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Introduction

Pranab Kumar Chattopadhyay

It is almost universally accepted that the developing countries are experiencing a 'jobless growth'. Not only is the vast majority of the population unable to utilize the benefits of capital-accumulation-led growth of 'modern' sectors, the very pattern of this 'progress' threatens livelihood of the bulk of the people by separating them from resources/means of labour. Some critics regard these 'excluded' and 'expropriated' people as forming a sea of 'surplus population'.

The need for containment of this large surplus population on the one hand, and deployment of the underutilized resources on the other, have induced the governments of the developing world to take up measures so that poverty and social security are managed outside the 'modern' sphere of capital-accumulation especially through 'peripheral' employment generation. Thus 'development management' by the State aiming directly at the excluded/expropriated population has become the dominant development strategy.

NREGS (National Rural Employment Guarantee Scheme, Government of India) happens to be a classic example. This is a 'self-targeted' 'workfare' programme and thought to be the world's largest employment generation ('cash-for-work') project.

An important goal of the NREG Act (NREGA) is the provision of a 'strong social safety net for the vulnerable groups by providing a fall-back employment source, when other employment alternatives are scarce or inadequate' (Ministry of Rural Development 2008, 1). It is supposed to provide at least 100-days of annual employment at the legally minimum wage rate to all rural households in India and to prepare/develop un(der)used or traditionally used natural-resources for cultivation-forestry-fishery in building roads, canals and reservoirs. Thus, NREGS is framed to take into account both the demand and supply side aspects of an agenda of 'inclusive growth'. While on the one hand, NREGS should take care of broad-based income and demand generation, on the other, it is supposed to induce overall rural production through infrastructure development.

However, in spite of its ambitious goals the programme has failed to generate expected results even in a country like India having very serious problems of un(der)employment. It is really intriguing that, even though there should be very high demand for NREGS jobs, the performance is much below expectation. A fundamental target of this programme is to introduce and operationalize the notion of 'right to work' through the mechanism of self-targeting and to provide a strong social safety-net. But this very notion of right is often violated/missed and the performance depends in many cases on the benevolence of the bureaucracy and political parties and on the (un)willingness of the governmental bodies. Even if there are very serious needs for job, the voices remain feeble and unheard. Furthermore, though the formulations of NREG schemes are supposed to come up from the bottom through a decentralised mechanism, the overall participation across the country is not satisfactory (national average being less than 50 person-days till 2009, while the target is at least 100) excepting certain states.

There have been extensive discussions on the project from different angles, especially from the point of view of its potential contribution in the decentralized and participatory development process, as it speaks for 'rights' and targets utilisation of local level resources including local labour. Concerns have been raised regarding viability of such a project due to the alleged problem of resource-conflict between NREGS and non-NREGS sectors and also conflict within government budgetary allocation for modern sector development vis-à-vis NREGS type development programmes. Criticism of more fundamental nature points to the probable short-run employment generating impact of the project due to its focus on earthen work rather than creation of durable assets. Probable input, especially labour and even output-market distorting impacts of the project have also been highlighted by the neo-classicists. Against this background and notwithstanding the validity of many of these view-points on the limitations of NREGS, this paper by Chakrabarti and Mukherjee propose that there are more fundamental problems with this programme.

Through the paper the authors introduce certain analytical critiques of NREGS, which are not so widely recognised in the literature. The authors also deal with some macro-data on NREGS performances, which itself is revealing; these presentations corroborate the theoretical departures from the literature as proposed by the authors.

Before we go into this detailed critique of NREGS along with some empirical supports, as proposed by the authors, we summarise the main arguments and observations of the paper:

Many researchers criticise NREGS from the perspective of government budget-management. The contention is that, government-financed programme of direct/indirect job creation outside the modern sectors (like NREGS) crowds-out direct/indirect government expenditure on 'core' sector itself. Thus, the demand-side trade-off between employment generations in

capitalistic sector and in its outside sectors is argued to create a dilemma for the State. The authors, however, propose that this demand-driven trade-off is not so important: In fact, there exists a more significant supply-side conflict between the two. Food-supply-constraint or generic-resource-constraint appears to create this NREGS – non-NREGS contradiction. The authors invoke a Kaleckian framework to examine it theoretically.

NREGS could, in fact, act as an instrument of intensifying capital-accumulation of modern sector. This programme could help capital in drawing rich untapped rural resource by improving its usefulness/productivity through infrastructure development and by preparing/developing the rural ‘space’ as a new field of exploitation, with the obvious repercussions of concentration of wealth and income on the one hand, and exclusion and eviction of indigenous population on the other.

The authors observe that the bias of many commentators on NREGS towards modern infrastructure development, modern market-oriented production practices and towards integration of ‘local’ with ‘global’ through demand and supply-side linkages emanating from NREGS – in the pretext of long-run growth, and their comparatively less emphasis on the fundamental issue of right to work and right to live may be reflective of the reality that ‘development’ is majorly viewed from the perspective of ‘global’. This preliminary observation follows from the fact that the local needs, local resources, localised characters of the mass of population and of the institutions and most importantly, the notion of rights of the people are frequently missed out from the policy debates. We argue that this failure to recognise fully the local geographic-economic-social-political-cultural-anthropological traits and the lack of proper focus on the issue of people’s rights leads to overemphasis on the so called global perspective, both in analysis and in the implementation of the project, that acts as the fundamental reason why in spite of being the world’s largest employment generation programme performance of NREGS is not at all up to the mark.

The authors' contention is that political mobilisation of people's voice is the key for proper performance of NREGS: Bureaucracy, whatever be its reach, and even the so called institutions of decentralized-governance may practise different types of patron-client relationships vis-à-vis the common people. While there may be concerns regarding infrastructure building and even in some cases regarding distribution of economic benefit through NREGS, these concerns may not have eliminated the serious lacuna in the understanding of the fundamental issue of people's rights; this is revealed primarily from the fact that there is no effective regulator in place to ensure the right to work in short-run and a truly inclusive development in long-run.

In the paper entitled "Education and Women Empowerment – A Case Study of Kalna Subdivision in West-Bengal, India" authors observed that Education has become one of the vital factors of development in the Indian economy. Authors examined the crucial role education plays to achieve economic development. In the recent time, the concept of women empowerment has increasingly been tied to the different developmental activities undertaken by government as well as Non Governmental Organizations (NGOs). Authors addressed the question 'How are we going to evaluate our achievements in empowering women in the process of development through education?' Authors had addressed the question by constructing an index of women Empowerment (WEI) on the basis of some empowerment variables like, education, income, decision making power etc. and its relation with economic development. With a sample of 205 Self-Help Groups (SHGs) in Kalna sub-division, under the district of Burdwan, West-Bengal, an empirical analysis had been done on this issue. It has been found that among these variables, education has turned out to be the most important factor in empowering women in particular and economic development in general.

The paper 'An Enquiry into the Scope of Sustainable promotion of Tribal Livelihood and education with Environmental Stability in West Bengal' pointed out that Environment can be preserved largely by rejuvenation of forest resources through Sustainable Joint Forest Management (SJFM). Forest resources conceived as green gold providing the basic necessities of life such as food fuelwood, fibre, and raw materials for house building, manure, medicine, fodder for animals, important resources of sustained employment for forest dwellers, revenue earnings, raw materials to various forest based industries, artisans and craftsmen. The present study had made an effort to explore the scope of sustainable promotion of tribal livelihoods and education with environmental stability in the study areas of West Bengal. The study represented that JFM plays an important role for promotion of tribal livelihoods and education to an extent as well as upliftment of the socio-economic and living conditions of forest dwellers with environment preservation.

Ms. Sucheta Paul and Daya Shankar Kushwaha made a baseline study of health service in Madarihat/Birpara Taluka of Kalchini, Jalpaiguri, West Bengal. Authors had critically examined the existing health services in Madarihat/Birpara Taluka. They tried to prepare a comprehensive scenario regarding understanding of accessibility and availability of health services in these far flung underdeveloped regions of West Bengal.

The author adopted the multiple approaches for collecting primary and secondary data. The primary data were collected from different stakeholders in the programme.

Authors pointed out that this geographically challenged area had inadequate health service facilities from both the government and private sector. The study revealed several reasons and impediments behind the inaccessibility to health services. The location of the health centres, problems of

communication and mobility, conservatism and social rigidities, inertia and unhappiness were found to be factors behind the poor delivery of the available services. The study also exposed the fact that the gap is filled by the untrained rural medical practitioners and people are compelled to resort to them because of the high cost of the services provided by the State and the NGOs. There are also paucity of health care services, both preventive and remedial, provided by these agencies. Authors also highlighted the areas of intervention emphasized on designing proper programmes for the area keeping in mind the local issues, geographical constraints and cultural sensitivity of the people of the region.

National Rural Employment Guarantee Scheme: Certain Theoretical Constraints!

Saumya Chakrabarti and Aparajita Mukherjee

This analytical note has developed through first author's earlier publication endeavour (Chakrabarti, 2011) and through his participation in the Workshop on National Rural Employment Guarantee Scheme (NREGS): Current Situation and Emerging Priorities for Research, 5-6 August, 2010, at the Centre for Studies in Social Sciences, Calcutta, India (organised jointly by ISS, The Hague, NL; NIPFP, New Delhi and CSSSC, Kolkata) and in the course of his active involvement in the subsequent field visits to South 24 Parganas and Birbhum districts of West Bengal (province) and to Puri and Nayagarh districts of Orissa (province), India. Author got earlier exposure to the problems with NREGS while collaborating for field-works with Subhasish Dey developing: Dey, Subhasish (2010): "Evaluating India's National Rural Employment Guarantee Scheme: The Case of Birbhum District, West Bengal", ISS Working Paper 490, International Institute of Social Studies (The Hague, The Netherlands: Erasmus University Rotterdam). The second author supervised research work on NREGS in Birbhum district of West Bengal, India in

2009-10.

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I

It is almost universally accepted that the developing countries are experiencing a 'jobless growth'. Not only the vast majority of the population is unable to utilize the benefits of capital-accumulation-led growth of 'modern' sectors, the very pattern of this 'progress' is threatening the livelihood of the indigenous people by expropriating them from resources. According to the critics these 'excluded' and 'expropriated' people form the sea of 'surplus population' (Davis, 2004; Sanyal, 2007).

The need for containment of this large surplus population on the one hand, and deployment of the underutilized resources on the other, have induced the governments of the developing world to take up measures so that poverty and social security are managed outside the sphere of capital-accumulation especially through 'peripheral' employment generation. Thus 'development management' by the State aiming at the excluded population has become the dominant development strategy. NREGS (National Rural Employment Guarantee Scheme, Government of India) happens to be a classic example. This is a self-targeted workfare programme and thought to be the world's largest employment generation project. It is supposed to create rural infrastructure as well. Thus NREGS is framed to take into account both the demand and supply-side aspects of an agenda of 'inclusive growth'.¹

In spite of its ambitious goals the programme has failed to

generate expected results even in a country like India having very serious problems of unemployment and underemployment. It is really intriguing that, even though there should be very high demand for NREGS jobs, the performance is much below expectation. A fundamental target of this programme is to introduce and operationalise the notion of 'right to work' and to provide a strong social safety-net.² But this very notion of right is violated almost everywhere and the performance depends in most of the cases on the *benevolence* of the bureaucracy and political parties. Even if there are very serious needs for job, the voices remain feeble and unheard.³ Furthermore, though the formulations of NREG schemes are supposed to come up from the bottom through a decentralised mechanism, the overall participation across the country is not at all satisfactory excepting certain states.

There has been extensive discussion on the project from different angles, especially from the point of view of its role in the decentralised and participatory development process targeting utilisation of local level resources including labour which remain unutilised in the direct process of capital-accumulation. Concern has been raised regarding viability of such a project in the context of problem of distribution of resources between NREGS and non-NREGS sectors and government budgetary allocation between modern sector development vis-à-vis NREGS type development programmes. Criticism of more fundamental nature points to the probable short-run employment generating impact of the project due to its focus on earthen work rather than creation of durable assets. Probable input especially labour and even output-market distorting impacts of the project have been highlighted by the neo-classicists. Against this background and notwithstanding the validity of some of the view points on the limitations of the project, we propose that there is fundamental problem with the formulation of the project as a strategy for handling the contradictions ingrained in the process of capital-accumulation.

The logical construct implicit behind the formulation is that

the project would unleash a process of generation of income and employment by primarily boosting the process of growth of the rural economy through capital formation in agriculture, with secondary effect on industry, trade and entire economy; it is presumed that such process of cumulative growth would receive its initial impetus from both supply-side and demand-side impact of the project. While it is implicitly accepted that the cumulative process of capital-accumulation generates as its counterpart a continuous process of displacement of labour and joblessness, it is believed that inevitability of a deep rooted social-political-economic crisis can be averted by proper management of the situation and NREGS may be used as one such important instrument of development management. We propose that this fundamental theoretical perspective itself is problematic, that even if NREGS can at all be implemented according to its original formulation, it could act as an instrument for intensifying the process of capital-accumulation by drawing the rich untapped rural resources, improving its productivity through infrastructure development and preparing it as a new field of exploitation by capital: while rural unemployed labour would be used for the purpose in the initial rounds of the project, it could ultimately generate a more vigorous process of capital-accumulation, displacement and joblessness, not only expanding further the size of the surplus population but also bringing about greater degree of immiserisation. Even if these possibilities are mitigated partially through long-run management by the State, the threat of long-run dynamic inequality looms large.

Given this long-run logical possibility the strength of such a programme lies in the characteristics of being apparently pro poor favouring labour against capital in the short-run; as such, such programmes may act not only as socio-economic measures for generating sympathy for the system but also may give rise to grass-root level social institutions providing critical support to the orthodoxy. While there is every reason for a capital-

centric socio-economic system to welcome such a vast programme as an important policy instrument in favour of the regime, the particular policy of the NREGS is fraught with some serious macro economic problems which deserve discussions.

Many researchers criticize NREGS from the perspective of government budget management. The contention is that, government financed direct job creation outside the modern sectors (like NREG) crowds-out government expenditure on modern sector itself. Thus the demand-driven trade-off between employment generations in capitalistic sector and in its outside is argued to create a dilemma for the State. However, in this context, our proposition is that demand-driven trade-off between NREGS and other employment generations and hence government budget constraint is not so important: in fact, there is a supply-side trade-off between the two. Rather, the food-supply-constraint and/or resource constraint in general create this NREGS–non-NREGS conflict (Chakrabarti, forthcoming). However, the government can play a crucial role in distributing this supply between these avenues.

The problem can be analysed in a Kaleckian framework assuming a situation of *unchanging supply* of (the generic) marketable surplus of ‘food’ (ibid.). When money is injected into the rural economy through NREGS, new food-demand arises from the rural population who are newly engaged into NREGS, because a large part of the corresponding income is generally spent on food. This newly evolved artificial food-demand competes with the demand for food from other sectors – mostly non-agricultural, because the aggregate supply of food remains unchanged. Consequently, food-price shoots up, which may raise the non-agricultural prices and wages as well.⁴ Demand for non-agricultural output may contract reducing the corresponding levels of output and employment. On the other hand, there could be real income decline for the non-NREGS population reinforcing the secondary negative impact

on output and employment. However, under the typical condition of *bumper harvest* when NREGS is introduced, additional rural employment is created undoubtedly. Under this situation the impacts on other non-agricultural production sectors and on rural *real* income depend on the relative size of additional food-supply owing to bumper harvest and the purchasing power injected through NREGS.

But it may be argued that this conflict could be relaxed quantitatively if NREGS is undertaken with such objectives as capital formation in agriculture and building rural infrastructure for marketing network so that particularly agricultural production gets demand and more importantly supply-side boosts. Thus while on the one hand, NREGS creates rural employment, on the other, agricultural supply-constraint for NREGS and non-NREGS populations may be relaxed boosting non-agricultural employment as well. Unfortunately, there are certain notes of concern (*ibid.*).

The strategy of NREGS towards building infrastructure may be practiced in such a way that in effect, rural resources are drained out to feed the urban population especially the urban rich (e.g. urban connectivity may change the cropping pattern towards 'high-value-crops' displacing the basic cereals endangering local and even macro food-security). This may also disproportionately benefit the rural propertied class who could get the major share of the infrastructural services (e.g. irrigation facilities mostly appropriated by landed class). This process of squeezing of rural resources and also the exclusion of rural asset-poor from the access to infrastructural facilities created by NREGS may engender long-run dynamic inequality. Given the better access to infrastructure for the rural and urban asset-rich they may benefit from dynamic gains, which may exclude or even expropriate the rural asset-poor (e.g. asset-rich could not only reap short-run benefits but also could enjoy long-run dynamic gains leading to wealth and income concentration). Thus NREGS, if used for building large dams,

constructing large rural roads and large canals, could essentially initiate another round of eviction of rural population from their means of subsistence and means of labour fuelling the pool of surplus population. Stated otherwise, an attempt to rehabilitate the rural surplus labour through NREGS, without any concomitant controlled programme of infrastructure building aiming at equitable distribution of the fruits/gains of such programmes, in effect may perpetuate a process of successive rounds of expropriation and rehabilitation. The specific pattern of infrastructure development strictly focussing on the resources and needs of the local poor should be undertaken, if the vicious cycles of inequality, exclusion and hence poverty have to be avoided (we can refer Chakrabarti, forthcoming in this regard). Thus the criticism that NREG is promoting 'primitive Keynesianism' primarily focusing on earthen work rather than on durable and quality asset creation and the suggestion that NREG should focus more on material intensive work, against the stipulation of 60:40 ratio between the labour and material cost in the NREG Act, appear to need further examination.

The demand emanating from NREGS income may also generate similar processes of dynamic inequality and exclusion and hence even long-run poverty, if a major part of this income is spent on 'urban' goods. In fact a major target of any policy under development management like NREGS is to integrate the surplus population with the 'global market'. However, this could bring in misery for the local 'less efficient' producers. If such global integration starts taking place, it not only drains out resources to 'global'/'urban' space but also displaces the local spaces (not only economic but also cultural-political-social-anthropological!) and thereby the 'local' could be marginalised. Inclusion of a part of surplus population generates moments of exclusion elsewhere in the local. Thus we may formulate a critique of the idea of NREGS as capable of providing a share of the social surplus to the surplus population (e.g. right to work, food etc). Attempts of inclusion may generate exclusion elsewhere, if proper regulation is not instituted. The question

is: who will regulate? Few of these macro-theoretic constraints are even noted by the Indian policy-makers. But, sufficient attention has not been paid. In fact, from the highest office of the present government it has been mentioned in the recent past that, one of the prime causes of current food-inflation in India is the demand-push due to NREGS. Nevertheless, no serious theoretical and policy prescriptions have been proposed!

II

Unfortunately bias of many researchers and critiques towards modern infrastructure development and towards integration of local with global through demand and supply-side linkages emanating from NREGS and comparatively less emphasis on the fundamental issue of right to work and right to live in the pretext of long-run growth is perhaps due to the fact that ‘development’ is still viewed from the perspective of ‘global’. The traditional doctrine of growth and development, in many cases supported by planning, looked at the problems of underdevelopment from the perspective of ‘global capitalistic accumulation’. But the modern paradigm of development management tries to address the problem of surplus population with the help of integration of this ‘marginal mass’ (Nun, 2000) into the global market – the new-found panacea. Though global capital-accumulation is invisible in this discourse of development management, it very much exists, perhaps, at the centre-stage. Hence the local needs, local resources, localised characters of the mass of population and institutions and most importantly, the notion of rights of people are frequently missed out from the policy debates (even if capital talks about individualised ‘freedom’ and ‘bourgeois rights’). And in spite of being the world’s largest employment generation programme performance of NREGS is miserable.⁵

The Neo-classicists look at the problems of NREGS mainly from the perspective of ‘global efficiency, transparency and accountability’ of market institution and hence tries to imbibe

the principle of exchange economy (through models like Public-Private-Partnership) into the formulation and implementation processes of NREGS. There are also serious criticisms from this school about NREGS in the pretext of (labour and even product) market distortions, mis-allocation and diversion of resources and labour leading to inefficiency, resource wastage and even production loss in non-NREGS projects. Perhaps the problem with them lies in the inability to focus on the local needs and local institutional specificities – the local economic-social-political-cultural-anthropological spaces and more fundamentally, lack of focus on the issue of rights. They think that proper utilisation of the market principles along with information flow within a decentralised framework would work even for NREGS; only under such conditions proper allocation of resources between NREGS and non-NREGS activities and efficient asset creation could be achieved.⁶ Ensuring right to work as an obligation of the modern developmental state is perhaps ignored by the Neo-classicists believing in the ‘magic’ of market.

The Institutional Economists take into consideration the institutional factors influencing ‘market-mechanism’; but a much broader inter-disciplinary perspective is needed to understand the interfaces of local spaces. Fundamentally, perhaps, they miss the issue of people’s mobilisation which could influence significantly economic and even other institutions. Hence not only the dynamics of people’s participation in NREGS are important, but also the interdependence of people’s mobilisation and broader institutional specificities should be taken into account while framing and implementing a policy like NREGS. In this context the role of CSOs, CBOs and political organisations should be very relevant.

Though much emphasis is given on CSO and CBO in the context of NREGS, it may be the case that political institutions and organisations could play a much greater role given their wide reach and most importantly, given their strong relation to the institution of political democracy. Furthermore, organisations

like NGOs have no political accountability. In India the institution of political democracy is a much wider space capable of handling various economic, social and even cultural and anthropological dimensions. Hence the multidimensional problem of organising NREGS could perhaps be managed in a better way by vibrant political organisations having strong representations in the local, sub-national and national democratic processes. Such endeavours unfortunately are not being taken up by the local/regional/national political organisations.

There are rather serious problems with them. In India, especially in rural India, not only the bureaucracy and its extended institutions even the political organisations have developed a kind of patron-client relationship vis-à-vis the commoners and the issue of people's mobilisation is largely missing. May be because of this problem even the political organisations are missing the fundamental issues of right to work and people's voice in the context of NREGS. Perhaps they are more interested in behaving like benevolent patrons. But in absence of people's voice, possibly, they are unable to negotiate with the bureaucracy and its supporting institutions; rather they become an extended part of the same! The non-Left's behaviour could be understood in this framework. But the failure of Left in the context of NREGS should be studied more closely. The 'official' Left (participating in State power-structure) may be behaving like parliamentary non-Left with less emphasis on people's mobilisation. But the neglect of ultra-Left in implementing NREGS could be due to the fact that they do not want to participate in such 'reformist' activities. The narrow frame of only class-based-politics focusing mainly on property-owner – worker contradiction may have crippled them. The NREGS is a grand project of Indian Capital to persuade the surplus population; not to incorporate them into the core of capitalistic production, but to hold them by transferring a part of social surplus and by providing certain

social spaces as 'rights'.

The Left has good frameworks for capital-labour conflict. But it requires in-depth analysis for the class-character of 'surplus population', perhaps a late-20th century phenomenon, and for the locus of this marginal mass vis-à-vis capital. Though a large part of this marginal mass owns some means of production and sometimes engages wage labour, its class-position should not be clubbed with the 'propertied-class' as such. This complexity of analysis should be brought to the fore (Bhattacharya, 2010). There are serious problems with organising this surplus humanity and in this very context the issue of NREGS should be viewed by the Left, either as a potential carrier of movements or as a powerful 'reactionary' programme. Alas, Left perhaps perceives this programme only as a 'paper tiger'.

The critique, however, could be at two stages: First of all, the issue of rights should be pushed further and the distinct difference between property right and right to work needs to be explicated. The trick of bypassing the problem of re-writing of property right-structure through such programmes of social surplus sharing should be brought to the forefront. Secondly, even the space of right to work should be pushed as much as possible to provide maximum relief to the surplus population and more importantly, to make clear the impossibility of an all-inclusive growth driven by capital-accumulation sucking up fundamental resources and necessary spaces of human living. However, it seems Indian Left in general is missing completely these issues, perhaps because of lack of proper understanding about the design-abilities/inabilities of Capital of 21st century (in this context we can also refer: Patnaik, 2010).

In absence of serious efforts in mobilising the surplus population the performance of NREGS may be more dependent on historical factors (like the case of Rajasthan where the already existing institutions of anti-drought programmes are

fundamental to the performance of NREGS) and it may have been left to the generosity of the bureaucracy⁷, personalised efforts and endogenous dynamics of local institutions.⁸ The 'political decentralisation' could only be performing the role of extended bureaucracy! The Indian Left is either becoming part of this 'power' or are unable to bargain for proper economic-political-social decentralisation and for institution building. They have serious problems of discourse in handling a 'reformist' programme like NREGS.

Unfortunately, Capital and its State are also unable to fulfil their dream of 'inclusion' for lack of proper institutional framework and for obvious lack of 'collective motivation' in the contemporary society.

III

In lieu of conclusion: two success stories:

Before we give an account of our own experiences during 2010-11 we should have the national and regional/state-level scenarios as our context of study. Let us take a brief recourse to the macro pictures.

NREGS has been introduced in West Bengal in 2006 with much hope and expectation. But performance of the state in terms of the Govt. of India administrative report seems bit gloomy for the 1st three consecutive years. In the 1st year (2006-07) West Bengal provided on the average 14 person days of jobs (to those who registered for job and demanded) as against 43 person days as the national average. In the 2nd year (2007-08) the figure improved little bit to 25 person days as against 42 person days – the national average. The trend continued even in the 3rd consecutive year (2008-09). For this 2008-09 West Bengal provided around 26 person days on an average as against 47.53 person days of national average.

Table-1 depicts a comparative performance of the big Indian

states in terms of number of person days provided on the average as against demand for job under NREGS and West Bengal consistently performing among the bottom 5. On the other hand, if we look at the figure-1, it tells us that West Bengal performing among top 10 in terms of reaching to the household with the programme. But these figures are the mere representation of the administrative performance. The real performance could be evaluated in terms of assessing impact of the programme on the participating household (those who are exposed in the programme) (Dey, 2010, 18-9).

With all these backgrounds, we visited total four districts

Name of the State	Average Person days generated		
	2006-07	2007-08	2008-09
Rajasthan	85	77.33	75.75
Assam	72.31	34.76	34.85
Madhyapradesh	68.79	63.33	56.59
Tripura	67.44	42.73	63.94
Himachal Pradesh	48.52	35.98	45.24
Haryana	47.52	50.46	40.23
Gujarat	44.41	30.98	25.05
Maharashtra	41.38	38.94	46.25
Karnataka	40.32	37.33	31.73
Jharkhand	37.33	44.5	47.56

Name of the State	Average Person days generated		
	2006-07	2007-08	2008-09
Bihar	35.34	22.16	25.95
Uttarpradesh	31.98	33.27	52.37
Andhra Pradesh	31.4	41.85	47.99
Uttarakhand	30.23	42.45	34.92
Tamilnadu	26.74	52.25	35.97
Jammu & Kashmir	26.62	24.15	36.76
Kerala	20.67	32.77	22.01
West Bengal	14.27	25.21	26.00
National average	43.01	42.35	47.53

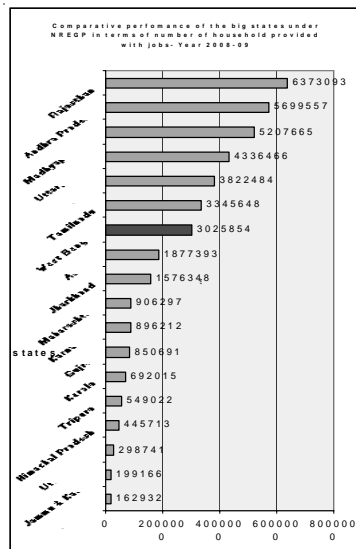


Fig. 1.

We also look into some other variables at the national and sub-national levels pertaining to performances of NREGS.

Table 2

NREGA fact sheet

Table 1

	2006-07	2007-08	
	"Phase I" districts only	"Phase I" districts only	Phase I + Phase II districts
Number of districts under NREGA	200	200	330
Person-days of employment generated			
Total (crore)	90	108	144
Per rural household ^a	17	20	16
Per job card	24	25	22
Per household employed in NREGA	43	48	42
Share of marginalised groups in NREGA employment (per cent)			
Women	40	44	42
Scheduled Tribes (S.T.)	36	33	29
Scheduled Castes (S.C.)	26	27	27
Expenditure on NREGA			
Total expenditure (Rs. crore)	8,813	12,057	15,857
Average expenditure per district (Rs. crore)	44	60	48
Average expenditure per person-day (Rs.)	98	111	110
Average wage cost per person-day ^b (Rs.)	65	75	75
Share of wages in total expenditure ^b (per cent)	66	67	68

a In the relevant districts; number of rural households was taken from the 2001 Census.

b Unskilled labour only.

Source: Calculated from official data posted on the NREGA website (nrega.nic.in). The NREGA was launched in 200 ("Phase I") districts on February 2, 2006, and extended to another 130 ("Phase II") districts on April 1, 2007.

Source: <http://sanhati.com/wp-content/uploads/2009/02/nrega-factsheet.jpg>

Table 3

Selected State-specific indicators

Table 2

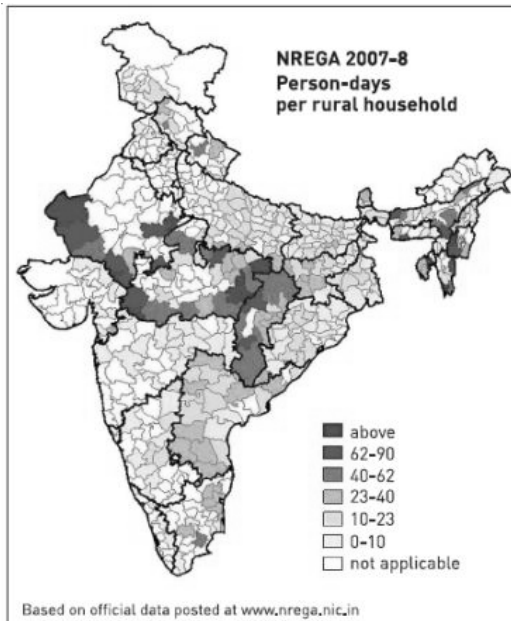
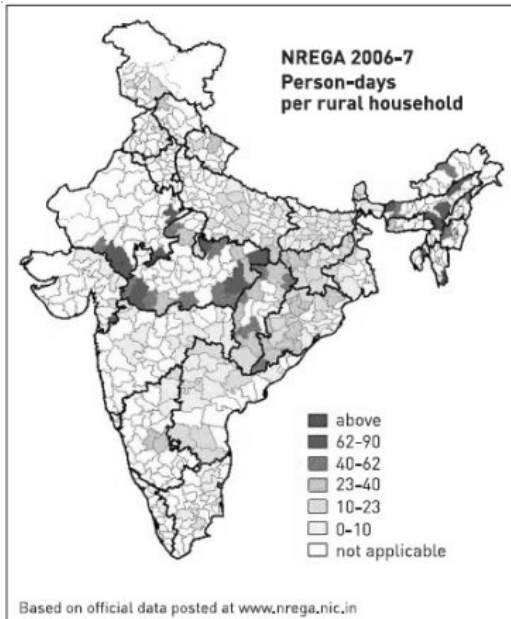
	NREGA employment [person-days per rural household] ^a		Share of women in NREGA employment (in per cent)		Share of S.C.s/S.T.s in NREGA employment (in per cent)		Share of unskilled labour in NREGA expenditure (in per cent)		Average wage (Rs./day)	
	2006-7	2007-8	2006-7	2007-8	2006-7	2007-8	2006-7	2007-8	2006-7	2007-8
Rajasthan	77	68	67	69	80	66	73	67	51	59
Madhya Pradesh	56	52	43	42	65	67	63	61	59	64
Chhattisgarh	34	43	40	42	58	56	65	64	62	68
North-East ^b	45	35	49	39	88	77	72	68	73	81
Assam	70	25	32	31	55	47	65	65	67	73
Tamil Nadu	9	21	81	82	58	60	96	97	80	77
Jharkhand	14	20	28	27	64	62	58	58	69	75
Andhra Pradesh	10	19	55	58	43	41	86	80	79	82
Himachal Pradesh	20	17	12	30	53	43	52	59	86	83
Uttarakhand	20	16	30	43	28	32	61	62	72	74
Uttar Pradesh	11	11	17	15	60	56	59	67	56	93
Haryana	9	10	31	34	60	54	65	85	97	124
Orissa	21	8	36	36	73	64	58	54	53	77
West Bengal	6	8	18	17	55	50	78	76	70	79
Bihar	8	7	17	27	50	48	59	65	70	80
Jammu & Kashmir	13	7	4	1	29	32	65	63	69	72
Karnataka	17	7	51	50	53	49	60	60	67	72
Kerala	3	6	66	71	33	34	89	86	121	118
Gujarat	7	5	50	47	71	72	65	71	56	64
Maharashtra	4	3	37	40	57	57	95	88	104	90
Punjab	7	2	38	16	69	76	59	65	94	101
India	17	16	40	42	62	57	66	68	65	75

a In the relevant districts ("Phase I" districts in 2006-7 and "Phase I + Phase II" districts in 2007-8); number of rural households was taken from the 2001 Census.

b Combined figures for Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, Tripura (excluding districts with missing data).

Source: See Table 1. States are ranked in decreasing order of NREGA employment generation in 2007-8 (second column).

Source: <http://sanhati.com/wp-content/uploads/2009/02/statewise.jpg>



Source: <http://sanhati.com/wp-content/uploads/2009/02/maps.jpg>

Table 4

Number of bank accounts opened			
	2008-2009	2009-2010	2010-2011
Tamil Nadu	78,10,574	8446182	7137487
Uttar Pradesh	53,58,447	7286108	6065658
Madhya Pradesh	34,79,747	4316193	5655737
Rajasthan	27,86,564	3502642	3848111
Karnataka	1821290	2590483	3099448
Number of post office A/Cs opened			
Andhra Pradesh	11196554	11982641	12686318
Rajasthan	3795010	6550469	5418854
Bihar	3223791	4390475	4013405
Chattisgarh	2388621	3597306	3680611
West Bengal	2351067	3427558	3443912
Source: Ministry of Rural Development			

Source :<http://www.financialexpress.com/news/nregs-is-worlds-largest-financial-inclusion-scheme/745890/0>

Given this broad scenario, we enter into our own experiences with the specific contexts of the overall situations in Orissa and West Bengal.

Table 5 Orissa.

		The Mahatma Gandhi National Rural Employment Guarantee Act										Ministry Department									
												TH									
State: ORISSA		Employment Generated During The financial Year 2011-2012																			
1	2	3			4			5			6			7			8				
S.No	District	a	b	c	d	Cumulative No. of HH demanded employment reporting (Till the reporting month)			Cumulative Labour Budget estimation of employment provided			Cumulative No. of HH provided employment (Till the reporting month)			No. of HH working under NREGA during the reporting month			Cumulative Labour Budget estimation of persondays			
		SCs	STs	Others	Total	SCs	STs	Others	Total	SCs	STs	Others	Total	SCs	STs	Others	Total	SCs	STs	Others	Total
Phase I																					
1	BOLANGIR	46738	59571	154405	260714	53674	61088	53473	26395	3888623	279087	441901	82								
2	BOUDH	20526	10848	51966	83340	29403	22274	28979	3517	1012642	244746	126444	59								
3	DEOGARH	10465	19177	29546	59188	11220	10790	11182	4783	461506	60188	133325	13								
4	DHENKANAL	38492	26501	108400	174393	35135	62692	34933	16657	3592855	226323	185182	61								
5	GANAPATI	10555	68742	45632	124929	48751	62345	47563	10234	2760945	88894	906908	27								
6	GANJAM	100559	25116	321953	447628	71169	97222	69789	2794	4146239	507853	120869	153								
7	PHARSUGUDA	18613	30611	26334	73598	17106	22037	17095	4734	1354675	159960	340999	19								
8	KALAHANDI	57157	87795	143444	288396	66630	72053	66181	23811	2915151	306971	689464	84								
9	KANDHAMAL	3764	79354	43679	156797	8700	89407	83956	36919	4540488	57270	1758965	64								
10	KENDUJHAR	45480	133676	130823	309979	81672	110079	81160	15473	5821483	349764	1158165	107								
11	KORAPUT	46740	153575	77598	277913	60686	81939	60012	20634	3513818	213045	4016861	39								
12	NALANGIRI	31062	78319	19206	128587	35824	49510	35550	10234	3080876	303073	677639	15								
13	NAVYARHANGI	61470	234249	136466	432185	8162	134356	86764	20126	7077782	373664	1361172	78								
14	NABARANGPUR	37321	122765	60750	220836	59693	103764	59091	8741	6123692	240015	1127817	43								
15	NIJAPADA	17446	41553	55616	114615	25483	23554	25374	8012	1104712	145303	437823	38								
16	RAYAGADA	32833	107675	46113	186621	43559	69125	42771	7333	4442148	267890	820929	37								
17	SAMBALPUR	33516	56454	65171	155141	30978	56997	30514	4137	3891484	218205	477501	44								
18	SONEPUR	22972	10173	72166	105311	31071	45409	30972	9133	2459561	171039	68358	50								
19	SUNDARGARH	36792	206121	73982	316895	70455	74719	68608	36861	3479257	208342	1444509	36								
Total Phase I		700501155227516642503917026			944371			1249460			934167			290518			650679374937632132948311057				

Phase II												
20ANGUL	33646	25938	118290	177874	26179	46264	25956	9903	1850560	118265	138905	42
21BALESHWAR	58022	32700	216937	307659	28314	49210	27757	3849	2021740	161838	92757	58
22BARGARH	52340	54927	146615	253882	33275	38022	32702	8601	1221142	148041	234279	42
23BHADRAK	40778	3706	152019	196503	20986	37265	20890	3211	1853551	117625	13681	45
24JAJPUR	71104	23563	174604	269271	20878	96966	20516	2027	4182704	165375	53183	25
TotalPhase II	255890	140834	808465	1205189	129632	267827	127821	27791	11129697	711144	532805	214
Phase III												
25CUTTACK	55418	13151	152066	220635	37964	78673	37588	2116	3461612	23324	68682	62
26JAGATSINGHPUR	33022	918	97409	131349	19776	46759	19693	1278	2329592	126990	2698	41
27KENDRAPARA	39365	1440	145676	186481	27871	83108	27402	1302	3030448	167648	5460	53
28KHORDHA	21369	8852	73610	103831	11604	14288	11555	1486	465705	42422	28311	22
29NAYAGARH	21724	11344	119229	152297	57138	49110	56769	6042	2269803	302653	166426	189
30PURI	44059	1643	166115	211817	22150	58551	21617	973	1974338	92603	5024	46
TotalPhase III	214957	37348	754105	1006410	176503	330489	174624	13197	13531498	965640	277601	414
Total	1171348	1730457	3226820	6128625	1250506	1847776	1236612	331506	903291326614416	14105237	16851	

Source: http://164.100.12.7/netnrega/writereaddata/state_out/Empstatusall24_local_1112_.html 08/03/2012

Table 6 – West Bengal.

Govt. of India
Ministry of Rural Development
Department of Rural Development
Thursday, March 08, 2012
Back

S.No	District	Employment Generated During The financial Year 2011-2012															10	11	12			
		3			4	5	6	7	8	9			e									
		a	b	c						d	Others	STs		Others	Women							
Cumulative No. of HH issued jobcards (Till the reporting month)		SCs	STs	Others	Cumulative No. of HH demanded employment (Till the reporting month)	Cumulative Labour Budget estimation of employment provided (Till the reporting month)	Cumulative No. of HH under NREGA during reporting month	Cumulative Labour Budget estimation of persondays	Cumulative Persondays generate (Till the reporting month)			Cumulative No. of HH completed (Till the reporting month)	No. of HH which are reform/TA	No. of Disabled beneficiary (Individuals)								
Phase I																	20534			44491		
1-24	PARGANAS SOUTH	120958	5339	895777	772074	145853	150545	145471	46193	5081400	650998	20234	2937627	3628859	844503	2442	3630	1899				
3	BANKURA	226537	70270	275011	571118	277206	277330	276547	79896	1383665	3015438	889266	2842248	5949524	2363490	4541	6932	5387				
4	DANSHUN	225447	51260	383933	894855	423875	415500	423145	87133	17287500	3875885	241225	4821198	2938977	2285292	7014	31109	9010				
5	DINAPUUR	84201	56781	154441	295403	39718	181130	39379	11016	2966700	150302	97280	287470	531522	148503	76	2162	241				
6	UTTAR	124249	21347	292557	438153	64204	0	63969	10555	0	283115	37288	649218	969621	298166	298	11418	1331				
7	MALDAH	315699	103883	333526	643281	266137	308268	263924	51764	7041400	1445690	788815	3330379	4584884	1816840	496	14326	396				
8	MEDINIPUR WEST	178636	147363	533356	895958	380311	385000	378720	108725	195154	1476819	1197853	3594196	6268866	2055767	1105	77239	2808				
9	MURSHIDABAD	332281	15788	871760	1019929	250955	1812071	249715	56650	13341861	642654	68846	3358153	4059663	608466	911	5086	748				
10	NOWRA	80567	80748	380464	441779	148879	247910	146134	16160	7608700	507487	685854	1884432	3135833	1347893	2236	8936	3775				
Phase I		152945218910914166952 6285113															2130728			3850045		
Phase II PARGANAS																	481310			118680054927425240307684168364511860583		
11	(NORTH)	33506	478790	733247	301221	301031	0	301031	146796	112206	3479543	387296	5047861	874700	2771868	3234	15373	1635				
12	BIRBHAN	402584	30146	499857	993287	635662	410959	410959	139118	193248	4884487	1082866	3904401	9941754	2854375	1468	81066	9891				
13	COOCHBEHAR	314440	5889	279537	599066	143152	275754	71744	4838500	3180489	39885	1084874	2605208	611303	179	43299	2879					
14	HOOURLY	283928	54781	311069	629758	374814	350250	374856	153031	11079021	3928202	918272	2855735	7532009	2546695	2063	32536	4700				
15	INDIA	197317	17779	492172	707268	221912	151897	92499	6079300	830371	108524	1655797	2594923	710956	397	9851	2318					
16	MEDINIPUR	100446	5116	551287	656881	231301	352803	229341	69300	11083900	610541	32151	3330719	3973411	1917306	724	34004	3515				
17	MALDAH	36205	22853	23389	84447	29607	0	29181	5579	0	212043	103137	104984	420164	233275	16	3309	223				
Phase II		15398832300802634891 4404034															1994150			670889330508271541441863638711311830371329213811848978		
Phase III																	6081			313848		
Descending																	1363			3925		
18	Gorkha Hill Council	8646	38893	79596	123500	73167	89530	73167	3922	54606	157374	762130	1482757	2402281	1068266			473				
19	CHOWDA	57672	1013	167151	225237	60353	91713	60291	32689	1771900	217631	3719	340702	962052	201187	197	1547	360				
Phase III		66221 99006 243110 349237 13320 181263 26611 1826506 378005 765849 2123446 2364113 1269423 1560 5472 8045															30175			372092		
Phase III		5134756 85985 754455 11038374 4258298															30175			372092		

Source: http://164.100.112.66/netnrega/writereaddata/state_out/Empstatusall32_local_1112_.html 08/03/2012

of Orissa and West Bengal.

Our visit to Narendrapur Gram-Panchayat (GP), Satyabadi Block, Puri District was an interesting experience. The Panchayat-Pradhan (the elected head of Panchayat) seemed to be an honest and energetic person having popularity for quite some time, which may have contributed to the unique performance of NREGS in this GP. But perhaps the most important factor that contributed to a large work under NREGS was the *convergence* of NREGS *plan* and the dire need and *dream/motivation* of the mass of population/community. An 18 kilometre long embankment work was done within the GP to protect low lying agricultural land from regular flooding. The work's cost was Rs.4.6 million creating 70 man-days of work on an average for *all* the families of the GP but only Rs.1.6 million has been distributed (payment for only 35-40 man-days)! The main problem is serious bottleneck in fund-flow from above. However, the people's resentment for non-payment of dues has been mitigated perhaps due to the acceptance of the Pradhan and more importantly, due to the solution of a long standing serious livelihood problem. Fatalistic attitude and a sense of acceptance of a patron-client relationship among the villagers vis-à-vis administration in general may have also contributed to lack of resentment. According to few of the beneficiaries this monetary injection has helped them in repaying debt, in checking temporary migration and in risk-spreading and income-smoothing, in food intake, in children's education etc. Unfortunately, though contrary to the projection of the BDO people vigorously sought for work in presence of visible poverty and destitution, there is no further major plan! The systematic people's voice is missing even after such a big project!

Visit to the Khamarsahi GP, Daspalla Block, Nayagarh District was a unique experience of mass participation in raising voice and in collective bargaining. People participated on mass in the process of reaching consensus regarding framing and participation in NREGS among different communities/political/

social organisations under the influence/intermediation of a CSO – ‘Maa-Maati-Mahila-Morcha’ (having definite ideological position). We visited purposively Purana Daspalla and Kauda the two remote, underdeveloped and severely malaria affected villages having distinctly different performances. Purana Daspalla got no NREGS work in spite of having a total of 280 households, almost all suffering from poor income conditions and amenities. Interestingly there is serious and definite demand for basic infrastructure as well. The Morcha seemed to have failed in bringing the different communities and political and social organisations together. Repeated appeals to the GP and the Block were futile and there was no fund perhaps due to this lack of unanimity. Kauda portrayed a relatively bright picture. Of the total 80 households 60 got job card and out of this 20 were not active in absence of support of implements from the GP. Though all applied formally, there was no receipt given to them. 60 households got 40-50 man-days of work with maximum of 90 man-days in certain cases. Still they want more work and are very vocal and united in every aspect getting support and systematic guidance from the Morcha. But unfortunately there are serious problems with fund flow and very bad track of payments! In spite of payment lags the villagers have worked in three projects consecutively! The Morcha is mobilising people for their rights in the context of NREGS.

It seems from the whole of our field trip that political mobilisation of people’s voice is the key for proper performance of NREGS. Bureaucracy, whatever be its reach, and even the so called decentralised system of governance is perhaps practising different types of patron-client relationships vis-à-vis the common people across our field areas. There are concerns regarding infrastructure building and even in some cases regarding distribution of economic benefit through NREGS but there is serious lacuna in the understanding of the fundamental issue of people’s rights! There seems to be a perpetuation of the

benevolent patron-client kind of relationship with its obvious loopholes and structural bottlenecks and there is almost no serious attempt by the institutions of the State and even by the established political parties – be it left or right – to mobilise people’s political voice. There is no effective regulator in place to ensure the right to work in short-run and a truly inclusive development in long-run.

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Notes

- 1 Detailed debates on NREGS could be found in: http://www.righttofoodindia.org/rtowork/rtw_articles.htm.
- 2 One of the four goals of the National Rural Employment Guarantee Act (NREGA) is the provision of a “strong social safety net for the vulnerable groups by providing a fall-back employment source, when other employment alternatives are scarce or inadequate” (The National Rural Employment Guarantee Act 2005 (NREGA)-Operational Guidelines, Ministry of Rural Development, Government of India, New Delhi, 2008, pp.1).
- 3 We saw, people want work to avoid hazards, costs and uncertainties of migration. Women are also interested to work to support their families. Potential and actual beneficiaries reported, they want work to smooth out their fluctuating consumption across agricultural seasons. Moreover they reported a kind of sharing of the stipulated work among themselves. People were also proud of their work and they were aware of the necessities of minimum infrastructure. However, there are serious problems of information asymmetry. The rules are almost unknown to the people and most importantly the rights consciousness is almost missing and it seems that the elected representatives and officials violates the very notion of ‘right to work’ by developing a kind of patron-client relationship with the commoners. By this arrangement the grievances of the people regarding NREGS are internalised/appropriated and mitigated at least to some extent. The irregular and ill-timed flow of fund seems to make the situation worse.
- 4 This wage rise is not due to transfer of labour to NREGS, but due to rise in food and non-food prices raising the subsistence requirements.
- 5 The employment generation remains well below the 100-day mark (the act talks about at least 100-days work per year per rural household), the national average being about 50 days (Dey and Bedi, 2010, pp.21).

6 It is found that, even if there is information flow to the potential beneficiaries regarding availability of the scheme/s and that too in many cases from the government institutions and even if there is proper distribution of job-cards (a kind of identity required to get NREGS job), the actual employment generation is very low (Dey and Bedi, 2010). This is not at all due to lack of intrinsic demand for job, but due to severe lack of people's voice! The commoners have very little understanding about the notion of basic rights (this is also the field-level-observation of the authors across two states of India – Orissa and West Bengal). In this context, we can also quote at length from the primary survey results of Dey and Bedi, 2010, pp.21, as: “ While the basic programme awareness is universal, knowledge on the details of the programme such as employment on demand, minimum wages, the right to receive wage payments within a fortnight, the right to an unemployment allowance, and the right to information on all NREGA related documents is not as widespread.” This happens in spite of somewhat justifiable claim that in West Bengal the extent of decentralisation is much higher compared to the national average. It perhaps shows lack of people's mobilisation and collective voice.

7 In the Indian state of Jharkhand, as Bhatia and Dreze (2006) report, unfortunately, the government officials restricted job card access to BPL households and attempted to restrict the number of job cards issued in order to keep their workload under control! However, in the district of Birbhum, West Bengal the picture is much better (Dey and Bedi, 2010, pp.21). Our field-observations are also revealing. Its very interesting to note that the Block (second-tier of district administration) Development Officers (BDOs) of the two blocks of the two districts, Satyabadi Block and Daspalla Block, of Orissa expressed pessimism about peoples' interest in NREGS, which was exactly the same for Sonarpur Block in West Bengal! While the BDO of Satyabadi Block talked about proximity to Bhubaneswar and Puri as the cause of people's disinterest (just as Sonarpur BDO talked about proximity to Kolkata), the Daspalla BDO complained against the lackadaisical attitude of the lower caste population. The latter BDO complained vigorously about the 'litigating' and politicised attitude of the people and argued that people have

alternative opportunities and hence they in general do not want to work. However, we hasten to add that we, on the contrary, clearly saw abject poverty and very serious urge to work under NREGS in all these places! The only problem is that, the collective voice is absent.

- 8 Our visits to fields showed serious problems with banks and post offices as fund distributing agencies as well. Another serious issue is the lack of coordination between Panchayats (the third-tier of district administration) and the higher tiers in terms of flow of fund, timely disbursement of this fund etc. We could notice several irregularities in the processes of formulation and especially implementation of the NREGS by these Panchayats. The anomalies in job-card distribution, in application process demanding job, in providing compensation in absence of job, lags in payments and lack of worksite facilities are some of the serious faults. The nature/type of earthen work under NREGS was reported to be inconsistent with the local requirements given the agro-climatic and geographical specificities. The problem becomes more complex due to lack of coordination between flow of fund and appropriate season of work. Though there are certain attempts to social forestry and forestry in private lands and social and private water body up-gradations and excavations, in general there seems to be either lack of vision even for the elected representatives of the villagers to generate large scale employment or a bias towards building durable assets or both. Peoples monitoring is not visible as such!

Education and Women Empowerment – A Case Study of Kalna Subdivision in West- Bengal, India

Bikash Saha, Probir Karar and Pranab Kumar
Chattopadhyay

“Education is of great intrinsic importance with assessing inequalities of opportunity. It is also important determinant of individual’s income, health (and that of their children) and capacity to interact and communicate with others. Inequality in education thus contributes to inequality in other important dimensions of well being.....”.
(World Bank, 2006)

Education is a potent tool in the emancipation and empowerment of women. The greatest single factor which can incredibly improve the status of women in any society is education. It is indispensable that education enables women not only to gain more knowledge about the world outside of her hut but helps to get her status, self esteem, self confidence, courage and inner strength to face challenges in life. It also facilitates them to procure a job and supplement the income of family.

Education, especially of women has a significant impact on health and nutrition and act as an instrument of developing a sustainable technique for population control. Moreover, educated women can play an equally critical role as men in nation building. Education is important for everyone, but it is especially significant for girls and women. This is true not only because education is an entry point to other opportunities, but also because the educational achievements of women can have multiplier effects within the family and across generations.

Investing in girls' education is one of the most effective ways to reduce poverty. Investments in secondary school education for girls yield especially high dividends. Girls who have been educated are likely to marry later and to have smaller and healthier families. Educated women can recognize the importance of health care and know how to seek it for themselves and their children. Education helps girls and women to know their rights and to gain confidence in social life. However, women's literacy rates are significantly lower than men's in most developing countries. Thus there is no denying the fact that education empowers women. Indeed the different organs of the United Nations and professionals on women's liberation argue for women's education as the basic step to attain equality with men.

Thus women's education has become one of the key development objectives in present day. So it is crucial to examine the assumptions under which policies, programmes and projects are formulated towards the goal of development. More recently, the concept of empowerment has been tied to the range of activities undertaken by and for women in different areas including education. In our study, we have tried to find the answer of this question by examining the relative impact of education, income, decision making power etc. on women empowerment through

Micro-Finance and Self-Help Groups. In order to do so, we have selected 205 SHGs under 9 SKUS of Kalna subdivision in Burdwan district, for collecting data.

The study is structured as follows. In the second section, we have presented a literature survey followed by the objectives of the study. The analytical framework of the study is presented in the third section. In section four, the empirical analysis has been done. Finally, we have concluded our study.

Section II

Literature Survey

Education for all means a quality education for all. Education in one way or the other is a necessary and universal feature of society by which every generation transmits to the next its social heritage; it is essentially an agency of social control both in its conservative and innovative aspects. Education's importance has been emphasized by a number of international conventions, including the Universal Declaration of Human Rights and the Programme of Action of the 1994 International Conference on Population and Development. The Fourth World Conference on Women, held in Beijing in 1995, recognized that women's literacy is key to empowering women's participation in decision making in society and improving families' well-being. In addition, the United Nations has articulated the Millennium Development Goals (MDGs), which include goals for improved education, gender equality, and women's empowerment. The U.N. Millennium Summit, held in September 2000, produced a set of Millennium Development Goals (MDGs) covering a range of development issues, including reducing child mortality, fighting various infectious diseases, eradicating illiteracy, and empowering women. The MDGs and their associated targets and indicators were designed as benchmarks for monitoring progress in developing countries and to provide a framework for sustaining development and eliminating poverty. The international community recognizes

that unless girls' education improves, few of the MDGs will be achieved. Two of the goals deal specifically with female education and women's empowerment.

% Goal 2: Achieve universal primary education. Target: Ensure that, by 2015, all children, boys and girls alike, will have access to a full course of primary education. Indicators for this goal: the net enrollment ratio in primary education; the proportion of pupils starting grade 1 who reach grade 5; and the literacy rate of 15-24 year olds.

% Goal 3: Promote gender equality and empower women. Target: Eliminate gender disparities in primary and secondary education, preferably by 2005, and at all levels of education no later than 2015. Indicators for this goal: the ratio of girls to boys in primary, secondary, and tertiary education; the ratio of literate females to males among 15-24 year olds; the share of women in wage employment in the nonagricultural sector; and the proportion of seats in national parliament held by women. (United Nations, "About the Goals" www.developmentgoals.org/About_the_goals.htm). Thus the MDGs emphasize education's essential role in building democratic societies and creating a foundation for sustained economic growth.

Education contributes directly to the growth of national income by improving the productive capacities of the labor force. A recent study of 19 developing countries, including Egypt, Jordan, and Tunisia, concluded that a country's long-term economic growth increases by 3.7 percent for every year by the rise of adult population's average level of schooling (UNESCO-2002). Thus, education is a key strategy for reducing poverty, especially in the developing countries. According to the United Nations Population Fund, countries that have made social investments in health, family planning, and education have lower population growth and faster economic growth than countries that have not made such investments. (New York: UNFPA, 2002). In the globalised economy, countries with high rates of illiteracy and gender gaps in educational attainment

tend to be less competitive, because foreign investors seek labor that is skilled as well as inexpensive. Various global trends pose special challenges to women who are illiterate or have limited education. The export orientation and the growing importance of small and medium-sized enterprises in modern economies create opportunities for women, but women need the appropriate education and training to take full advantage of these opportunities.

The benefits of female education for women's empowerment and gender equality are broadly recognized as follows:

- As female education rises, fertility, population growth, and infant and child mortality fall and family health improves.
- Increases in girls' secondary school enrollment are associated with increases in women's participation in the labor force and their contributions to household and national income.
- Women's increased earning capacity, in turn, has a positive effect on child nutrition.
- Children—especially daughters—of educated mothers are more likely to be enrolled in school and to have higher levels of educational attainment.
- Educated women are more politically active and better informed about their legal rights and their execution.

Education of women, along with their right of ownership of property and access to productive resources through micro-finance, is of crucial importance for their participation in the long run development process or in other words in sustainable development. In fact, in a developing country like India, education may be even more important for women than for men in terms of the over-all multiplier effect. As indicated in a World Bank Study, education of women is not just a question of equity or equalization of opportunity; it is a matter of enlistment of half of the adult population in the process of development. Education of women is important for several

reasons. First, education is an indispensable window onto the surrounding, changing society and it helps in the development of human capital through proper child rearing and training at early stage. Secondly, education for mother tends to reduce the demand for children, this is because, they understand the relatively higher opportunity cost of their time.

It is also observed that education at present is mainly catering to the needs of elites in the urban areas but it has to make inroads in rural areas where India lives. In rural areas, women are totally dependent on men, as they do not have economic power to spend. The relationships with their husbands can be seen as influenced by historical factors that shape the social structures of how they are subordinated. It has been observed in several research studies that women do experience a double day, as they return to study combined with their domestic roles.

It has been mentioned that education helps to empower women. A UNICEF study (1998) on violence against women in South East Asia concluded that compulsory schooling for all girls would be a long-term measure to reduce violence against women by providing them adequate qualifications for getting a job which in turn will enable them to earn income and improve their status. Thus the SHGs should in-fact also be converted in to Self Help Study Groups that will give them not only enhanced income but also enhanced esteem and self confidence to do something meaningful for the society as a whole. They should realize that they are not the isolated unproductive part but important wheel for the smooth running of the society. The economic incentives and effective NGOs participation will definitely make the women empowerment a reality from a distant dream at present (www.col.org/pcf3/Papers/PDFs/Ghadoliya_MK.pdf). As a case in point, we can mention 'Human Development Report – 2011', to give more weights in this direction.

Table -1: Relation between HDI and Schooling

HDI groupings	Average HDI	Average MYS	Average of EYS
Countries with very high Human Development (1-47)	0.889	11.3	15.9
High Human Development (48-94)	0.741	8.5	13.6
Medium Human Development(95-141)	0.630	6.3	11.2
Low Human Development(142-187)	0.456	4.2	8.3
World	0.682	7.4	11.3

Source: Human Development Report 2011 - Sustainability and Equity: A Better Future for All

The table shows a positive relationship between HDI & Mean Year of Schooling (MYS) as well as Expected Year of Schooling (EYS). This means the nations where educational facilities are better, their economic development are higher.

Let us turn to Indian scenario. In India, the access to education has improved dramatically over the past few decades, and there have been a number of encouraging trends in girls' and women's education (Table-2). Primary school enrollment is high or universal in most of the developing countries.

Table-2: Educational Attainment in India

Year/Census	Male Literacy	Female Literacy	Gap
1981	56.37%	29.75%	26.62%
1991	64.13%	39.29%	24.84%
2001	75.85%	54.16%	21.69%
2011	82.14%	65.46%	16.68%

,Source: Registrar General of India, Census of India of different years.

But great challenges remain. Many people, especially girls, are still excluded from education, and many more are enrolled in school but learning too little to prepare them for 21st-century job markets. A report of MHRD (2007-08) shows that, the dropout rates in primary & elementary education of girls are 24.82 & 41.43 respectively. At the same time, there is an enormous gender gap in the provision of educational opportunities. In the labour market, there is also a considerably disadvantage for women. In some countries, access to the secondary and higher education that helps to create a skilled and knowledgeable labor force continues to be limited; even where access is not a problem; the quality of the education provided is often low.

The underinvestment in women's education can be explained not only by cultural factors, but also by economic factors. Because women have inferior work opportunities, the cost of educating women are not so easily recouped, and the rate of return is low – at least, the private return. Families see greater return from investing in the education of boys. From a social point of view, however, the return from investment in the education of female could be high. The education of women is not only important in its own right for improving the entitlement & capabilities of women, but it has important direct & indirect effects through increasing the supply of skilled labour & leading to empower the less privileged section of the society (Thirlwall,1972).

Problems in Women Education

Economic factors along with social attitude continue to restrict the access of women to superior job opportunities, even as in the years to come there will be a continual and considerable influx of women in the labour market. Indeed one easily falls in line in the Indian context, with the observation that a classic vicious circle seems to operate in the case of women; They have poorer economic and social status because they lack the skills/

education that are in demand; they are engaged in low-paying subsistence oriented activities, they have neither the inclination nor the courage to fight the gender bias in employment and demand their rights of fundamental necessities, including education. Consequently, the daughters of poor mothers remain poor (UN, 2010). Thus the heart of the problem is to create awareness among women of their economic potential, increase their self confidence, sense of responsibility & commitment, and to ensure that investment which is made for their education, training and development.

Objectives of the study

As per as the survey of the literature is concerned, it has been found that various studies have been undertaken regarding the relationship among women's education, empowerment and sustainable development, but no attempt has been made so far, focusing the same issue through the movement of Self-Help Groups(SHG). Our study aims at establishing the relation between women's education, their economic empowerment and sustainable development through the model of SHG movements and Micro-Financing. We shall highlight the education's links with economic earnings, decision makings and free movement in explaining women's empowerment and its role in sustainable development. In order to do so, we have constructed Women Empowerment Index (WEI) and establish the relation between WEI and these three important variables mentioned above in explaining sustainable development.

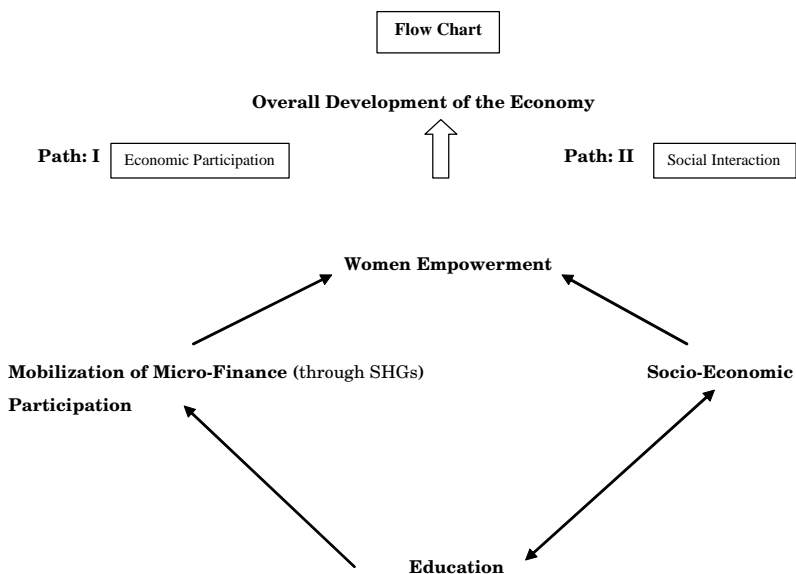
Hypothetical Model

A hypothetical model has been made in our study to establish the relationship among Education, SHG-Movement, Women Empowerment and Sustainable Development. In the later stage we have tested it utilizing primary data source.

4.1 Model:

Path I: Education Resource Mobilization Empowerment.

Path II: Education ↔ Participation → Empowerment



Education

Path II of the Model explains that educational base of a person leads to enhance his/her socio-economic interaction. Such socio-economic interactions influence participants for education while Path I describes that education increases the ability of controlling and managing resource (from MF institutions), mobilization and creates a positive outlook for resource generation in future. The socio-economic participation and proper resource mobilization together empowers women through raising the financial stability and reducing poverty. For example, a successful loan graduation programme would over time increase women's ability to take and repay larger loans which are

cheaper to administer (Mayoux, 2000). Hence the process ultimately leads them towards the path of sustainable development.

Section III

Analytical Framework

Index of Empowerment

For the purpose of comparison and understanding the impact of education on empowerment of participants in SHG movement, a women empowerment index (WEI) is constructed as an average of standardized economic score, education score, and decision making score. The index of each dimension was constructed where minimum and maximum values were chosen for each underlying indicator. Performance in each indicator is expressed as the minimum and maximum value between 0 and 1 in accordance with the construction method of the Human Development Index (UNDP, 2005). The WEI is then computed by a simple average of these three indices according to the formula below:

WEI = 1/3(Index of economic empowerment) + 1/3(Index of educational empowerment) + 1/3 (empowerment index of decision making). Thus index (Mostofa et.al., 2008) value can be defined as:

$$IV_i = \frac{(X_i - \text{Min } X_i)}{(\text{Max } X_i - \text{Min } X_i)}$$

Where, (X_i) , $\text{Min } (X_i)$, $\text{Max } (X_i)$ and IV_i are, respectively, the actual value, minimum value, maximum value and Index value for the concern dimension. Here, IV_i represents the indices like economic score, decision making score and education score of each individual in 205 sample size. For example, the economic score index is calculated by dividing the difference between each individual score from its minimum with difference in the maximum and minimum of economic score of 205 samples.

Economic scores are derived from the earnings of individual members of SHGs by utilizing their micro-finances served by banks and other financial institutions. Note that, the decision making index is formed by the average of four indices as regular household decision, economic decision, decision about movement out-side the home, and political decision.

Specification of the Equation of the Model

The specification of the proposed regression equation is as follows:

$$\text{WEI} = \alpha + \beta_1 F_1 + \alpha_2 F_2 + \beta_3 F_3$$

Where, F_1 stands for the Index of Educational Empowerment, F_2 stands for the Index of Economic Empowerment and F_3 stands for the Index of Socio-political Empowerment. Note that, F_3 is an average of four decision making indices i.e., economic decision, political decision, domestic (social) decision & decision about movement. To understand the impact of Education, Income and Decision making power on women empowerment, Ordinary Linear Regression (OLS) analysis has been done. Graphs are also used to support the data analysis.

Section IV

Empirical Analysis

On the basis of our construction of WEI, we have to calculate three important indices, namely, Educational Empowerment index, Socio-Political Empowerment index & Economic Empowerment index. The following table shows the indices of different S.K.U.S. The details of the scoring method have been given in the Appendix I.

Table – 6: Grand Average of different Indexes

Grand Average of Indices				
Name of S.K.U.S.	IEduE	IEcoE	ISo-PE	WEI
Ghanashyampur	.449	.199	.781	.477
Dhatrigram	.348	.019	.46	.277
Kulti	.505	.117	.728	.451
Uploti	.443	.083	.673	.473
Dharmadanga	.529	.242	.779	.514
Ramnagar	.438	.101	.746	.426
Mirjabati	.557	.129	.683	.46
Mirjapur	.339	.078	.358	.258
Salgharachandpur	.44	.094	.76	.431

Note: IEduE stands for Index of Educational Empowerment, IEcoE for Index of Economic Empowerment & ISoPE for Index of Socio-Political Empowerment.

The table shows that in all the S.K.U.S., among the three components of WEI, the average Socio-Political (decision making) indexes have a greater value compare with others. The second position is held by the average index of educational empowerment followed by the average index of economic empowerment. This implies that, through the SHG movement, women are being able to play a significant role to take any decision. In other words we may also say that, now women's decisions are being started to accept by the other members of the family. By the way it helps us to ensure actual participation of women in national planning. The result also shows that the economic earning is not the dominating factor for women empowerment rather education and social participations are vital for it. In the following passages, we shall corroborate our findings by utilizing the result of regression analysis.

Table – 7: Ordinary Least Square (O.L.S.) Regression Results

<p>The Form of Regression Equation: $Y = a + b_1 X_1 + b_2 X_2 + b_3 X_3 + U$ Where, Y = Women Empowerment Index X_1 = Index of Educational Empowerment X_2 = Index of Economic Empowerment X_3 = Index of Socio-political Empowerment</p>		
<p>1) Overall Result $Y = .004 + .46 X_1 + .24 X_2 + .49 X_3$ $R^2 = .922$ $\bar{R}^2 = .921$ $t; (17.3) (9.3) (21.9)$ $VIF_{x1} = 1.82$ $VIF_{x2} = 1.65$ $VIF_{x3} = 1.27$</p>		
2) a.	$Y = 0.05 + 0.83X_1,$ (21.0)	$R^2 = 0.685,$ $\bar{R}^2 = 0.684$
b.	$Y = 0.30 + 0.69X_2,$ (13.68)	$R^2 = 0.480,$ $\bar{R}^2 = 0.477$
c.	$Y = 0.144 + 0.776X_3,$ (17.54)	$R^2 = 0.603,$ $\bar{R}^2 = 0.601$

The problem of multi co-linearity is not present here. Because in all cases $VIF < 2.0$ Further, R^2 of the regression equation of Education on Economic & Socio-Political Empowerment, R^2 of regression equation of Economic empowerment on Education & Socio-Political Empowerment and R^2 of regression equation of Socio-Political Empowerment on Education & Economic empowerment are 0.451, 0.393 & 0.213 respectively which are less than the overall regression co-efficient , i.e.0.922.

Section V

Conclusions

The result of the regression analysis is very interesting. If we look at the overall result where WEI was dependent variable and all the three empowerment indices were independent variables, the Goodness of Fit was as high as 0.92 percent with all the beta coefficient have expected signs with accepted standard errors. When we run the regression of WEI separately

on each of the empowerment indices, again the results are interesting. In all the cases, the value of R bar Square is high. It can be mention that in the case of influence of different empowerment indices on WEI; education turns out to be the highest influencing factor followed by socio-political and economic empowerment. Thus our result strongly advocates that it is the education which becomes the most significant variable in empowering rural women even through the movement of Self Help Groups. Since we basically dealt with a large number of rural women, it can be concluded that education is one of the vital aspect of sustainable rural development in the area of our study and we strongly believe that this type of result can be obtained if one can cover other rural areas in our country.

Recommendations

Thus, (i) Education should be given top priority in all plans & programmes initiated by the government and NGOs for the development under the democratic structure of our country which will give birth a new way of sustainable development.

(ii) There is a need to interlink the illiterate members of SHGs where, the most downtrodden people, particularly women in rural areas struggling with their family for bare survival, with educational programmes like, the Sarva Siksha Aviyaan etc.

(iii) A proper coordination between Micro-Finance and SHGs with true education is very important for the long run sustainable development in the Indian economy.

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Appendix I:

A) Measurement of Socio-political empowerment:
(K.O.Mason & Herbert L. Smith, 2 January 2003).

Economic Decision (ED)

(1) Please tell me who in your family decides the following:

Whether to purchase of major goods for the household, such as dress/sari, item of jewelry, TV/refrigerator/etc.? (Wife participates = 1, does not = 0; note that the item mentioned varied from region to region.)

2. Whether to purchase or selling of durable assets like Cultivable land, Household Property, Business property etc.

(Wife participates = 1, others = 0.)

(3) Please tell me, whether you have full control over loan and its management? (yes = 1, no = 0.)

The final score was formed by averaging the score of these three items. Range: 0 – 1.

Freedom of Movement (FM)

(1).Who of these people usually has the greatest say in this decision: whether you should work/move outside the home? (Respondent's herself = 1, others = 0.)

Domestic (social) Decision (DD)

1. Who of these people usually has the greatest say in this decision: how many children to have? (Participation of respondent = 1, others = 0.)
2. Who decides about admission &/or continuation of children's education? (Participation of respondents =1, others =0.)
3. Who take decision about the marriage of the dependents of the family, particularly of girls? (Participation of respondents=1, others=0.)

The final score was formed by averaging the score of these three items. Range: 0 – 1.

Political Decision (PD)

1. Whether any influence or external pressure motivates the respondent to cast her vote to a particular candidate? (No=1, Yes=0).

(B) Socio-political Empowerment Index (F_3):

$$F_3 = \frac{1}{4}(ED+FM+DD+PD)$$

An Enquiry into the Scope of Sustainable Promotion of Tribal Livelihood and Education with Environmental Stability in West Bengal

Arun Kumar Mandal and Pranab Kumar Chattopadhyay

Few forest acts such as Indian Forest Act, 1927, Wild life (Protection) Act 1972, Forest (Conservation) Act 1980 were pertained with environment protection, control of soil erosion, commercial and sustained use of forest resources in National economy, wild life protection and necessary diversion of forests for the sake of industrialization and development of country. But the rights and responsibilities of forest dwellers on forest resources were neglected days and days out which have appeared to be an end within enactment of Forest Act/Tribal Rights Act (2006) in India. The tribal depend on forests not only for their economy but also their social, cultural and emotional needs. The tribal people find that Non-Timber Forest Products (NTFPs) are very useful to them during the stressful time in maintaining their day-to-day requirements. So the problem of deforestation and degradation is linked with unemployment and poverty. In

India, forests cover about 75 million hectare areas with respect to the total geographical area.

Accordingly to the Ministry of Agriculture, Government of India (GOI, 1988), forests in India accounted for nearly 22 percent of the total Geographical area of the country. It is estimated that every year the country is losing 1.5 million hectares of forest coverage. Now the question mooted again and again how to protect and preserve forest resources and environment. The forests of West Bengal become one of the major sources of livelihood to an entire mass of the society living in the vicinity of the forest and living well below the poverty line. The JFM has a positive impact on the livelihoods of participant's households encompassing economic, social, political and environmental domains. (Sreedhar, G., and K Bhaskar .2000).According to the report of Statistical Abstract (2005), West Bengal occupies only 13.38 % forest area w.r.t total geographical area as compared to 22.3 % in the country and 30 % in the World. International experience suggests that when communities are empowered with greater rights and responsibility, forest conservation and rural livelihoods tend to improve. In this backdrop, Joint Forest Management (JFM) involving local people with forest department does have a catalectic role for rejuvenation of forest resources as well as environmental conservation and poverty eradication of forest dwellers. Education makes social and behavioural changes. So, influence of education and training on forest denizens through various programmes about the different aspects of forest activities may also be taken into the purview of the study.

Objectives of the Study

1. To find out the present status of forest resources under Joint Forest Management(JFM) in Birbhum, Midnapore and West Bengal w.r.t India and other countries.
2. To explore the scope of development of forest resources under JFM for fulfilling twin objectives i.e Environment preservation and promotion of the tribal livelihoods in study areas and West Bengal

3. To examine to what extent extension of education, awareness and information can influence the tribal people regarding the nature and scope of properly utilization of forest resources leading Environmental Stability under JFM in Birbhum, West Midnapore and W.B.

Sampling and Methodology

In order to carry out the study, 300 BPL households from two districts i.e. West Midnapore and Birbhum in West Bengal have been chosen having considered the depleted and lower forest cover and lowest concentration of tribal population in Birbhum as compared to West Midnapore where forest cover is large and concentration of tribal population is also highest. Various forests related secondary data have been collected from District Forest Offices, range and beat offices and other available official sources. Various statistical tools i.e. questionnaire method; Mean, S.D. , Correlation Matrix, Regression Equations, Dummy Variable Regression model and various figures were deployed to collect and analyze the data.

Discussion and Results

Environmental and Social Significance of Joint Forest Management (JFM)

Each Forest Protection Committee (FPC) under JFM of study areas and West Bengal plays a useful role not only in protection and management of forestry involving local people but also income generation, employment creation, poverty eradication of tribal, maintaining livelihoods of tribal people and environment protection in a sustainable manner without hampering forest resources. The forest department has also realized that forests cannot be protected without the help of local poor and improvement of their socio-economic condition. The Government is now taking so many steps for the improvement of living condition of poor tribal people. The members of FPC are now deriving so many facilities from forest department. Forest Department (FD) provides poultry, piggery, different kinds of plants, thresher machine, spray machine,

weaving machine, well for drinking water, Sal plate making machine, vapour machine for boiling paddy, education for children etc. FD renders training to the FPC members for Pisciculture, Apiculture, Tussar Culture, Horticulture, Piggery, Duckary, Poultry, Mushroom culture, Animal Resource Development etc. Apart from these, 25 percent revenue is equally distributed among the members of FPC. They spend this money purchasing agricultural land, building house and other purposes. The members of FPC also get jobs during plantation and felling of trees having appropriate wage rate. They also collect branches and twigs of felling trees for fuel at a low price from forest department. Pisciculture is also practiced at different places by FPCs. Recently Forest Department of West Bengal has received Paul Getty Prize for the best protection and rejuvenation of forest resources under JFM. Forest Department also renders scholarship to the students for higher education having households of FPC members funded by Paul Getty Prize.

Table – 1: Forest Cover in India, South Asia and Other Regions.

Region	Forest Cover (percent)	Forest per Capita (hectares)	Annual Change in Hectares (000)	Forest Cover 1990-2000 (percent)
South America	50.5	2.6	-3,711	-0.4
Europe	46.0	1.4	881	-0.1
North/Central America	25.7	1.1	-570	-0.1
Africa	21.8	0.8	-5,262	-0.8
Asia	17.8	0.2	-364	-0.1
World	29.6	0.6	-9,391	-0.2
<i>South Asia</i>	64.2	1.5	-	-
Bhutan	30.0	0.1	-35	-1.6
Sri Lanka	27.3	0.2	-78	-1.8
Nepal	21.6	0.1	38	0.1
India	10.2	-	-	-
Bangladesh	3.1	-	-39	-1.5
Pakistan	2.1	0.1	-	-
Afghanistan				

Source: FAO (2005)

Table -1 focuses about forest cover in India, other countries in South Asia and other regions of the World. It shows that percentage of forest cover is found to be the highest in Bhutan having 64.2 % within South Asian countries, followed by 30 % in Sri Lanka, 27.3% in Nepal, 21.6 % in India, 10.2 % in Bangladesh, 3.1 % in Pakistan and lowest to be 2.1 % in Afghanistan. Percentage of forest cover is found highest in South America (50.5 %), followed by Europe (46 %), North / Central America (25.7%), Africa (21.8 %) and Asia (17.8 %). Per capita forest cover is much lower in India (0.1 ha) as compared to other countries such as Bhutan (1.5 ha), Nepal (.2 ha) Africa (0.8 ha), Europe (1.4 ha) and South America (2.6 ha). This table indicates that India is the only country in South Asia which estimates a positive increase in forest cover between 1990 and 2000 (38,000 ha). This increase in forest cover under JFM in India accounts for only 0.6 percent of the National Forest area and conveys a positive feature for forest development and environment conservation.

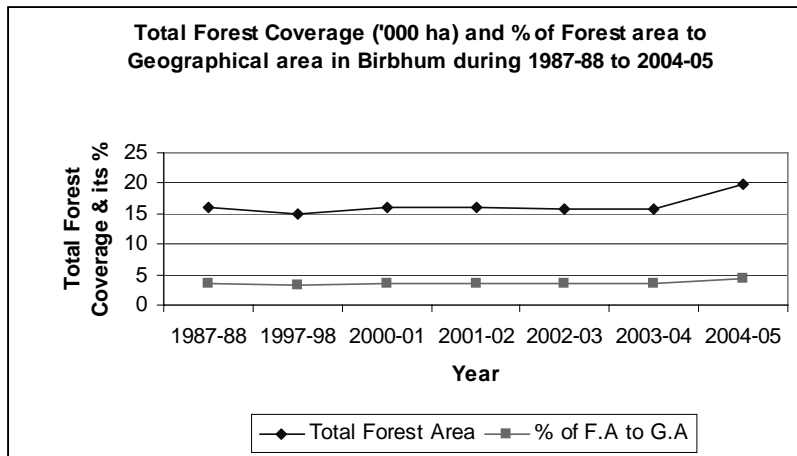


Diagram- 1: Forest Area and its Percentage to Total Geographical Area in Birbhum during 1987-88 to 2004-05 (Area in Thousand Hectares)

Diagram -1 highlights that forest area and its percentage to total geographical area in Birbhum (thousand hectares) during 1987-88 to 2004-05. Forest area and its percentage in Birbhum increased from 15.9 thousand hectares forming 3.50 percentages to 19.9 thousand hectares having 4.4 percentages during 1987-88 to 2004-05. Resuscitation of forest resources in Birbhum during the period had been possible due to the success of JFM depending on a good rapport between the forest department and local communities.

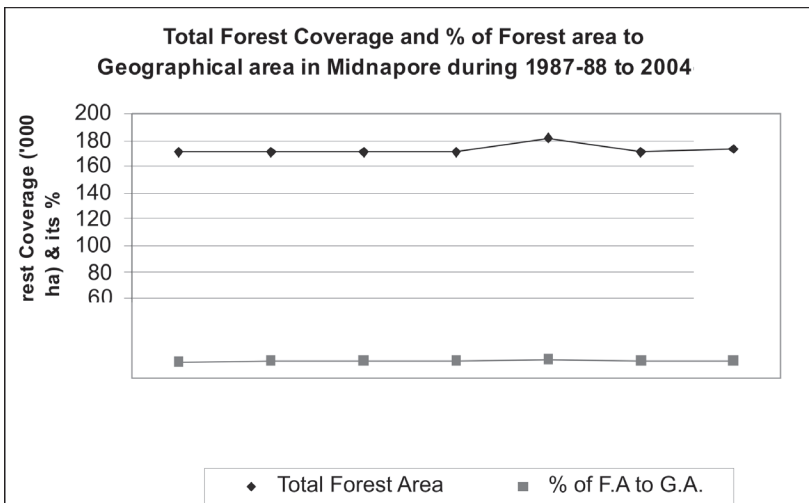


Diagram-2: Forest Area and its Percentage to Total Geographical Area in Midnapore during 1987-88 to 2004-05 (Area in Thousand Hectares)

Diagram-2 depicts that forest area and its percentage to total geographical area in Midnapore augmented from 170.9 thousand hectares covering 12.14 percent of forest to total reporting area to 172.8 thousand hectares sharing 13.03 percent forest coverage to total reporting area during 1987-88 to 2004-05. So the improvement of forest resources has been made possible through JFM in Midnapore where JFM was installed first at Arabari in 1990 and spread like wild fire in every nook and corner in west Bengal.

Table-2: Correlation Matrix among Different Forest Related Variables at Banavilla(Birbhum)

X_i, X_j	F.M. (X_1)	Farm Size -F.S. (X_2)	C.S. (X_3)	ANFY (X_4)	AFLD (X_5)	ANFLD (X_6)	AWFLD (X_7)	AFY- fuel (X_8)	AFY- Fodder (X_9)	AFY- salplate (X_{10})
X_1		0.275*	0.235*	0.388**	0.401**	0.275*	0.363**	0.746**	0.277*	0.067
X_2			0.538**	0.434**	0.096	0.420**	0.052	-.082	0.569**	-.198
X_3				0.302**	0.281*	0.327**	0.172	-0.089	0.905**	-0.108
X_4					0.447**	0.682**	0.377**	0.190	0.324**	0.192
X_5						0.431**	0.958**	0.496**	0.393**	0.728**
X_6							0.355**	0.068	0.338**	0.126
X_7								0.489**	0.265*	0.799**
X_8									0.014	0.196
X_9										-0.045
X_{10}										

** Correlation is significant at 0.01 level (2 tailed)

* Correlation is significant at 0.05 level (2 tailed)

* F.M.-Family Member, F.S.-Farm Size, C.S.-Cattle Size,

ANFY - Annual Non Forest Income; AFLD - Annual Forest Labor Days; ANFLD - Annual Non- Forest Labor Days; AWFLD

- Annual Woman Forest Labor Days; AFY-fodder- Annual Forest Income Fodder, Fuel, Salplate making.

Let us establish the following functional relationship having ignored multi-colinearity problem to some extent.

$$AFY_i = \alpha + \beta_8 X_{8i} + \alpha_9 X_{9i} + \beta_{10} X_{10i} + U_i \dots \dots (1)$$

i.e. $AFY = f$ (FY fuel, FY fodder, FY – salplate making)

Where, AFY =Annual forest income.

Table-3: Multiple Regression Results

Variable	X-coefficient	SE of coefficient	Value of 't'	Significance
Constant	423.574	159.470	2.656	*** (.010)
FY fuel	1.295	0.071	18.139	***(.000)
FY fodder	0.933	0.028	33.792	***(.000)
FY salplate making	0.971	0.029	33.942	***(.000)

$R = .9888$, $R^2 = .976$, Adjusted $R^2 = .975$
d.f = 3; *** indicates .1% level of significance.

The multiple regression results can also be arranged as follows:

$AFY_i = 423.574 + 1.295 \text{ FY - fuel} + 0.933 \text{ FY- fodder} + 0.971 \text{ FY- salplate making}$

SE = (159.470) (0.071) (0.028) (0.029)

t = (2.656)*** (18.139)*** (33.792)*** (33.942)***

$R^2 = 0.976$

Table-3 exhibits that there is positive and significant relationship between **i**) AFY and AFY from fuel, **ii**) AFY and AFY from fodder, **iii**) AFY and AFY from salplate making as the P values are quite low, so it is concluded that higher forest income from fuel, fodder and salplate making provide higher annual FY per household. So, AFY at Banavilla largely depends on FY-fuel, FY-fodder and FY-salplate making having statistically significant.

Table-4: Correlation Matrix among Different Forest Related Variables at Machhkanda(West Midnapore).

$X_i X_j$	F.M (X_1)	Farm Size -F.S. (X_2)	C.S. (X_3)	ANFY (X_4)	AFLD (X_5)	ANFLD (X_6)	AWFLD (X_7)	AFY- fuel (X_8)	AFY- power (X_9)	AFY- salplate (X_{10})
X_1		0.222	0.160	0.514**	0.594**	0.512**	0.458**	0.945**	0.264	0.035
X_2			0.602**	0.748**	-0.069	0.554**	-0.369**	0.079	0.612**	0.596**
X_3				0.536**	0.031	0.402**	-0.229	0.019	0.895**	-0.357**
X_4					0.191	0.924**	-0.176	0.376**	0.549**	0.403**
X_5						0.348**	0.843**	0.670**	0.114	0.547**
X_6							-0.031	0.412**	0.437**	-0.255
X_7								0.576**	0.161	0.787**
X_8									0.170	0.182
X_9										
X_{10}										

** Correlation is significant at 0.01 level (2 tailed)
 * Correlation is significant at 0.05 level (2 tailed)

Dropping multi-collinearity problem to some extent, we obtain the following regression model.

$$\begin{aligned} \text{AFY}_i &= \alpha + \beta_1 \beta_{1i} + \beta_2 X_{2i} + \beta_7 X_{7i} + U_i \quad ..(2) \\ &= f(\text{F.M.}, \text{F.S.}, \text{TAWFLD}) \end{aligned}$$

and the regression results are stated as follows

$$\begin{aligned} \text{AFY}_i &= \mathbf{1115.072+216.140 \text{ F.M.}_i+ 422.393 \text{ F.S.}_i+16.683 \text{ TAWFLD}_i} \\ \text{S.E.} &= (1200.632) \quad (230.839) \quad (150.027)(2.589) \\ t &= (.929) \quad (.936) \quad (2.815) \quad (6.455) \dots (14) \\ & \quad (.357)^* \quad (.354)^* \quad (.007)^* \quad (.000)^* \end{aligned}$$

where * indicates P values, $R = .779$, $R^2 = .607$

From the above results it is found that forest income at Machhkanda shows positive correlation with AWFLD and statistically significant as the P value estimates quite low. It can also be seen from this regression that the estimated slope coefficient for FM is not statistically significant as its P value is 35.4 percent whereas that of F.S. is statistically significant as the P value is only 7 percent. So the conclusion is that AFY depends on F.S. and AWFLD having statistically significant but dependence of AFY on FM is statistically insignificant.

Equation -1 Shows Dummy Variable Regression Model w.r.t AFY

$$\text{AFY}_i = \beta_1 + \beta_2 D_{2i} + \beta_3 D_{3i} + \beta_4 D_{4i} + U_i$$

Where, AFY_i = average annual forest income of tribal households at village i

$D_2 = 1$, if forest income belongs to tribal households at Banavilla,
=0, otherwise.

$D_3 = 1$, if forest income belongs to tribal households at Lakhipur,
=0, otherwise.

$D_4 = 1$, if forest income belongs to tribal households at Dakai,
=0, otherwise.

Variable	B (coefficient of D)	Std - error	T	Sig.
Constant	10,336.241	443.407	23.311	.000
D ₂	- 3185.862	581.522	-5.478	.000
D ₃	-1598.587	581.522	-2.749	.000
D ₄	140.613	554.258	.254	.800

R = .388, R² = .151, df₁=3, df₂=296. Dependent Variable: AFY.

As above regression results focus that mean annual forest income of household at Machhkanda is found to be about Rs 10,336, that of forest income at Dakai is higher by about Rs 140, that of forest income at Banavilla is lower by about Rs 3185 and that of forest income at Lakhipur is lower by about Rs1598. So it is seen that actual mean annual forest income of household at three tribal villages namely Banavilla, Lakhipur and Dakai are Rs 7150, Rs 8737 and Rs 10476 respectively. It can be seen from this regression, the estimated slope coefficient for Banavilla, Lakhipur, is statistically significant as p values are quite low. So this regression results suggest that mean annual forest income per household at Banavilla and Lakhipur in Birbhum differ statistically significant but it does not differ significantly at Dakai in Midnapore (W).

Equation -2. Shows Dummy Variable Regression Model w.r.t AFLD

$$\text{AFLD}_i = b_1 + b_2 D_{2i} + b_3 D_{3i} + b_4 D_{4i} + U_i$$

Where, AFLD_i = average annual forest labour days of tribal households at village i

D₂ =1, if annual forest labour days belong to tribal households at Banavilla,

=0, otherwise.

$D_3 = 1$, if annual forest labour days belong to tribal households at Lakhipur,

=0, otherwise.

$D_4 = 1$, if annual forest labour days belongs to tribal households at Dakai,

=0, otherwise.

Variable	B (coefficient of D)	Std - error	T	Sig.
Constant	527.963	22.714	23.244	.000
D_2	-159.310	29.789	-5.348	.000
D_3	-80.003	29.789	-2.686	.008
D_4	40.266	28.392	1.418	.157

$R = .431$, $R^2 = .186$, $df_1=3$, $df_2=296$. D.V: AFLD

Above regression results highlight that mean annual forest labour days is found to be statistically significant different at Banavilla and Lakhipur in Birbhum having lower p values and it estimates insignificant different (as higher p value) at Dakai in Midnapore (w).

Equation-3: Dummy Variable Regression Model

Let us consider the following model.

$$AFY_i = \beta_1 + \beta_2 D_{2i} + \beta_3 D_{3i} + \beta_4 D_{4i} + U_i$$

Where FY_i = average annual forest income of tribal household at village i

$D_2 = 1$, if the annual forest income belongs to the literate respondents of tribal household at Banavilla.

= 0, otherwise

$D_3 = 1$, if the annual forest income belongs to the literate respondents of tribal household at Lakhipur.

= 0, otherwise

$D_4 = 1$, if the annual forest income belong to the literate respondents of tribal household at Dakai.
 $= 0$, otherwise

Let us present the results based on the above regression.

$$FY_i = 7499.840 + 1356.502D_{2i} + 2426.641D_{3i} + 4088.603D_{4i}$$

$$Se = (272.884) \quad (572.065) \quad (502.351) \quad (442.789)$$

$$t = (27.484) \quad (2.371) \quad (4.831) \quad (9.234)$$

$$(0.000)^* \quad (0.0018)^* \quad (0.000)^* \quad (0.000)^*$$

where * indicates the p values, $R=0.481$, $R^2=0.224$

As these regression results show, the mean forest income of literate respondents at Machhkanda is about Rs 7499, that of forest income at Banavilla is higher by about Rs 1356, that of forest income at Lakhipur is higher by about Rs 2426 and that of forest income at Dakai is higher by about Rs 4088. So it is found that actual mean forest income of literate respondents at three tribal villages namely Banavilla, Lakhipur and Dakai are Rs 8859, Rs 9925 and Rs 11587 respectively. As can be seen from this regression, the estimated slope coefficient for Banavilla, Lakhipur and Dakai is statistically significant as their p values are quite low. It may be concluded from this regression results that mean forest income of literate respondents among tribal villages differs statistically significant.

Conclusion

1. In the economy of nature forest resources play an important and effective role in making bridge between man and environment. Forest resources are poorly endowed among the different ranges of Birbhum due to settlement pattern of land. There are total 590 numbers of FPCs under JFM in West Midnapore.
2. Formation of Forest Protection Committees (FPCs) under JFM extends every nook and corner of not only Birbhum and Midnapore but also whole West Bengal and India since 1990.

3. Number of male FPCs member is much higher as compared to that of female in both districts. Forest area per FPC in Birbhum (78.77 ha) is lower than West Midnapore, (114.67 ha), West Bengal (155.27 ha) and India (204.79 ha). The number of female participation in FPCs under JFM in study area is dissatisfactory. Percentage of forest cover (22.8 %) as well as per capita forest area (0.11 ha) in India is much lower as compared to other countries.
4. Resuscitation of forest resources in Birbhum, Midnapore and west Bengal during 1987-88 to 2004-05 may have been possible due to the success of JFM depending on a good rapport between the forest department and local communities mainly tribal people.
5. AFY at Banavilla(Birbhum) largely depends on FY-fuel, FY-fodder and FY-salplate making having statistically significant.
6. AFY at Machhkanda(West Midnapore) depends on F.S. and AWFLD having statistically significant but dependence of AFY on FM is statistically insignificant.
7. The regression results suggest that mean annual forest income per household at Banavilla and Lakhipur in Birbhum differ statistically significant but it does not differ significantly at Dakai in Midnapore (W).
8. Mean annual forest labour days is found to be statistically significant different at Banavilla and Lakhipur in Birbhum having lower p values and it estimates insignificant different (as higher p value) at Dakai in Midnapore (w).
9. The regression results that mean forest income of literate respondents among tribal villages differs statistically significant
10. The study significantly represents that Forest protection Committees (FPCs) at village level with forest departments under JFM have been playing a catalectic role for rejuvenation of forest resources along with environmental

conservation and promotion of tribal livelihoods and education as well as economic development of forest denizens largely since 1990 in west Bengal and India.

Recommendations

1. Some of the FPCs under JFM remain inactive condition. To identify these FPCs, and ascertain their main causes of inactiveness and take remedial measures by providing greater facilities to these FPCS.
3. Participation of Female FPCs member should be increased.
4. FPCs member should be provided 25 % share properly and continuously for stimulation and responses.
5. FPCs member should be provided more facilities.
6. Intelligent students of FPCs member should be arranged scholarship for their higher education.
7. Forest based small industries should be increased to secure employment and income of forest dwellers. For this purpose rural banks should extend their help and cooperation as much as possible.
8. Better use of indigenous knowledge and information about forest resources should be extended largely.
9. Expand forest research and training so that JFM model can rapidly establish its reality for the existence and revival of forest resources in W.B and India.

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A Baseline Study of Health Service in Madarihat/Birpara Taluka of Kalchini, Jalpaiguri, West Bengal

Sucheta Paul and Daya Shankar Kushwaha

Today health services are one of the major concerns of common people. The health service has two dimension; one is health service available from government agencies and secondly from the private stakeholders. This study mainly focuses on the existing government and private facilities and existing challenges before the service-delivery agencies. This study tried to assess how services are accessible and reached to the lowest strata and utilization of the services by the community. The new approach requires decentralization of planning, monitoring and Evaluation of the services. The district being the basic nucleus of planning and Implementation of various programme. This study reaches out to assess people's perceptions on quality of services and expectation from the service providers.

The Government agencies and various voluntary Organizations are working on comprehensive healthcare programme including RCH/HIV/AIDS issues in Madarihat/

Birpara Taluka of Kalchini Block to contribute towards national and state goal of achieving standard health indicators in the underprivileged population by providing adequate and quality healthcare services. The overall existing health scenario, community environment and associated factors are not adequately conducive for achieving satisfactory health goals.

Rational of the baseline study

In the above background it will be rationale to think of conducting one baseline study that can address knowledge, attitude and behaviours of the community people in regard to basic healthcare facilities available, utilization of services and care seeking behaviours as well as other vulnerabilities existing within the community that may affect the same. There is a need to emphasize of the reproductive and sexual health issues. The baseline findings will provide evidence for the changes that intervention will bring within next couple of years.

Objectives of the Mapping/Baseline Survey

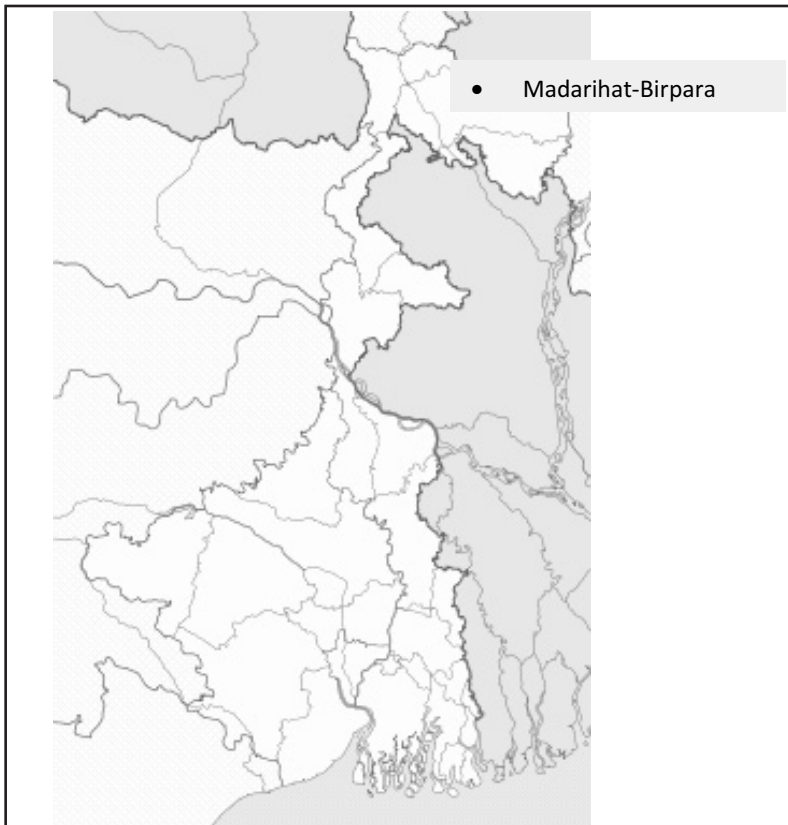
1. Mapping of existing Health care service providers
2. Mapping of Health facilities in the Taluka/ Tehsil/ Block
3. Scope of Govt. Institutions and welfare voluntary organizations in delivery of health services



The baseline report will be helpful in this way:

- To describe the baseline health situation
- To justify the need and magnitude of intervention
- To design the programme for optimum resource allocation
- To use baseline data for tracking critical indicators
- To evaluate the existing programme and recommendations towards areas of intervention.

Study Area

Madarihat-Birpara Block is inhabited by tribal people. These groups are classified into two parts. One is belonging to Austroloid Group like Oraon, Munda, Nagasia, Ashur, Santal, Chik Baraik. Originally they are from Dravidian Bleed and the 2nd group is Mongoloid like Rava Mech, Garo originated from Assam. Specially to note that TOTO is one of the smallest tribal group of India residing under Madarihat-Birpara Block and they are originally from Tibetan bleed.



Location of Madarihat-Birpara in West Bengal and India	
Coordinates	 26°42'00"N 89°16'59"E 26.700°N 89.283°E  26°42'00"N 89°16'59"E 26.700°N 89.283°E
Country	India
State	West Bengal
District(s)	Jalpaiguri
Parliamentary constituency	Alipurduars
Assembly constituency	Madarihat
Population	
• Density	185,499 (2001[update])
• 487 /km ² (1,261 /sq mi)	
Time zone	IST (UTC+05:30)
Area	380.96 square kilometers
(147.09 sq mi)	

Block wise population (ST/SC) Sex Ratio, Literacy and Working Population

S. No.	Particular	Name of the Taluka/Block
1-	Population	2,07,482 [Madarihat-Birpara Block]
2-	Population Growth Rate (per decade)	10.96%
3-	Population Density (per Sq.Km.)	530
4.	Sex Ratio	939
5.	SC Population	37,005
	Percentage	17.83%
6.	ST Population	98,836
	Percentage	47.63%
7.	Literate Percentage	68.40%
	Male	38.53%
	Female	29.87%
8.	Working Population	61,604
	Percentage	29.69%
9.	Area	672 Sq.Km

(Source: Census 2001)

Methodology & Strategy Adopted for the Baseline Study

1. In-depth one to one interview of the target group using structured questionnaire.
2. Focus group discussion with the target group.
3. Group Discussion.
4. Social Mapping
5. Informal interview of the key informants e.g. local influential people, Local political leaders (GP officials, Block Development Officer Etc).
6. Government records.
7. Brainstorming sessions with staff and volunteers of the voluntary Organizations
8. Interaction with community members
9. Secondary source of Information

Process of Data Collection

Preparation of Questionnaire

Three informal interview guides were followed for focus group discussion and questionnaire for target groups. The FGD guide consists of certain structured questionnaire about the qualitative information on socio-economic factors affecting public health. Few questions were asked on the issues like overall health status of the region, available health care facilities, general health perception etc.

The interview guide for the target group consisted of questions which covered the following topics: Demographic profile, KABP (knowledge, attitude, Behaviour, Practice) and decision making power. Separate questions were kept on their perception on several health issues and health incidents (no of infant or maternal death, incidents of several diseases etc). Most of these questions were designed to have quantitative information and centered around five principal facets of

reproductive health namely Safe Motherhood, Child Survival, Family Planning, Adolescent health, ARI/Diarrhoea and STD/HIV/AIDS. Importance was also given to collect information related to access of health service point and delivery system.

Findings : The survey was conducted on 10 GP consisting of total population 108703 male 98779 female. The details of the GP s are mentioned below

Name of G.P	No. of Household	Total Population	MALE	FEMALE
Ballalguri & Toto Para	1150	5354	2774	2580
Madarihath GP	5298	23265	11744	11521
Hantapara GP	4295	19913	10238	9675
Khairbari GP	4928	21416	11411	10005
Rangali Bazna GP	5592	26435	14271	12164
Bandapani GP	2611	13140	7104	6036
Sishujhumra GP	6215	31003	15996	15007
Birpara- I GP	7000	33082	17387	15695
Birpara-II GP	3034	15073	7997	7076
Lankapara GP	4050	18801	9781	9020
Total	44173	207482	108703	98789

HEALTH SERVICES AT GRAM PANCHAYATS

GP-1	GP-2	GP-3	GP-4	GP-5
Where people [living in the community] go for general health care services	1] Govt.SC. 2.Govt.PHC 3. Local Chemist. 4. Private doctor at Hamiltonganj, Siliguri and Birpara. 5.Phuentsholing Hospital, Bhutan	1.Tea Garden Hospital. 2.Govt.SC 3.BPHC-Madarihat 4.Chemists at Madarihat 5.RMPs	1. Tea Garden Hospital Lankapara, Tulsipara and Ramjhora. 2.Govt.SC 3.Private doctor at Birpara 4.Chemists at Birpara 5. RMPs.	1. Tea Garden Hospital. 2.Govt.SC 3.Private doctor at Birpara 4.Chemists at Birpara 5. RMPs.
Where people [living in the community] go for seeking abortion	1.Birpara Hospital and Jeeban Suraksha Nursing Home, Birpara 2.Alipurduar St.Mary'sNursing Home and 3.Chemists	1. RMPs. 2. Chemists at Madarihat. 3. FPAI Kalchini. 4.Birpara Jeeban Suraksha Nursing home	1. Chemists at Birpara. 2.Jeeban Suraksha Nursing Home, 3.Dooars Nursing Home. 4.Chemists at Birpara. 5. RMPs.	1.Local Chemists, 2.RMPS 3. Jeeban Suraksha Nursing Home.

	GP-1 Birpara State General Hospital	GP-2 Birpara State General Hospital Pundibari BPHC, Coochbehar another district.	GP-3 1. Birpara State General Hospital. 2. Alipurduar SD Hospital. 3. Pundibari BPHC, Coochbehar district.	GP-4 1. Birpara State General Hospital.	GP-5 Birpara State General Hospital
Where people [living in the community] go for HIV related services (including VCTC, DOTS)	Birpara ICTC located at Birpara State General Hospital for HIV testing. 2. DOTS - Totopara PHC and Govt.SC	Birpara ICTC located at Birpara State General Hospital for HIV testing. DOTS- Madarihath BPHC and Govt.SC. New Birpara Diagnostic Centre.	Birpara ICTC located at Birpara State General Hospital for HIV testing. DOTS- Madarihath BPHC and Govt.SC. Tea Garden Hospital at Gharganda Hospital.	Birpara ICTC located at Birpara State General Hospital for HIV testing. DOTS- Govt.SC. Tea Garden Hospital at Lankapara Hospital, Ramjhora Tea Garden Hospital.	Birpara ICTC at Birpara State General Hospital for HIV testing. DOTS- Govt.SC. Tea Garden Hospital at Makrapara TG Hospital.

	GP-1	GP-2	GP-3	GP-4	GP-5
From where people living in the community get condoms, & OCPs	PHC/Govt.SC / and Chemists.	Govt.SC and local chemists.	Govt.SC, ASHA Tea Garden Hospital	Govt.SC, Tea Garden Hospital and Chemists at Birpara.	Govt.SC, ASHA Tea Garden Hospital
Where people living in the community go for ANC/PNC services	1.Govt.SC / PHC 2.Private doctor at Birpara	BPHC Madarihath, Govt.SC	Govt.SC	Govt.SCs	Govt.SC
Where people living in the community go for delivery services	Home delivery non - trained TBAs and Trained TBAs Govt.PHC at Totopara	1.Madarihath BPHC, 2. Nursing home located at Birpara, Jalpaiguri Touch Nursing Home 3.Alipurduar SD Hospital. 4.Tea Garden Hospital 5. Home conducted by DAI MA.	1. Garden Hospital. 2.Home by DAI MAs	1. Garden Hospital. 2. Home by DAI MAs. Birpara State General Hospital.	Tea Garden Hospital DAI MAs State General Hospital- Birpara.

	GP-1	GP-2	GP-3	GP-4	GP-5
Where children in the community are taken for immunization	Govt.PHC and Govt.SC	BPHC Madarihath Govt.SC	Govt.SC	Govt.SCs	Govt.SCs
The geographical area where these groups live.	Totopara	NA	Tea Garden habitants are fully Treated as migrants	Tea Garden habitants are fully Treated as migrants	NA

GP-6	GP-7	GP-8	GP-9	GP-10
<p>Birpara State General Hospital Jeeban Suraksha Nursing Home. Dooars Nursing home. Private Doctor. Chemists. RMPs Ayurved. Govt.SCs</p>	<p>1. Tea Garden Hospital located at Bandapani/Dhaklapara and Jay Birpara. 2. RMPs. 3.Govt.SCs 4. Chemists. 5.Sishujhumra PHC</p>	<p>Tea Garden Hospital located at Dimdima/Nangdala/Birpara/Rahimpur. 2. RMPs. 3.Govt.SCs 4. Chemists. 5.Sishujhumra PHC</p>	<p>1. RMPs. 2.Govt.SCs 3. Chemists. Tea Garden Dispensary Jaysree TG 6. Madarihath BPHC.</p>	<p>1.PHC Rangalibazna. 2.Govt.SCs. 3.RMPs. 4.Chemists. 4.Ayurvedic Doctor</p>
<p>1.Birpara Hospital and Jeeban Suraksha Nursing Home Birpara 2.Dooars Nursing Home. 3.RMPs 4. Chemists.</p>	<p>1. Chemists. 2. RMPs 3. Jeeban Suraksha Nursing Home.</p>	<p>1.RMPs 2.Chemists 3.DAI MAs</p>	<p>1.RMPs 2.Chemist 3.Greenland Nursing Home,Alipurduar. 4.PP Unit Alipurduar PP Unit.</p>	<p>Chemists, RMPs, Birpara Hospital</p>

<p>GP-6 Birpara State General Hospital</p>	<p>GP-7 Birpara State General Hospital.</p>	<p>GP-8 Birpara State General Hospital. Pundibari BPHC, Coochbehar District.</p>	<p>GP-9 Pundibari BPHC. Coochbehar district.</p>	<p>GP-10 Birpara State General Hospital. 2. Alipurduar SD Hospital.</p>
<p>Birpara ICTC located at Birpara State General Hospital for HIV testing. DOTS- Govt.SC. New Birpara Diagnostic Centre.</p>	<p>1. Birpara ICTC located at Birpara State General Hospital for HIV testing. 2. DOTS : Govt.SC [Bandapani/ Kalapani and Jay Birpara] 3. New Birpara Diagnostic Centre.</p>	<p>Birpara ICTC located at Birpara State General Hospital for HIV testing. DOTS- Govt.SC. and Sishujhumra PHC. Tea Garden Hospital at Dimdima/Nangdala/Birpara/ Rahimpur.</p>	<p>Birpara ICTC located at Birpara State General Hospital for HIV testing. DOTS- Govt.SC. and MadarihatBPHC.</p>	<p>1. Birpara ICTC located at Birpara State General Hospital for HIV testing. 2. DOTS- Govt.SC. and RangalibaznaPHC.</p>
<p>Birpara Hospital/Govt.SCs/ASHA and chemists.</p>	<p>Govt.SC TeaGarden Dispensaries.</p>	<p>Govt.SCs, ASHA, Sishujhumra PHC, Chemists, Tea Garden Hospital at Dimdima/ Nangdala/Birpara/ Rahimpur</p>	<p>Govt.SCs Chemists.</p>	<p>Govt.SCs, ASHA Chemists</p>

GP-6	GP-7	GP-8	GP-9	GP-10
Govt.SC and State General Hospital Birpara. 2.Private Doctors	Govt.SCs	Govt.SC Sishujhumra PHC,	Govt.SCs	Govt.SCs, Rangalibazna PHC
1. State General Hospital Birpara. 2. Jeeban Suraksha Nursing Home. 3. Dooars Nursing Home. 4.DAI MAs	Tea Garden Hospital. 2. Home delivery conducted by DAI MAs. 3. PHC Sisughumra.	1. PHC Sisughumra. 2. Tea Garden Hospital Dimdima/Nangdala/Birpara/Rahimpur. 3. Home delivery conducted by DAI MAs.	Madarihat BPHC. DAI MAs.	1. Madarihat BPHC. 2.Rangalibazna PHC and 3.DAI MAs
Govt.SC and State General Hospital, Birpara	Govt.SCs and PHC Sisughumra	Govt.SCs and PHC Sisughumra	Govt.SCs	Govt.SCs
NA	NA	NA	NA	NA

Service delivery at a glance

		Total at Taluka /Block
1	Family Planning	
1.1	Number of NSV/Conventional Vasectomy conducted	
1.1.1	At Public facilities	
1.1.1.a	At PHCs	
1.1.1.b	At CHCs	
1.1.1.c	At Sub-divisional hospitals/ District Hospitals	1192
1.1.1.d	At Other State Owned Public Institutions	
1.1.1.e	Total {(a) to (d)}	1192
1.1.2	At Private facilities	
1.2	Number of Laparoscopic sterilizations conducted/Tubectomy	
1.2.1	At Public facilities	
1.2.1.a	At PHCs	
1.2.1.b	At CHCs	
1.2.1.c	At Sub-divisional hospitals/ District Hospitals/	251
1.2.1.d	At Other State Owned Public Institutions	
1.2.1.e	Total {(a) to (d)}	251
1.2.2	At Private facilities	
1.3	Number of Mini-lap sterilizations conducted	0
1.3.1	At Public facilities	0

		Total at Taluka /Block
1.3.1.a	At PHCs	0
1.3.1.b	At CHCs	0
1.3.1.c	At Sub-divisional hospitals/ District Hospitals	0
1.3.1.d	At Other State Owned Public Institutions	0
1.3.1.e	Total {(a) to (d)}	0
1.3.2	At Private facilities	
1.4	Number of Post-Partum sterilizations conducted	0
1.4.1	Public facilities	0
1.4.1.a	At PHCs	0
1.4.1.b	At CHCs	0
1.4.1.c	At Sub-divisional hospitals/ District Hospitals	0
1.4.1.d	At Other State Owned Public Institutions	0
1.4.1.e	Total {(a) to (d)}	0
1.4.2	Private facilities	
1.5	Number of IUD Insertions	
1.5.1	Public facilities	
1.5.1.a	At Sub-Centers	398
1.5.1.b	At PHCs	0
1.5.1.c	At CHCs	0

		Total at Taluka /Block
1.5.1.d	At Sub-divisional hospitals/ District Hospitals	0
1.5.1.e	At Other State Owned Public Institutions	0
1.5.1.f	Total {(a) to (e)}	398
1.5.2	Private facilities	
1.6	Number of IUD removals	23
1.7	Number of Oral Pills cycles distributed	12848
1.8	Number of Condom pieces distributed	51026
1.9	Number of Centchroman (weekly) pills given	0
1.1	Number of Emergency Contraceptive Pills distributed	0
1.11	Number of Injectable contraceptives administered	0
1.12	Number of Institutions having NSV trained doctors	1
2	Medical Termination of Pregnancy (MTP)	172
2.1	Number of MTPs conducted at Public Institutions	
2.1.1	Up to 12 weeks of pregnancy	172

		Total at Taluka /Block
2.1.2	More than 12 weeks of pregnancy	
2.1.3	Total {(2.1.1) to (2.1.2)}	172
2.2	Number of MTPs conducted at Private Facilities	
3	RTI/STI Cases	1720
3.1	Number of new RTI/STI for which treatment initiated	
3.1.a	Male	147
3.1.b	Female	1573
3.1.c	Total {(a) to (b)}	1720
4	CHILD IMMUNIZATION	
4.1	Number of Infants 0 to 11 months old who received the following:	
4.1.01	BCG	3158
4.1.02	DPT1	3590
4.1.03	DPT2	3271
4.1.04	DPT3	3641
4.1.05	OPV 0 (Birth Dose)	2124
4.1.06	OPV1	3532
4.1.07	OPV2	3198
4.1.08	OPV3	3518
4.1.09	Hepatitis-B1	2110
4.1.10	Hepatitis-B2	1851
4.1.11	Hepatitis-B3	1817
4.1.12	Measles	3379

		Total at Taluka /Block
4.1.13	Total number of children aged between 9 and 11 months who have been fully immunized (BCG+DPT123+OPV123+Measles) during the year	
4.1.13.a	Male	1713
4.1.13.b	Female	1495
4.1.13.c	Total {(a) to (b)}	3208
4.2	Number of children more than 16 months who received the following	
4.2.1	DPT Booster	3582
4.2.2	OPV Booster	3539
4.2.3	Measles, Mumps, Rubella (MMR) Vaccine	2793
5	Number of Vitamin A doses during the year	
5.1	Administered between 9 months and 5 years	3822
6	Number of cases of Childhood Diseases reported during the year 0-5 years:	
6.1	Diphtheria	0
6.2	Pertussis	0
6.3	Tetanus Neonatorum	0
6.4	Tetanus others	0
6.5	Polio	0
6.6	Measles	194
6.7	Diarrhea and dehydration	14433
6.8	Malaria	57
6.9	Number admitted with Respiratory	54

		Total at Taluka /Block
7	HIV tests conducted	
7.1.a	Male	1422
7.1.b	Female-Non ANC	478
7.1.c	Female with ANC	205 [only one ICTC at Birpara SG Hospital]
7.1.d	Total {(a) to (c)}	2105
8	VDRL tests conducted	No STI clinic at Birpara State General Hospital
8.1.a	Male	
8.1.b	Female-Non ANC	0
8.1.c	Female with ANC	0
8.1.d	Total {(a) to (c)}	0
9	Ante Natal care Services ANC	
9.1	Total number of pregnant women Registered for ANC	4080
9.2	Number of pregnant women received 3 ANC check ups	3879
10	Deliveries	
10.1	Deliveries conducted at Home:	2205
10.1.1	Number of Home Deliveries attended by:	
10.1.1.a	SBA Trained (Doctor/Nurse/ANM)	1033
10.1.1.b	Non SBA (Trained TBA/Relatives/etc.)	1172

		Total at Taluka /Block
10.1.1.c	Total {(a) to (b)}	2205
10.2	Deliveries conducted at Public Institutions	
10.2.1	Of which Number discharged under 48 hours of delivery	178
11	Post - Natal Care	
11.1	Women receiving post partum check-up within 48 hours after delivery	422
11.2	Women getting a post partum check up between 48 hours and 14 days	844
11.3	No. of post partum women receiving Contraception(other than sterilization)	343
12	No. of married couples eligible for Family planning	16000 approx as govt. reported
13	No. of unmarried persons 15-49 years	
13.1a	Males	Not available from govt. reported.
13.1b	Females	Not available from govt. reported.

Findings and Discussion

Problems in Health Service Delivery from Public Sector

Staff Shortage

The distribution of these sub-centres are not equi-proportional and grossly inadequate to serve the overall health need of the population. As per the Govt. rule, there should be one health sub-centre per 5000 population. There would be two staffs in each of these centres. Both these conditions are affecting delivery of service. There are some Sub-centres in villages which cover even 10000 populations with only one staff. Thus, according to the ANMs, they are generally overloaded. It is difficult for them to provide services individually through house to house survey. Moreover they have to take part in several other programmes like Pulse polio, Netrojoti, Leprosy campaign etc in addition to their regular duties. So it becomes difficult for them to provide RCH services from the health centre on regular basis.

Unavailability of Medical Officer

Though in papers Medical officers are available in mobile duties to sub-centres, but in reality they are rarely visible. This is also one of the important barriers to proper functioning of the health programmes.

Poor treatment seeking behaviour of Villagers

Regarding the services of Govt., it is the perception of the villagers that it is their right to get in-house treatment and therefore are unwilling to come to the sub-centres. Since one

health worker has to cover 5000 population per month hence it is quite difficult to provide services one to one basis.

Poor condition of Sub-centres

According to most of the Govt. health workers, the conditions of the buildings of sub-centres are disastrous. In some of the places the sub-centre even do not have any physical infrastructure. Thus it becomes very difficult for the health workers to go there, sit and work properly.

Problem of Communication

According to the PHC In-Charge and the Health workers, communication problem is one of the biggest problems in Intervention areas. It has been seen that very few public transport is available and thus in remote areas one public transport is available in entire day. The villages are cut off in the rainy season and so are deprived from the health services.

Improper time management by the Health Authority

Due to the staff shortage, one staff of the sub-centre is being put to multidisciplinary activities. In the absence of proper time management between various works, and it affects the services.

FINDINGS OF THE QUALITATIVE SECTION

General health

People suffer from common ailments like Respiratory Tract Infection, Malaria, Tuberculosis, Typhoid, Diarrhoea, STD etc. Other health problems as reported are fever for any reason, cough & cold with/without breathlessness, bleeding per rectum, earache, problems with eye, and also skin diseases.

Maternal and Child Health

Care during pregnancy is inadequate and inappropriate. Rest, ANC service utilization, tetanus immunization and IFA

consumption are not adequate. Dietary habits during pregnancy are not healthy necessary for birth of a healthy child. Services availed by the people during delivery is not safe. Care during puerperal state is not at all taken care of. Immunization coverage is poor. In spite of government's effort for eradicating Polio through Pulse Polio Programme, the coverage is not adequate. Social taboo against polio vaccine about its adverse effects needs to be removed . Colostrums feeding, exclusive breast-feeding is very poor. Infant care, early neonatal cares are not safe. Nutritional habits for children are not good enough to promote. growth and development of children. Diseases like ARI, diarrhoea, and malnutrition are challenges. Due to poor dietary habits, and much worm infestation malnutrition remains a big problem. In a single year 14433 cases of Diarrhoea and dehydration was reported.

Adolescent Health

Adolescents are learn about their health issues but it is not adequately reach to them. Social stigma and taboo is a barrier towards accessing lessons to them. Reproductive issues, hygiene, sanitation, nutrition are important for them.

STD/STD/HIV/AIDS

There is very poor awareness about STD/HIV/AIDS in the community. Issue of migration is not very negligible. Certain percentages of males stay outstation for job. So this migrant group can bring infection to the general community. Thus women become vulnerable. Trafficking remains another concern for the girl children.

Hygiene and sanitation facilities available in the community

Hygiene and sanitation facilities are not up to the mark. Hardly any house can be found where separate bathroom or toilet facilities are there. Bathing and toilet facilities are all shared up to 80-95%. Community gets drinking water from the

roadside taps available for drinking water supply from the authority.

Healthcare services and its utilization pattern

Health institution attendance: Out of all health service providing agency, utilization of services from government institutions to be major and it is around 80-90%. Rest 10-20% utilization is contributed from private facilities consisting of registered or traditional practitioners.

Family Planning method

The usage of family planning method is also very poor and needs immediate improvement as the under mentioned table supports this statement:

- Number of NSV/Conventional Vasectomy conducted: 1192 (out of 4080)
- Number of Laparoscopic sterilizations conducted/ Tubectomy: 251 (out of 4080)
- Number of Mini-lap sterilizations conducted: 0
- Number of IUD Insertions: 398
- Number of Oral Pills cycles distributed: 12848
- Number of Condom pieces distributed : 51026

Key findings and their implications

Area	Key findings (Qualitative)	Key findings (Quantitative)	Implications and remarks
RCH and Family Planning	<p>ANC coverage needs improvement as a large number requires total ANC coverage which was not reflected from the collected data.</p> <p>Eligible couple information reveals that OCP and condom usage are most frequent compared to vasectomy or IUD insertion methods.</p> <p>Immunization scenario is also not satisfactory as a large number of new born were not provided with Polio 0 dose.</p>	<ul style="list-style-type: none"> • Total number of pregnant women Registered for ANC: 4080. • Number of pregnant women received 3 ANC check ups: 3879. • Number of Condom pieces distributed: 51026. • Number of Oral Pills cycles distributed: 12848. • OPV 0 (BIRTH DOSE) 2124 	<p>Access to the FP methods and RCH services at the remote places needs to be improvised and awareness generation regarding the same also required. Immunization coverage also needs to be improved.</p>
HIV/AIDS	<p>Awareness related to HIV/AIDS is very poor in the community.</p> <p>Poor knowledge contributes towards unsafe sexual behaviours. We know HIV prevalence with in the general community in WB is gradually increasing.</p>		<p>No CBO or NGO is working on this issue and has given stress on awareness generation. The access to HIV AIDS testing service is very poor. Only 1 ICTC at Birpara hospital and no VDRL testing facility is available.</p>

Area	Key findings (Qualitative)	Key findings (Quantitative)	Implications and remarks
Access to Institutional Service Delivery.	Access to Institutional Service is also very poor as the data collected shows that majority of the delivery performed at home.	<ul style="list-style-type: none"> • Out of 2205 deliveries 178 cases were reported to be institutional delivery. 	<p>Awareness generation and setting up advocacy with the local health administration is needed to improve the system delivery. Implication is that quality of care should be ensured to minimize many health hazards out of inappropriate therapy from inefficient providers. So orientation and training of these providers and involving them within the programme remains a challenge.</p> <p>underutilization is there for health institutions or other local government facilities. Reason behind it should be explored and collaborative actions should be taken in participation with Councilor, MO or other health functionaries. Inability to afford, malpractices by physicians, information asymmetry are important issues of concern to be Managed.</p>

Recommendations

The overall baseline activity had been broadly divided into two parts-Research and Intervention. As a first step to initiate Intervention, and provide a benchmark for future program evaluation depending on basic indicators.

Other than reproductive health, the general health status of the population, affecting the reproductive health was also studied during the survey. Information were collected through one-to one survey, focus group discussion and informal interviews. The survey was conducted on of the population of 10 Panchayets. Sample size for each sub-group was selected through population proportion method. Primary groups e.g. Mother, Eligible couple, adolescents and children, few secondary groups like Teacher, Political leaders, Doctors etc were also interviewed during the study.

The overall findings of the study give alarming feature of the area irrespective of age groups. Considering the children it was found that a major portion of children suffered from at least one episode of diarrhoea and 67% from ARI. Only 10% of the children were colostrums fed.

Regarding the adolescent group it was found that around 58% of the adolescents had joined school of whom 32% dropped out The rate of drop-out was high within girls than boys. The major reasons behind drop-out was responsibility of caring siblings when parents at work, social pressure for early marriage, pressure for joining work etc. Regarding maintenance of health and hygiene the picture was also pale. 85% of the female adolescents not maintained proper hygiene during

menstrual period. Most of them was unaware about menstruation till they have experienced it. The awareness level was also equally low for the sexual incidences.

The issue of family planning was the key issue for intervening the eligible couple's group. As the findings suggest that a huge proportion of couple were completely unaware (57%) about the probable methods of family planning. A significant proportion of the aware group also did not use it because they did not felt the need for family planning. The reasons identified in this case were the desire for more children (34%) and 16% of the respondents reported to have suffered from various complications after the operation, 36% of the couple who were not using any family planning method during the study expressed their eagerness to use it in future.

Another concerned area in this study was mother's health. As it came out that a significant proportion (62%) of the mother experienced their first child birth below the age of 20. 7% respondents experienced at least one episode of abortion of which 71% were spontaneous. Around 50% of the respondents didn't receive any one of the service components during ante-natal period mostly because of their lack of awareness regarding the issue. 84% of the deliveries were performed at home and 60% were by untrained birth attendants. 74% of respondents didn't receive any post-natal check up. Around 50% of the respondents suffered from different complications during pregnancy period.

Conclusion

The study gave us some highlights of the existing health service situation. One observation is that services are difficult to access due to geographical barriers. The discussion gave an impression that planning and implementation of the programme needs to be based on the reality of local conditions and understanding of the geographical layout of the area. The

various areas of intervention came out in this study and more research work to be undertaken to understand the issues associated with the health quality of common people.