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PANCHAYAT IRRIGATION MANAGEMENT: A CASE STUDY OF INSTITUTIONAL REFORMS PROGRAMME OVER TEESTA COMMAND IN WEST BENGAL

Nirmalya Choudhury
Parthosarathy Banerjee
Dayabati Roy

This article studies the role played by the constitutionally empowered Panchayati Raj Institutions over a large irrigation system in West Bengal. The article tries to capture the linkages and the dynamics governing interaction between the *Gram Panchayats* and the Water User Associations. The inferences are drawn from observed phenomenon pertaining to the role and relationship between the two sets of institutions over the Command Area Development Authority Programme (CADAP). While the advent of the canal water has created an agrarian dynamism over the canal command particularly among the marginal and landless farmers through boro-paddy cultivation, the process of institutionalizing farmers' participation left much to be desired. While the representatives of the Water User Associations often faltered to draw collective action from the farmers, the political actors proved to be much stronger. However even these actors were not proactive and responded only to crisis situations. Thus the system continues to operate at the sub-optimal level and seems to have achieved a low level of equilibrium.

INTRODUCTION

Reform in the irrigation sector in the form of decentralized irrigation management over large canal systems has been the buzzword in the policy arena for years now, but so far agrarian West Bengal has hardly been studied in this regard. In spite

of the presence of large canal irrigation systems in the state and a rich history of canal irrigation as depicted in the writing of Willcocks (1930), there is a strange paucity of recent literature on canal irrigation in West Bengal. This article, while it tries to portray the process of decentralized reform of canal irrigation in the state, also aims to address the issue of linkages between the formal Panchayati Raj Institutions (PRIs) and the Water User Associations (WUAs).

The current mode of decentralization is in the form of devolution of critical recurring activities that include maintenance of irrigation infrastructures, management of water distribution over the command and also the task of collection of irrigation charge from the farmers, which limits the domain of the WUAs. The domain of the WUAs is limited at the tertiary level,¹ with limited control over the resource at the secondary level, while the headwork of the system still remains in the control of the government bureaucracy. This limits the authorized and intended domain of action of the organizations. Such an arrangement may have the effect of reducing the member-centricity (Shah 1996) of these institutions. On the other hand, it needs to be mentioned upfront that irrigation, though a very critical input for prosperous agriculture, is not the sole input. So while the water user associations may try to build allegiance, they may fail to do so because of the presence of bottlenecks in any part of the supply chain of necessities for the agriculture production system. In a scenario characterized by high priced fertilizers and pesticides, seeds with low yields, poor storage and marketing of the agriculture produce, the patronage centrality (Shah 1996) of these institutions to the farmers also reduces. Though the devolution principle promises much in spirit, the modality of such devolution can constrain performance on intended promises. It becomes important to see if there are some complimentary institutional arrangements which can be coupled with the present form of devolution. One such arrangement is to see whether these WUAs can be dovetailed with the PRIs and thus enhance their domain as being part of the overall agriculture development process.

This article draws inferences from field observations pertaining to the implementation of a decentralization programme in the state of West Bengal. The decentralization programme involved the formation of a Beneficiary Committee (BC)² over Teesta Barrage Project as a part of the Command Area Development Authority Programme (CADAP). The methodology followed was an embedded case study over two blocks in Jalpaiguri District of West Bengal, which comes under the Teesta–Mahananda Canal System of the Teesta Barrage Project (TBP). During the course of our fieldwork we were engaged in detailed Group Discussions with the farmers and unstructured interviews with Panchayat members, farmers, BC members and petty contractors. Most of the time these were conducted in the panchayat office, at local tea shops and over farmlands. Also, transect analysis was done to check the condition of the field channels.

DESCRIPTION OF THE STUDY AREA

The study area was chosen primarily for two reasons. The district of Jalpaiguri falls in the North Bengal region which compare unfavourably with the South Bengal districts in terms of general developmental parameters and also in terms of political clout of the ruling left party. Also, the bulk of studies on PRIs in West Bengal have focused on different South Bengal districts, which also motivated us to study some districts in North Bengal.³ The district of Jalpaiguri lies partly over the command of the Teesta Barrage Project which, once completed, will be the largest irrigation project in the entire Eastern region. This district also has a large chunk of tribal population. Jalpaiguri is agriculturally backward with the lowest food grain productivity among all the districts in the state, being rated ninth among 18 districts in cropping intensity and twelfth in irrigation coverage. Compositely, in terms of agriculture development, Jalpaiguri was found to be in fourteenth position in the state (Chatterjee and Ghosh 2003). The Net Sown Area in the district is around 3.42 lakh hectares, while the irrigation coverage is only 26 per cent and the irrigation coverage through canals is around 17 per cent, both the values distinctly lower than the state averages. The predominance of canal irrigation among all sources of water is clearly reflected in the district, as out of a total irrigated area of 89.4 thousand hectares, around 58.9 thousand hectares (66 per cent) is irrigated through canals; these are mainly through the Teesta Barrage Project and the Kartowa Barrage project, which also draws its water from the Teesta (GoWB 2004a).

In spite of the lack of agrarian dynamism in this district, it has shown the highest increase in cropping intensity during the period of 1995–96 to 2000–2001—a whopping increase of 62.14 per cent as compared to the state average increase of 2.44 per cent (indiastat.com). The district also shows the greatest decline in the size of landholdings, at 14 per cent in the same period, as compared to the state average of 3.53 per cent (GoWB 2005). Thus a phenomenon is noticed whereby the size of the landholding is reducing and the intensity of using the parcels of land is increasing in this district. Both these features can be attributed to the Teesta Barrage Project (TBP), which we will explain subsequently.

The TBP is the latest major irrigation project in West Bengal and is supposedly the largest irrigation project in the whole of eastern India. When completed, it will have a designed command area of more than 9 lakh hectares, irrigating five districts in North Bengal (namely Jalpaiguri, North Dinajpur, South Dinajpur, Coochbehar and Malda). The project started in 1975 and currently only part of Sub-stage 1 of Stage 1 under Phase 1 is ongoing. The target under Phase 1 is to create irrigation potential of 5.46 lakh hectares. About 2.23 lakh hectares will be covered in Phase 2 and 1.53 lakh hectares in Phase 3. Further, it was decided that in Stage 1, under Phase 1 there needs to be created an irrigation potential

of around 3.42 lakh hectares. At current prices, the cost of the project is Rupees 20,680 million. The Teesta Barrage project consists of a series of five barrages, namely Jaldhaka, Teesta, Mahananda, Dauk, Nagor and Tangon, connected by link canals. The project thus takes an L shaped structure. Currently Teesta, Mahananda and Dauk barrages have been completed. The Teesta–Mahananda Link canal and Mahananda Main Canal along with its distribution structure are partially completed. Irrigation of certain patches has been taking place for the last eight–10 years (Ghosh 2005).

The study focused on the Teesta–Mahananda Link Canal (TMLC) which passes through the Jalpaiguri district, over two blocks: Rajganj and Jalpaiguri Sadar. The major part of the distribution network of the TMLC has been completed. The TMLC is a case of Inter-Basin Transfer that links the mountain river Teesta, tributary of the Brahmaputra, to the Mahananda, a tributary of the Ganga. The project is one of its kind, where a mountainous river has been tamed and large areas in the plains are being irrigated, using its water without creating any reservoirs. Of the 10 distributaries coming out from the TMLC, this study was carried out over distributary D2 and Minor M3 that comes out from D2. D2 and M3 are spread over the Rajganj and Jalpaiguri Sadar blocks of the district. From the head of D2 to the tail end of M3 there are 4 gram panchayats (GPs) namely Mantadari and Shikarpur under Rajganj block and Belakoba and Bahadur under Jalpaiguri Sadar block. Thus the study area was spatially divided into head, middle and tail ends, whereby Mantadari and Shikarpur came at the Head, Belakoba GP at the middle and Bahadur GP at the tail end.

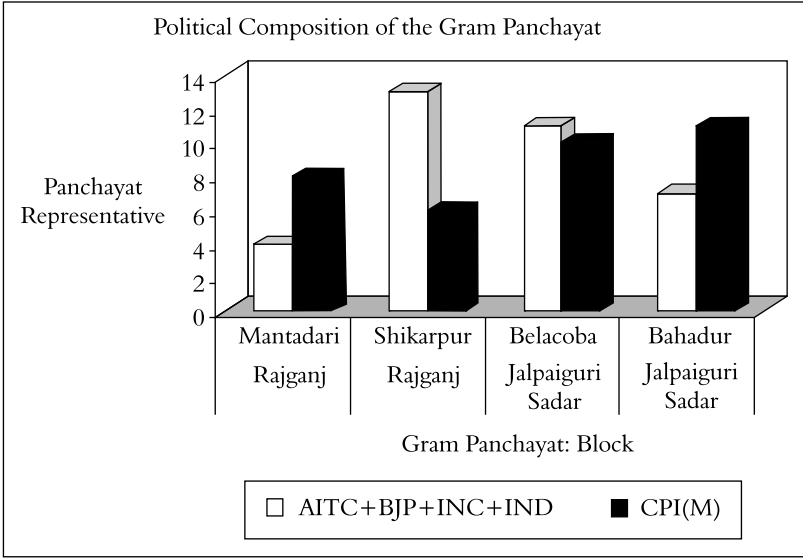
Formally, the gram panchayat even in a state like West Bengal enjoys limited devolution of power and rights over canal systems. While the canal rights rest with the irrigation department, the rights of the field channels that need to be built at the farm level do not rest with the department as they need to be built over private agricultural land. This is where the gram panchayat intervenes. The intervention lies in implementation of the scheme of construction of lined field channels undertaken by the Command Area Development Authority (CADA). We will now try to understand the nuances of the CADAP and portray the role of different institutions in this programme.

The CADA, Teesta, was entrusted with the responsibility of construction of lined channels from the already completed distributaries and the minors and sub minors of the TBP in order to realize the created irrigation potential. In the absence of financial authority and the requisite manpower to undertake the project on its own and following a state Government Order, CADA, Teesta, decided that the formation of lined field channels would be implemented through the panchayat, and the gram panchayat was to undertake the role of the implementation agency. The procedure of implementation of this programme follows a series of actions concerning the farmers, the gram panchayat and the CADA. To start

with, a group of farmers who are willing to donate part of their land and get a lined field channel (FC) come together and submit a proposal for the construction of a field channel to their farms. The proposal is given to the concerned gram panchayat. The essence of this programme is decentralized management with the increased role of farmers at the tertiary level whereby the management of the FC and distribution of water is undertaken by this group. The group for this purpose forms a Beneficiary Committee (BC) and along with their proposal they provide an undertaking expressing their willingness to undertake the management of the FC in the post-construction stage. Since such responsibility requires funds, the group has to open a bank account in any bank. This account becomes a joint account of three people selected from the group. The *pradhan* of the gram panchayat, who is the nodal implementation officer, now collates all applications in the panchayat area and forwards them to the CADA. The CADA, after receipt of these applications, undertakes a technical review of the project proposals and with some correction approves the project and forwards it to the state capital for the sanctioning of funds. Once the projects are sanctioned, CADA forwards it to the *pradhan* who now implements them with the help of the Beneficiary Committees (BCs). During the process of implementation the CADA may provide technical assistance. The money is released to the *pradhan* in instalments. The CADA pays the *pradhan* at the market rate and also does not impose any income tax against him/her. This is how the project gets implemented. The cost of the project was initially shared between the state and the central government in the ratio of 50: 50, but post 2003 a component of the farmers' contribution was added and now the break up stands as 10: 40: 50 between the farmers, the state and the central government. Till now most of the BCs have been formed over D2 and M3 over the four GPs of Mantadari, Shikarpur, Belakoba and Bahadur. The reason for this is that D2 and M3 are the two largest distribution infrastructures in terms of the water capacity, length of the canals and the command area.

Since a large number of decision takes place in the socio-political domain in the villages of West Bengal, it was important to note the political composition of the gram panchayat at the outset, which also helps later on to interpret diverse findings (Figure 1). Mantadari GP where the programme of CADA started is a Left-dominated panchayat where the CPI (M) is in absolute majority. Next was Shikarpur, which was a hung GP, where there had recently been a roll-over in the GP whereby an independent candidate (who is also the *pradhan*), with the help of four breakaway Trinamool Congress representatives, had switched sides in favour of the Left. Through this process the Left could wrest control of this GP after a long time. Belakoba was again a hung GP where the Congress, Trinamool Congress and BJP have come together to form a grand coalition (*mahajoth*). The Bahadur GP located at the tail end is again a Left ruled GP where there is absolute majority of the CPI(M). Thus, there is a clear distinction in terms of political composition in all these four GPs. The differences in political composition seem

Figure 1
Political Composition of the Gram Panchayats in the study area



Source: GoWB 2004b.

to impact the implementation of the programme as we explain subsequently. Thus there is a clear political demarcation over our study area whereby the head and the tail end GP are controlled by the left front, mainly the Communist Party of India (Marxists) [CPI(M)], but the other two GPs do not have a strong presence of the left front.

RESULTS AND DISCUSSIONS

Under the CADA programme, 99 field channels have been constructed in the last six years. Though the programme started from Mantadari, most of the FCs are located over Belakoba, Shikarpur and Bahadur panchayats.⁴ During the course of this study 18 field channels were visited. They were found to irrigate around 1,187 hectares with an average area of 85 hectares per channel. But the area irrigated by different field channels showed large variations. While 87 hectares were found to be the created irrigation potential, only around 42 hectares actually received irrigation from the canal. Since this value showed a high degree of variation, we decided to calculate the utilization ratio, that is, the ratio of the designed command and the actual command.⁵ For 11 FCs, out of the 18 that we studied, we could obtain the designed command and the current level of area that is irrigated.

It was found that the irrigation potential utilized was only 52.4 per cent with a low standard deviation. This shows that the utilization rate of these field channels was uniformly low.

In order to see if there was any pattern governing the low utilization rate it was decided to run a regression of the independent variables like length of the field channels, members in the BC, number of farmers in the command and command area over the utilization rate. It was presumed that long field channels catering to large number of farmers would show a lower utilization rate. Longer the channel, greater will be the conveyance loss and larger the farmer density in the command, greater will be managerial problems, both resulting in low utilization. The size of the BC was postulated to impact in both directions. While transaction cost may have a downward effect, the increased participation may act positively on the utilization rate. However, it was found that the designed command was negatively linked with the utilization rate. Thus, systems having a larger command showed a lower utilization rate. The number of members in the beneficiary committee had a positive correlation with the utilization rate. Both of them were significant at an 18 per cent level of significance.⁶ The model, though it was a good fit, failed to explain the entire range of variations. The overall explainability of the model was found to be low, thus indicating that apart from the often quoted reasons behind the low utilization rate there must be other factors that contributed to the low utilization rate. While the utilization rates of the FC were low, the increase in area under irrigation over the command was found to increase statistically significantly, from 677 to 2471 hectares ($F = 119.412$, $p = .000$). Also it was found that there was an anomaly between the data that was furnished by the CADA pertaining to the panchayats and our primary data based on the estimates and guesstimates of the beneficiaries (see Table 1).

Thus, to capture the fine interlocking that contributed to lower utilization over the command and its subsequent interpretations, it becomes important to depend more on the qualitative information as furnished by our respondents. It was also important to raise questions like: Was this programme making a significant impact on the farmers? Who was benefiting? Who was losing out? Why? How has the involvement of panchayat affected the implementation of the programme?

During the course of this study we had met and had discussions with many farmers. We administered a checklist pertaining to the outcome and impact of this programme across 48 farmers. Among them, there were 24 marginal farmers, 12 small farmers, seven semi-medium farmers and two medium farmers. There were no large farmers among our sample.⁷ Most of them were primarily dependent on agriculture, though only 17 respondents reported agriculture as their sole livelihood activity. Around 65 per cent of respondents in our sample were found to practice agriculture as an allied activity, as they thought that sole dependence on agriculture could be a risky proposition. Such a composition reflects the practice of low-value agriculture in the area. Many of the respondents practised

Table 1
Field Channels Constructed under CADA Programme

<i>FC No.</i>	<i>Actual Irri. Area (in Hectares)*</i>	<i>FC Length (in Meters)*</i>	<i>FC Length (in Meters)#</i>	<i>Actual Irri. Area (in Hectares)#</i>
35L	50	2500	3400	92
154 R	Na	1900	1770	41
98 L	24	1800	1860	44
108 R	24	1600	1630	41
82 L	Na	350	309	6.5
169 L	42	1400	1675	40
158 L	102	1600	1450	38
149L/R	98	1200	1625	40
128 L	42	2000	1550	40
111 R	6	1200	1000	26
129 R	Na	1630	1700	40.5
136 R	183	1600	1730	40
2 L	7	110	192	3
3 L	8	120	316	5
8 L	7	Na	391	5.5
31 L	7	Na	2600	57

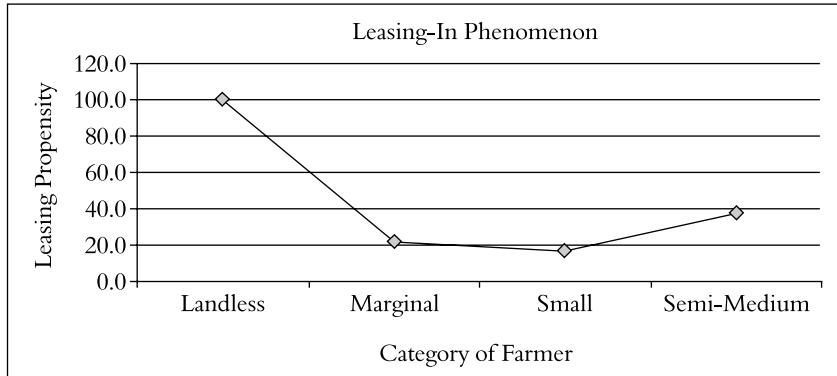
Notes: *FGD with farmers/BC members/contractors.

= based on the CADA information.

allied professions like general labour work, tea garden labourer, agriculture labourer, fishing business, local shopkeeper, contractor and van driver to name a few. Though the exclusive dependence on agriculture as an occupation was low, agriculture seems to have intensified. The cropping intensity was found to increase significantly from 138 per cent to 180 per cent ($F = 11.83$, $p = .001$). While an increase in the intensification of agriculture is noticed over the canal command it was found that there has also been increase in the cultivated area over the area owned by the farmers, which indicates the possibility of *leasing in* of land. We analyzed the *lease-in* phenomenon and tried to interpret the economics behind it (see Figure 2).

It was found that there was clear distinction across landholding size between those who leased out land and those who leased in land. Around 30 per cent of the marginal farmers were found to lease-in land over the command and more strangely, 11 per cent who leased-in land under this category were earlier landless. The phenomenon that is noticed over the command area of Teesta is not an exception. It was reported by Webstar that even in the early years of the Damodar Valley Canal command, the marginal and the landless were found to lease-in land from the medium or large farmers. This he had termed as the 'poor' nature of canal irrigation (Webstar 1992).

Figure 2
Leasing-In Phenomenon in the Command Area of Teesta Barrage Project



Source: Authors' survey over the command area.

There has been shift in the cropping pattern among the farmers over the Teesta canal command. Prior to availability of canal water, jute was one of the major crops in the area. However, the economics of jute at that time was unfavourable for profitable agriculture. On one hand, it was labour intensive and so the entire landholding was seldom cultivated. The farmers would grow jute only on small patches, mostly to cater to their domestic requirement, while the surplus was sold in the market. On the other hand, the price obtained for jute during those years (in the 1990s) was pretty low. Low prices were fuelled by both excess production (since most of the farmers would grow jute) and market manipulation by the local jute traders known as *phore*. Sometimes there would be a cartel among all the buyers and on other occasions sales restrictions imposed by the local farmers' organization also dampened the price level. According to the farmers over the command, the crop economics of jute was around Rs 2,625 per hectare.

With the advent of canal water jute has given way to boro-paddy over this area and the prominent crop cycle had shifted from aman-jute combination to aman-boro combination. Advent of boro-paddy over the area has also resulted in a differential land tenure system. One of the tenural arrangements is *aadhiyaa* system. In this, a farmer cultivates boro-paddy by leasing in land under a specific contractual arrangement, whereby the cost of cultivation is borne by the lessee and only the cost of manure is provided by the landowner. The final output will be shared equally between the lessee and the landowner. Another dominant form of tenural system is to lease-in land in exchange of fixed cash payments. The cost of cultivation and the yield under such a tenural system is then solely enjoyed by the lessee. Again this fact seems to follow what Webstar reported in his paper in the early years of the DVC canal command (Webstar 1992).

Boro cultivation has changed the developmental scenario in the hitherto poor villages and has substantially contributed to the food security in the region. The crop economics as reported by the marginal farmers in our sample shows that boro-paddy yields around 86 mounds per hectare, yielding a surplus of around Rs 10,202 per hectare. Aman paddy continues to remain the prominent crop during the Kharif season. It yields around 50 mounds per hectare and Rs 6,892 per hectare. The Kharif paddy is mostly rain-fed and is now more assured with the advent of the canal system. Even in case of rain failure, a critical supplemental irrigation can be provided from the canal system.

Around 24 per cent of the marginal farmers continued to grow jute and due to higher market prices they began to earn roughly Rs 18,350 per hectare, which was even more than boro-paddy. This result has different ramifications. The tail-enders of the command, who do not get water in some plots of their land from the canal, continue to grow jute. Also the reduction in the mass production has forced the price upwards. However, boro has not been facing competition from jute cultivation since jute is labour intensive and farmers usually put only a fraction of their landholding under jute, and also, there is a huge boost in the food security status brought in through boro cultivation. Also, availability of fallow land which could be dug out for rotting of jute has now drastically reduced with the advent of boro cultivation.

The leasing-in of land was, however, much lower in the case of small farmers while 33 per cent of the semi-medium category farmers were seen to lease-in land. Since the respondents under medium and large were largely absent we did not try to compute for them. Thus, leasing-in of land seems to take a 'U'-shaped form with relatively high leasing-in among the marginal/landless and the semi-medium farmers, but low among the small farmers. The specific reason behind such a phenomenon needs to be probed further.

Thus, the crop economics and the cropping pattern, including the tenural system, strongly indicate the upsurge of marginal and landless farmers with the advent of canal water. But the apparent positive picture over the command is also the source of the paradox. On one hand, while it was seen to act as a pro-poor tool, on the other hand a large part of the command of the field channels continued to remain uncatered to. It was found that around 56 per cent of the respondents said that there is conveyance loss in the field channel due to which they receive water late or are devoid of water.

In such a situation it becomes important to look at the reasons behind the low utilization based on qualitative information based on the experiences of the agrarian populace. Most of the respondents (34 per cent) who complained about not receiving adequate water from the FC attributed it to faulty construction; 23 per cent of them attributed this to the coercive extraction by the farmers within the FC command and 23 per cent of them attributed this to the coercive extraction by the farmers outside the FC command. Most of the respondents from

Bahadur panchayat came under this third category as they faced water problem particularly during scarcity because of illegal bunding by the farmers at the head of the system, mainly from the Shikarpur and Belakoba panchayat. All the three responses have important implications.

The construction of field channels was to be done by the *pradhan* through the beneficiary committees. But there remained a gap between the designed process of decentralization and the reality. On a number of occasions the beneficiary was born on a death bed and the contracts of construction of the field channels were hijacked by those who were well connected. In other places, the BC was institutionalized but just to get the proposal sanctioned from the panchayat and the department; the construction was undertaken by some petty contractor whose land may or may not be in the command. The role of the BC was restricted to ensuring collective action from the farmers during the construction phase only for the sacrifice of land for the canal construction. Also, there were cases reported by the respondents whereby the contractors, by virtue of their position in the political society, would actually collude with the technical surveyor and manipulate the channel construction. Thus, when we try to match the information collected from the beneficiaries with the official figures they do not tally. The mismatch also indicates the ignorance of the BC or the farmers in the command who were in accordance to the rule supposed to be the builders and managers of the field channels. This had its usual impact in the quality of the field channels. In a number of cases the field channels were breaking down, more so in the middle and tail ends. The reason is quite simple. The objective of the farmers over the command would have been maximization of profit from agriculture, for which they would have ensured top quality distribution infrastructure, as water is a crucial input for boro cultivation which yields cash or food security. The contractor does not have a direct stake like the farmer, and would just try to maximize his profit from the construction, in the process compromising on the materials to save cost and ending up building an inferior infrastructure.

The prevalence of coercive extraction as reported by our respondents also questions the effectiveness of the BC. In very few cases we found that the BC was actually functional. Even a classic case of market failure was observed in one of the schemes where it was found that both the tail end and the head end farmers kept on waiting for each other to rehabilitate a part of the canal which was broken but no one actually did anything and ultimately they had to opt for a cheap alternate source.

As far as the water distribution within the command of the FC is concerned it was found that while only 20 per cent respondents who were at the head of the FC command complained about irregular supply, all the respondents who were located at the end of the FC complained about not getting water, or getting limited supply from the FC. The point to note is that even 47 per cent of the respondents whose land were found to lie somewhere in the middle also complained about

limited supply of water. Around 19 per cent of the respondents attributed the lack of adequate supply to a combination of faulty construction and coercive extraction which resulted in the scarcity. Thus the conditions of the distribution infrastructure question the pattern of implementation of the CADA programme. The honest spirit that guided the institutional reform over the Teesta Canal Command decentralization using the panchayat institution seriously lacked teeth when it came down to actual implementation.

While a part of the FC command remains water-scarce, in the actual situation it hardly remains unirrigated. In many occasions it was found that the farmers constructed mud channels from the canal and conveyed water to their field. But these were never free from hassles and dispute. A case of externality lied at the core of such disputes. It was found that the farmers over whose land the mud channel had to be constructed would not allow the other farmer to use the channel to convey water on days when he applied manures and fertilizer; otherwise the investment of the landowning farmer would be washed off, while the farmer who received the water would benefit doubly, both because of receipt of water and receipt of fertilizer and manure washed along with it, which would reduce his cost of agriculture. On such occasions the panchayat representatives and party representatives often resolved those conflicts.

The process of construction of the FC and the process of institutionalization was not uniform everywhere. It was found that in Bahadur GP which lies at the tail end, most of the field channels were in better condition. Here, the role of the BCs were also palpable and it was not difficult to find people who had actually put their brains together in the construction of those field channels. Even the cases of coercive extraction among farmers within the command were limited, but the conflict lay above the command. Thus the case of Bahadur GP allows us to hypothesize a scenario where when there is absolute scarcity of the water at the outlet, then there is less conflict below the outlet. In case of Shikarpur and Belakoba GP, however, where the absolute volume of water was not a problem, the conflict was below the outlet.

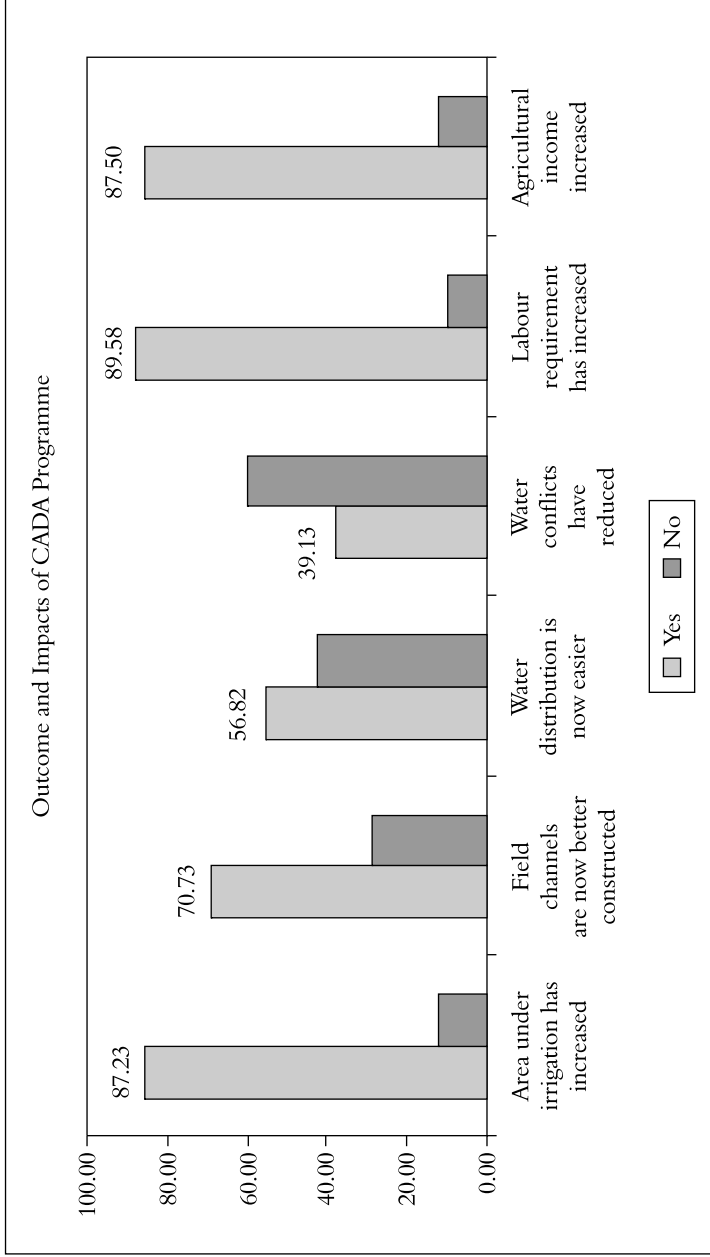
The importance of canal water in agriculture is reflected in the incidences of violence reported in the countryside on account of water distribution. Around 77 per cent of our respondents reported instances of conflicts pertaining to water distribution in the canal. The role of the BC vis-à-vis the local panchayat representatives becomes important in such a context, as the crisis situation reveals the relative power exercised by the two different actors: (i) the social actor represented by the BC representatives who, according to the rule, need to manage the water distribution, thereby exerting a peer pressure to maintain an optimal situation; and (ii) the political actor who formally does not have any role to play in the water distribution and cannot even have any right over the canal without prior permission of the irrigation department (GoWB). We found

that while 19 per cent of the respondents said that in a crisis situation the BC resolves the conflicts, around 56 per cent of the respondents report that it is the panchayat representatives and sometimes the *pradhan* who resolves the conflict. On many occasions it was found that conflicts were resolved by the local panchayat representative or the party representative not just pertaining to water distribution, but also water conveyance when the unlined channels needed to be drawn over somebody's field. In the case of Bahadur GP, where the conflict spread out to a different panchayat, even the *pradhan* had to interfere along with the higher order panchayat functionaries and government officials. Thus broadly speaking, on one hand we find that while the irrigation scenario has caused a marked improvement among the landless and marginal farmers, the small farmers and semi-medium have also made some improvement. With the advent of the boro cultivation, the cropping intensity and the area of cultivation has increased. We wanted to check our findings with the farmers' perception. It was found that around 87 per cent of our respondent felt that area under irrigation has increased with the advent of canal waters and 87.5 per cent respondents agreed that their agriculture income has increased (see Figure 3). However the increase of agriculture income is not universal. While there has definitely been a boost among the landless and marginal farmers, the large and medium farmers were not positive with the impact of the canal. The reason for this was the amount of crop diversification that they could employ earlier, including cultivation of rabi vegetables and potato, which has reduced with the advent of canal irrigation. For them, the aman-boro cycle may not seem very lucrative. In such a scenario we found two possibilities: those who did not get canal water would rather happily source alternative source of irrigation and continue to grow different crops, while the net losers seemed to be those who neither received canal waters nor could even grow other rabi crops including potato because of the increased soil moisture caused due to percolation of canal water. Thus it was not uncommon to find farmers outside the command growing potato intensively with the help of shallow tube wells or growing vegetables by lifting water from the farm pond.

The demand for labour requirement has also increased and the average wage rate that was reported over the area was about Rs 70 per day for males and Rs 50 per day for females. This was supported by our respondents where around 89.6 per cent respondents were of the view that the demand for labour has increased (see Figure 3).

While the advent of Teesta water has brought a change in the agricultural scenario, the process of decentralization through involvement of farmer groups in the form of institutionalizing beneficiary committees lacked teeth. In most of the field channels we visited, the beneficiary committee lay moribund. The collective action in terms of maintenance of the field channels and ensuring proper distribution of irrigation water across the command was largely absent.

Figure 3
People Perception on Outcome and Impacts of CADA Programme



Source: Authors' survey over the command area.

On the contrary, it was not uncommon to find collective action among farmers to create cross-bunding over the canal and lift water to a level that allows them to irrigate more area. In the tail end GP it was found that during the boro season, the farmers would contribute collectively for tea and snacks while they would work together to create cross-bunds over the canals, to stop the flow of water. Thus the anarchy pertaining to water distribution prevailed. These observations were largely supported even by our respondents. While 70 per cent perceived that field channels have been better constructed due to the CADA programme only 56.8 per cent residents felt that water distribution has improved with the construction of the lined channels, and an even group of 39 per cent perceived that there has been a reduction in the water conflict (see Figure 3).

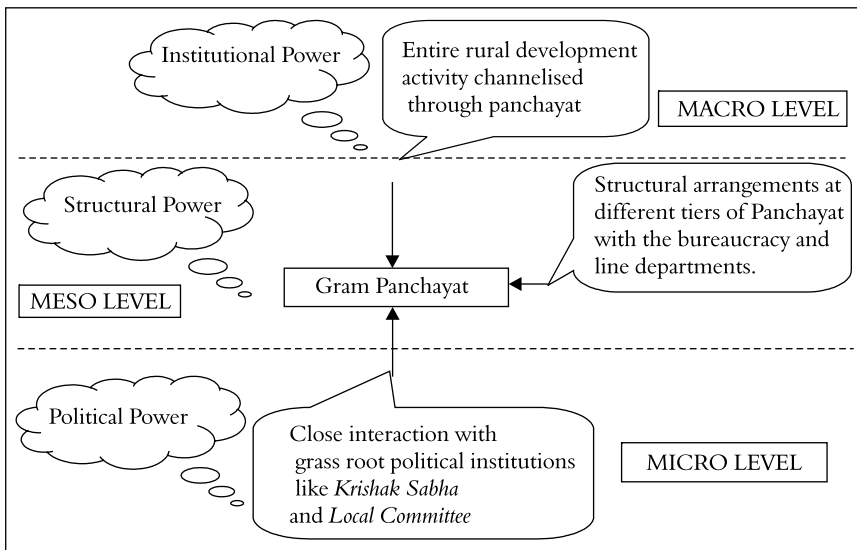
The conflict pertaining to water distribution seems to remain unchanged even with the institutionalization of the beneficiary committees, largely because the power was not devolved to the beneficiary committee and in many occasions they just existed on paper. It was found that on a number of occasions the beneficiary committee failed to encourage collective action among the farmers and thus the farmers depended on the panchayat member at the village level and in some cases the only fall-back option available was the local party. Thus, even at the micro level the political actors and the panchayat representative or the party representative seemed to draw more command than the community social actors which would have been the case had the BC been much more active than what it currently is. Strangely, the intervention by the gram panchayat or panchayat samiti, though palpable as one talked with the farmers, was in no way proactive. Rather, it was a knee-jerk response to a problem. Any matter which moved beyond the private domain automatically would move into the panchayat domain.

Thus the impact on the farmers with the advent of Teesta water cannot be solely attributed to the implementation of the field channel programme. The area under irrigation has increased with the advent of the field channels but mainly because little area was irrigated before the construction of field channels and impromptu actions such as construction of mud channels would on many occasions remain unrecorded. In spite of the construction of lined field channels the farmers always had a cheaper alternative though a more heckling one. They would bypass the lined channel by choice or by compulsion by constructing unlined mud channels and withdraw water from the canals through these temporary unlined field channels. Though this entails one of the major components of conflict raised due to a typical problem of externality, there were instances where the local party officials would act as intervening agents who would locally manage the situation as and when the need arose. Thus while on one hand there would be a small fraction of farmers who would benefit from the lined channels, one could find a larger group adopting the cheaper option.

INFERENCE AND CONCLUSION

Learning from the implementation programme of CADA programme suggests that the role of civil society (in this case the institutionalization of the beneficiary committee) is limited until and unless it is routed through the political society, which is powerful enough to propagate collective action among the populace. The power of the political society at the grass root level emanates from three sources (see Figure 4).

Figure 4
Power Structure of the West Bengal Panchayat Gram Panchayat



1. One comes directly from the governmental policy and ideology of bestowing of functions into the hands of the panchayat. This results in the entire rural developmental activity being channelized through the panchayat institution. This results in the panchayat becoming the *mai-baap* of the general rural populace, becoming a government in itself. Thus the panchayat continues to wield the patronage baton as bestowed from the above by the government and continues to become more and more powerful; the power seems to increase as one moves down from the zilla parishad to the gram panchayat. Thus Ghatak and Ghatak (2002: 52) quoted in their paper ‘...the god in heaven and the *pradhan* in the countryside are equally powerful...’. Such power often becomes a double edged weapon. On one hand, with increasing power the gram panchayat starts becoming

a bureaucratic organization whereby they become less responsive to the populace and more responsive to the party. Thus there remains a potential that administrative bureaucracy is replaced with panchayat bureaucracy. On the other hand, the channelization of the entire range of rural developmental activity through the panchayat implies that the villagers within the panchayat jurisdiction have to depend on the panchayat for one or the other reason, and their daily life gets embedded into the panchayati system. Thus at least theoretically, the 'member centrality', 'domain centrality' and 'patronage centrality' (Shah 1996) automatically increases and the gram panchayat or panchayat samiti becomes powerful enough to draw any level of collective action from the community. For instance, while the irrigation department wrests the legal right over the canal systems, they actually fail to appease the villagers to release water for the tail enders and remove the illegal blockades in crisis situation. In all such situations the panchayat representatives who do not have any legal power over the canal systems seem to enjoy a comparative advantage and have to accompany the departmental staff. This is the very same reason why the departmental staff also feels that involvement of panchayat in the CADA programmers ensured some success which would have definitely not been achieved in case the panchayat had been bypassed.

2. There is also a power that emanates from below. At the grass root level, different organizations like *krishak sabha*, local committee and gram panchayat overlap. This overlapping of the party and the panchayat also endows a lot of power to the panchayat. The panchayat at various levels has a check from the strong political presence of the party. Thus while the party may feed this organization, they also act as checks to the organization. Thus in the background of every zilla parishad there is a district committee (DC); for every panchayat samiti there is a zonal committee (ZC) organization and behind every gram panchayat there is a local committee (LC). Such an arrangement ensures that even if the panchayat representatives are not accountable to the public at large, they still seem to have a strong accountability towards the party. Thus, in rural West Bengal there exists a vertical accountability of the elected panchayat representatives towards the political representatives, at least in those panchayat which are controlled by the CPI(M). The importance of vertical accountability was clearly noticeable in the case of the construction and maintenance of field channels across the GPs. In both Shikarpur and Belakoba panchayat the FCs were falling off badly, either due to faulty construction or lack of maintenance, which signified the extent of leakages in the construction of the FCs both in the hardware and the software aspects. As political representation of these gram panchayat reveals, the non-left coalition seems to be stronger. The objective function of such an arrangement is to keep the communist

party out of the fray at least till the subsequent panchayat election. On the other hand, the works appeared to be relatively better in the case of Bahadur which had a very strong leftist presence. Though there were cases where the basic idea of farmers' participation was hijacked, the implementation of the programme was much better and at least there were few cases where the entire scheme went haywire with the farmers openly cursing the panchayat entrusted contractors. Informal discussions with the panchayat and party officials also revealed that in the case of implementation of many of the schemes the party seems to have strict control over the disbursement, to the extent that even an elected representative cannot on his/her own arrange to wield a patronage baton by virtue of his position. Even the mode of disbursement needs to be decided by the party and finally delivered by the party. The strict control over panchayat by the party was also reflected by Lieten (1988) when he found that sitting communist party representatives were debarred for subsequent election as they were charged with official corruption.

3. The third source is the simultaneous and shared domain of canal irrigation by the PRI and the irrigation department in which ultimately the PRI has the power on the ground to get things done through the department, since the latter has no money and fewer functionaries.

The study of the implementation of the CADA programme across different political panchayat seems to indicate that the presence of strong party behind the panchayat actually checks the panchayat from becoming a blatantly corrupt institution on one hand but on the other hand also propagates a silent corruption. Veron et al. (2006) also reported similar findings while studying the employment assurance scheme in rural West Bengal where they found that upward accountability or political accountability towards the panchayat and the party seems to dominate over horizontal accountability between the BC and the department functionaries of the beneficiary committee. Thus, while corruption was palpable in Old Malda which was politically well contested, it was silent in Debra, a CPI(M) stronghold. Even in our fieldwork we did find that where the gram panchayats were non-leftist coalitions the extent of corruption is easily palpable. The reason is simply that while the panchayat members' accountability may be limited to just winning a panchayat election or a term of five years, the party needs to maintain a permanent pro-poor and responsive image in the minds of the rural populace, or at least a critical mass, which is a political compulsion for the party.

Thus at the micro level the panchayat intervention though unsystematic was palpable in terms of knee-jerk responses. Though there were instances where the gram panchayat would leverage its finance to build up unlined channels

through the Swarnajayanti Gramin Rozgar Yojana (SGRY) funds, any organized effort even from the side of the panchayat to revitalize the moribund beneficiary committees seems missing. A system of low level equilibrium existed whereby the beneficiary committee lay defunct in many cases, the field channels catered to half its command, the farmers would travel an extra mile to draw water through unlined channels and the panchayat intervened only when the situation was conflicting; and all this when a substantial population, particularly the marginal and the landless, showed marked improvement with the advent of the canal. Thus the system seemed to be trapped in a low level equilibrium situation whereby none of the actors (the community or the political) actually intervened.

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Nirmalya Choudhury is a Doctoral Student, TU Berlin, Augustinushaus Room No 103, Edward Pflüger Straße 56, 53113 Bonn, Germany. E-mail: nirmalya1511@gmail.com. Parthosarathy Banerjee is a Research Consultant. E-mail: psb3210@yahoo.co.in. Dayabati Roy is a Research Consultant. E-mail: dayabatiroy@gmail.com.

Notes

1. The canal system can be broadly phased into Headwork, Secondary and Tertiary level. The headwork is the conveyance structure which includes the main canal coming out of storage or a diversion. The secondary level would be the distribution structure which may be the distributaries, sub distributaries, minors and sub minors coming out from the distributaries. The tertiary level refers to the actual command area which may be minor if the minor directly irrigates a patch or may be sub minors and water courses.
2. The Beneficiary Committee is the West Bengal version of Water User Associations (WUA). Most of the decentralization programmes in West Bengal take place through formation of beneficiary committees.
3. Apart from the recent string of studies like the one that was done by Bardhan and Mookherjee and the study under DFID's strengthening rural decentralization project where large scale surveys were done throughout West Bengal, seminal works of Lieton, Webstar, Ghatak and Ghatak, and Harris were case studies done over districts of Bankura, Birbhum, Midnapore, Burdwan all of which are districts in South Bengal.
4. There are 12, 33, 38 and 15 field channels in Mantadari, Shikarpur, Belakoba and Bahadur GP, respectively.
5. Designed command was obtained from the CADA and the actual irrigated area was the estimate obtained from the farmers over the command/BC members/Petty contractors.

6. $R = .848$, $R \text{ Square} = .719$, Residual SS = 839.6, Regression SS = 2151.97, T value for Designed command is -2.04 and T value for members in BC is 2.02.
7. Marginal farmers own < 1 hectare, small 1–2 hectares, semi medium 2–4 hectares, medium 4–10 hectares and large > 10 hectares.

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