock. According to the Ministry of Rural Areas and Employment, there was a shortfall of about 14.3 million housing units in the rural sector in 1991, which was expected to go up to 16.4 million units in 2001 and 24.4 million units in 2121. Though the households to houses ratio has declined marginally between 1981 and 1991 (from 1.05 to 1.03), the difference in absolute terms between census houses and households in rural areas was estimated as 365 million in 1991. Thus, there is a long way to go before the goal of equitable distribution of shelter resources is achieved.

Earlier housing initiatives in the government sector in India had an explicit bias in favour of the urban sector. Virtually, there was no allocation made for rural housing till the end of the Fourth Plan, though a scheme was launched in 1971 to provide land sites and construction assistance to rural landless labourers. This scheme which was started in the central sector was later shifted to the state sector in 1974. The later Plans addressed the issue of rural housing as part of the MNP. A nominal sum of assistance given per site or per family under MNP was supposed to provide for a developed plot, approach roads and masonry tube wells for a cluster of 30 to 40 families. The basic principle of shelter provision under this scheme may be said to be one of `aided or assisted self help', whereby the government selects the potential users (beneficiaries), arranges for financing and administrative procedures, and the users provide the entire or part of the labour input. This, in fact, is the most conventional form of sponsored self help housing. In line with this strategy, house construction was one of the major activities of the rural employment programmes; such as the NREP and the RLEGP launched during the 1980s. However, there were significant variations across states in terms of the rural housing policies followed. Whereas some states insisted on beneficiary contribution from their own savings or borrowed funds, some allowed the entire cost to be borne from the NREP/ RLEGP funds.

The National Housing Policy (NHP) drafted in 1994 aimed at developing housing as a major economic sector. It envisaged the role of the state as the facilitator (rather than a provider or builder) in helping the most vulnerable sections of the population to acquire affordable shelters by providing them with access to developed land, appropriate building material and technology. The Indira Awas Yojana, the largest rural housing scheme to have been launched in India, has been modelled as a programme that epitomises these aspects. Not only that it has failed to instil the spirit of self-help in the poor people, but it has come to inherit all the ills of target oriented programmes.

At the other end, the outreach of mainstream housing financial institutions like the Housing Development Finance Corporation (HDFC) and the National Housing Board (NHB) still remain about 10 per cent. Also, they have kept themselves away from the rural poor as lending to them is considered risky and non-profitable. Even the specialised rural housing finance agencies have focused on the 'creamy layer' of the rural clientele. For instance, the average loan size of the Gujarat Rural Housing

Table 5: Agricultural Workers in Rural India, 1951-91 (In Millions)

[2] This sub-section is based on the research done by Tara S. Nair on the subject, mainly, Nair (1999 and 2001).

Year	Rural Population	Cultivators	Agricultural Labourers	Other Workers	Total Workers
1951	298.6 (82.7)	69.9 (49.9)	27.3 (19.5)	42.8 (30.6)	140.0 (100.0)
1961	360.3 (82.0)	99.6 (52.8)	31.5 (16.7)	57.6 (30.5)	188.7 (100.0)
1971	439.0 (80.1)	78.2 (43.4)	47.5 (26.3)	54.7 (30.3)	180.4 (100.0)
1981	523.9 (76.7)	92.5 (37.8)	55.5 (22.7)	96.6 (39.5)*	244.6 (100.0)
1991	628.7 (74.3)	110.7 (35.2)	74.6 (23.8)	128.8 (41.0)*	314.1 (100.0)

Notes: * Includes marginal workers ; Figures in parentheses in second column represent percentages to total population for the respective years. Figures in parentheses in 3rd, 4th, 5th and 6th columns relate to percentages to respective total workers.
Source: Statistics at a Glance at http://www.nic.in/agricoop/statistics/pop1.htm

Finance (GRUH) in March 1998 was reported as Rs. 149843 and monthly family income of the applicant Rs. 7401 (Table 4). Nearly three fourths of the housing finance needs are met from informal sources like household savings and employee housing loans advanced by private and public agencies. It is clear that the poor are not in any way part of this system. Under these circumstances, only a network of decentralised financial institutions with their resources deployed over a variety of housing-related activities (like land assembly, housing upgradation, infrastructure and servicing) can take care of the unmet housing demand of the rural poor. Other than the provision of finance, an enabling housing policy should have institutional arrangements to ensure supply of affordable and appropriate building materials and technologies. As far as the supply of land is concerned, it is proven beyond doubt that redistribution of land is a prerequisite to ensure the poor a roof over their heads, however tattered it may be.

9. Crucial Role of the State

Even from this limited enquiry, it is obvious that private capital has not been forthcoming and would probably not, in the foreseeable future, enter into the arena of basic rural infrastructure. It is important to realise that the population that we are concerned with has such low levels of income and standards of living that their ability to pay is low. Yet the external and private benefits are very large. In the typical literature on privatisation and commercialisation of infrastructure we often come across “illustrative” cases of urban dwellers’ willingness and ability to pay for the aforesaid basic infrastructural facilities. The examples of their readiness to pay relatively higher prices (e.g., for ‘mineral’ water, accessing health services, using paid common toilet facilities, commuting to workplace, taking recourse to private transport or renting residential accommodation), even when the income levels may not be high, have been highlighted often to argue for commercialisation of rural infrastructure. These evidences are not contradictory because rural poverty can be far sharper than in urban areas, and many goods and services can hardly be excluded, especially at low levels of service.

There is little logic to the contention that because the state has failed `massively', there is no alternative to the private sector for basic rural infrastructural services. The state need not fail massively, and there is still scope for the state in infrastructure in a more focused approach, wherein these activities with vast social benefits are taken up - water, sanitation, roads and housing. Cross subsidisation is severely limited.

10. Land, the Key Endowment

Land is the prime source of endowment in rural India. Table 5 indicates the landholding pattern of small and marginal cultivators only. The most striking aspect of this information is that there has been a rise in both the number and proportion of marginal and small farmers from 1970 to 1991. They constitute a staggering three-fourths of total agrarian workforce in India.

The gradual fading out of land reforms as a powerful economic and political agenda of transformation of the Indian society questions the seriousness of current efforts to bring about distributive justice. The most durable solution to penury and discrimination lies in land reforms, especially in an excessively land depending economy like that of India. It may seem as tampering with the lid of the can of dangerous worms in the time of reforms of the ‘second generation’, but that holds a potential promise.

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