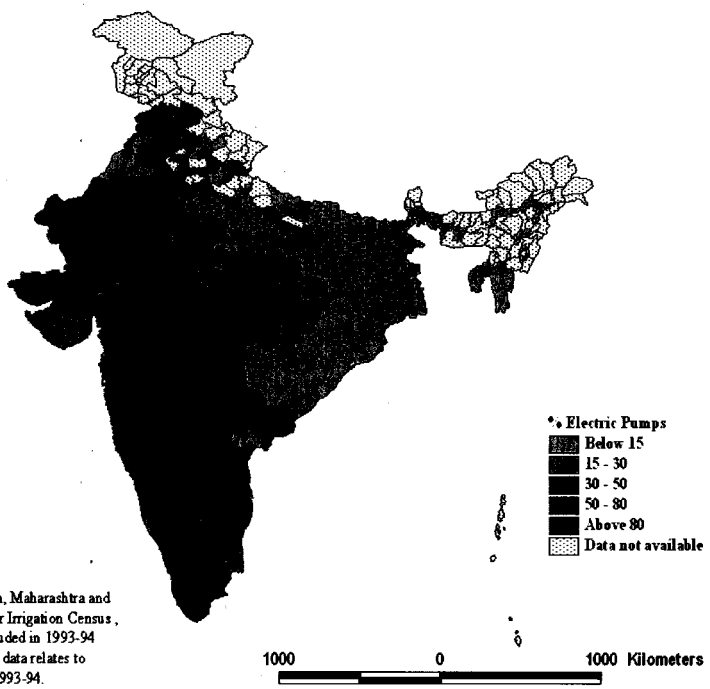
Poverty, groundwater, electricity and agrarian politics: Understanding the linkages in West Bengal

Aditi Mukherji

What has poverty got to do with groundwater and electricity? Intriguing, as the question seems, the answer is fairly straightforward. In regions of abundant rainfall and good alluvial aquifers, groundwater irrigation is a powerful tool for poverty alleviation. The power of groundwater to alleviate poverty becomes all the more effective if affordable electricity is provided to groundwater irrigators.

Eastern India (including eastern Uttar Pradesh, Bihar, West Bengal, Orissa and Assam) is one such region where provision of groundwater irrigation would have high poverty alleviating impacts. This was noted way back in 1984 by the Reserve Bank of India and later in the 1990s by the World Bank. Even in other parts of India, groundwater irrigation played an important role in ushering in Green Revolution that in turn led to food self sufficiency. At present, groundwater irrigates over 60% of India's net irrigated area of 58 million ha or so and it contributes more to agricultural production than all other sources of irrigation put together. However, the downside of this has been increasingly unsustainable use in certain pockets of the country, though not in eastern India, where under-utilization of groundwater is a more pressing issue.

In the 1980s and early 1990s, many of the eastern states did see increased groundwater utilisation which in turn led to rapid agricultural growth in states like West Bengal. However, by the mid 1990s, the boom in groundwater irrigation in eastern India had halted, much as it did in other parts of arid and semi-arid India. While in these parts of India, the pace of groundwater development had decelerated as a result of groundwater depletion and over-exploitation, this was not the case for eastern India where ample rainfall and alluvial aquifers ensured that much of the groundwater was recharged. Yet, eastern India saw a decline in growth of irrigation wells and tubewells, which, may be largely attributed to the inappropriate policies such as rural de-electrification, removal of capital subsidies on

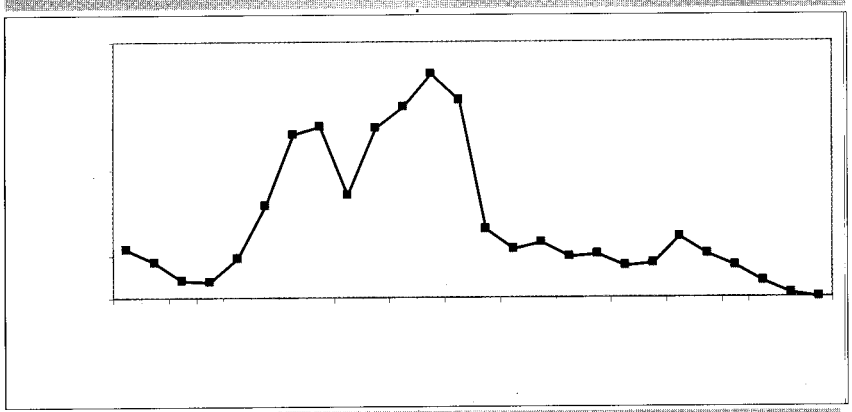


* Figures for Gujarat, Karnataka, Maharashtra and Tamil Nadu are based on Minor Irrigation Census, 1986 as they have not been included in 1993-94 MI Census. For the other states, data relates to 1993-94 based on MI Census, 1993-94.

electrification, complicated groundwater permit systems etc. To a certain extent, these policies were influenced by the dominant discourse in groundwater, viz. that of scarcity, depletion and over-exploitation, even though this discourse was not relevant for the water abundant eastern India. A part of the explanation also lies in agrarian politics, manifested by the presence or absence of farmers' lobbies. Let me elaborate upon these observations with concrete example from West Bengal.

West Bengal is a state of plentiful rainfall (1500 to 2500 cm of annually), rich alluvial aquifers and high groundwater potential of around 31 billion cubic meters (BCM). In terms of groundwater endowments per unit of net cultivable area, West Bengal ranks second only to the state of Assam. As per the estimation carried out by the Central Groundwater Board, 88 percent of all administrative blocks in the state were categorized as 'safe' blocks. This is in sharp contrast to states such as Punjab, Haryana, Gujarat, Tamil Nadu, Andhra Pradesh etc. However, paradoxically enough, the groundwater policies in West Bengal too are in sharp contrast with those of over-exploited states mentioned above. For one, farmers in West Bengal pay one of the highest electricity tariffs in India, while farmers in Punjab, Haryana, Tamil Nadu and Andhra Pradesh get electricity free of charge. Second, West Bengal has the lowest percentage of electric pumps to total pumps (10.1%) in the country, even lower than the neighbouring state of Bihar. In the 1980s and 1990s, lack of rural electrification did not matter much because diesel was cheap, subsidised and affordable. However, over the last few years or so, diesel prices have gone up tremendously(**See:Rising diesel prices,1973 to 2005**) and in the process have put many groundwater irrigators out of business. Third, to compound the problem further, recent years have seen a slow down in rate of pump electrification in the state mainly due to withdrawal of capital subsidy on electrification and necessity of procuring rather cumbersome clearance certificate from the State Water Investigation Directorate (SWID). All these policies have had a negative effect on the growth in groundwater irrigation and consequently on the agricultural economy as a whole. Given that groundwater irrigation played a crucial role in agricultural development in the state and that agricultural growth is also positively related to poverty alleviation, any slowdown in the former without any compensating growth in other sectors leads to further poverty. And the ultimate result is somewhat of a paradox: economic groundwater scarcity and concentrated rural poverty in a land of abundant rainfall and groundwater.

Slow down in the pace of pump electrification in West Bengal, 1979 to 2004



Source: West Bengal State Electricity Board (WBSEB) Yearbook (several years)

Thus, as elaborated in the preceding paragraph, going by the policy making discourse in the state, it would seem as if the state were in the brink of a major groundwater disaster. Undoubtedly, the global notoriety created by arsenic contamination of groundwater explains part of this over cautious policies, but given that arsenic is largely a drinking water threat and may be taken care of, restrictive policies of the state are hardly justified. This is especially so because West Bengal has one of the higher poverty ratios in India and here groundwater can and did play an important poverty alleviating role. What then explains the 'conservationist' attitude of the state government vis-à-vis groundwater resources? Partly, as has been mentioned earlier, the dominant discourse on depletion and scarcity has influenced the policy discourse in West Bengal given the pre-eminence of the urban intelligentsia in

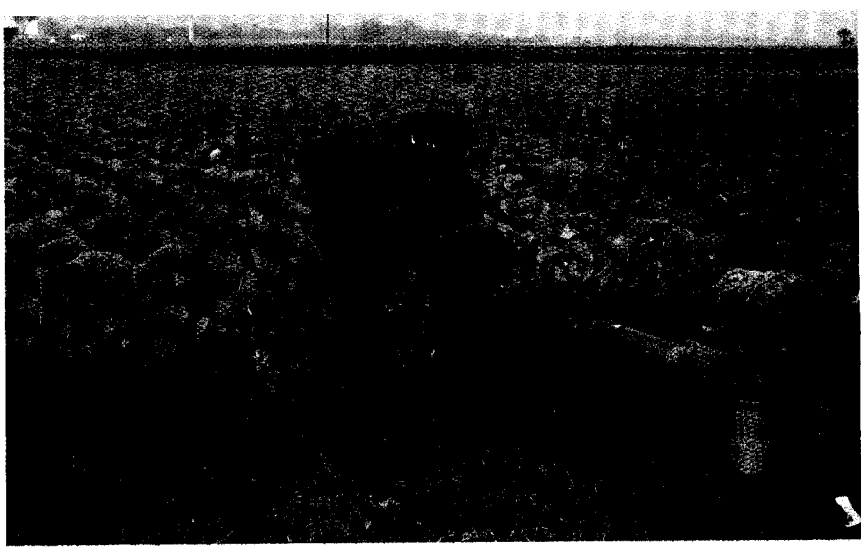
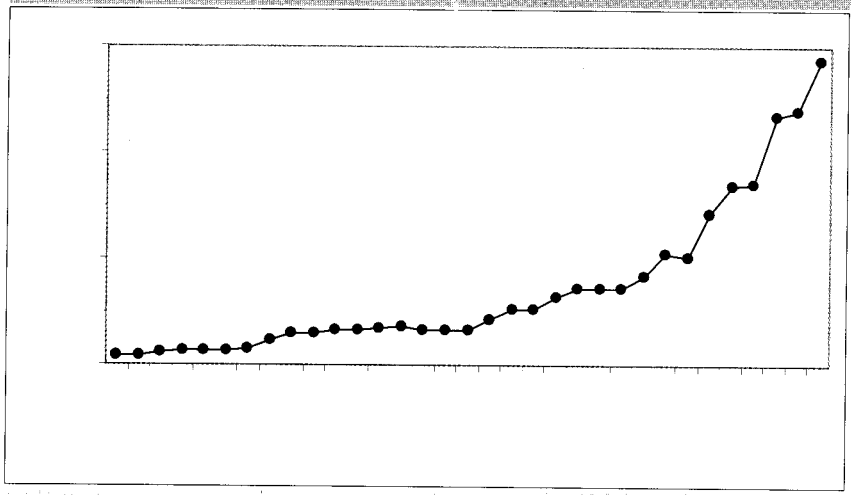


Figure 2. Rising diesel price, 1973 to 2005



Source: www.indiastat.com downloaded on 12th July 2006 (at 2004 real prices based on GOI's wholesale price index downloaded from website http://eaindustry.nic.in downloaded on 15th June 2006)

policy making and their pro-environmental sympathies and limited knowledge of rural realities. But by far the most important reason why these restrictive and anti-farmer policies have been implemented without causing any visible farmers' protest is the lack of credible farmers' lobby in the state. Krishak Sabha, a CPI(M) affiliated farmer's organisation is the only dominant farmers' group in the state and this has been co-opted by the ruling party. Given the centralised and strict discipline based party ethos of the CPI(M), voices of dissent are rarely heard outside the closed door meetings of the party high command. Since Krishak Sabha fails to give voice to the farmer's grievances, these are rarely heard. Such pro-resource and anti-farmer policies would be well neigh impossible to impose in states in Punjab, Gujarat and Andhra Pradesh all of which have strong farmer's lobbies. Thus, it may be hypothesized that groundwater policies in India have much less to do with resources condition and everything to do with agrarian politics, manifested in terms of presence or absence of farmers' lobbies.

By mid 90's Eastern India saw a decline in growth of irrigation wells and tubewells, which, may be largely attributed to the inappropriate policies such as rural de-electrification, removal of capital subsidies on electrification, complicated groundwater permit systems etc.

What then are the policy options, given the resource conditions and the political milieu? Given the rich groundwater resource condition in the state coupled with high rates of rural poverty, it may be credibly argued that increasing groundwater use through rapid rural electrification is one of the best ways of combating poverty. One often expressed concern is that encouraging groundwater irrigation through electrification leads to bankruptcy of the state electricity boards as has happened in Gujarat and Punjab. But it need not necessarily be so, provided that electricity is not given free of cost or subsidised, though a good case can be made of one time capital subsidy (and not operations and maintenance subsidy). West Bengal already has one of the highest flat rate tariffs in India and this has encouraged pro-active groundwater markets in the state. These groundwater markets provide access to irrigation to those who do not own any means of irrigation and have largely equitable and efficient outcomes. Continuing this high flat rate tariff along with easing the entire process of rural electrification and providing one time capital subsidy would encourage groundwater use and consequently make a dent in the high poverty figures in the state. Providing affordable electricity for agriculture would also make a good political move for the ruling Left Front coalition, given that recently they have come under increasing criticism for their anti-farmers land acquisition policies, the flash point of which is the ongoing Nandigram dispute. ■

Aditi Mukherji,
Post-doctoral fellow (Economics),
International Water Management Institute,
Colombo, a.mukherji@cgiar.org