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ABSTRACT

ESTIMATED IMPACTS OF ARMED CONFLICT ON LOCAL LIVELIHOODS OF FOREST-BASED COMMUNITIES in the Short Run: A Micro-Level Analysis

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ABSTRACT

One latest challenge emerging in India's strategy of 'development with environment' with community protected natural resources, especially forest resources is that of armed conflict and civil war where people's livelihoods, lives and poverty reduction process have been adversely affected. Mass violent conflict in several districts of India has severely impact upon the local level and the lives of poor women, men and children who are likely to be adversely affected in the process and are likely to become impoverished and vulnerable due to such conflict and are likely to feel traumatized. A mass violent conflict has erupted in the forest areas of West Bengal (India) in the Jhargram sub-division and has rapidly gained pace since June 2009. The present paper attempts to estimate and analyse the impacts of such armed conflicts on the livelihoods pursued by the forest-based communities and draws some quick policy implications in this regard. The study is on-going and some preliminary findings are presented in this paper.

Based on primary data of a typical forest village in the conflict zone of Jhargram Sub-Division (West Bengal), the paper illustrates how local natural resources provide critical support to local groups in both normal times and also difficult times including armed conflict, though such support can be accessed in different proportions by different socio-economic groups, especially in terms of sourcing their livelihoods. Those socio-economic groups at the bottom of the ladder have much higher dependence on their local forest resources, which impacts upon their poverty and nutrition levels. While the socio-economic groups at the higher end of the ladder are generally employed in local service sector with full time salaries, income, pensions etc., and their earnings from NTFPs, supplement household disposable income. The objective of the present paper is to provide some estimates of changes in nominal earnings from local livelihoods' sources of both poor and non-poor groups in rural Bengal during period of armed conflict in comparison to a normal and to analyses the

explanatory factors, the coping mechanisms adopted by local communities and some policy implications in this regard.

The paper concludes that during the conflict period access to NTFPs was better for the destitute groups as compared to the very poor and the poor groups while the non-poor groups saw a sharp fall in their nominal NTFP earnings. The paper also concludes that by and large local forests raised by community-based protection can constitute important providers of livelihoods for the poor groups during critical times. Though forests are important providers there are other crucial factors such as price rise of forest and non-forest products, timely rainfall, produce from one's own land, opportunities for agriculture labour, out-migration and access to funds, which are also important drivers of livelihoods. However, it may be mentioned that in case of armed conflicts over extended period, much uncertainty creeps into the system and it may become difficult to ensure the length of such support from local forest with little or no communication between local communities and forest department. This could lead to major breakdown in rules and procedures, where key arrangements and contracts with forest authority tend to lose their validity and can no longer be respected or automatically enforced.

1. INTRODUCTION

India is witnessing a conflict situation in at least 223 districts, especially in parts of its forest corridors under the Joint Forest Management (JFM), which have active Maoist's presence. In the context of such conflicts the Indian Prime Minister Dr. Manmohan Singh has mentioned that India is 'losing Maoist battle' and it is the gravest internal security threat to the country¹. Of late, the Government of India intensified its offensive and purported a larger attack against the Maoists forces which is on-going². It must be mentioned that such conflict which started in Lalgarh (West Bengal) since June 2009 is a part of the larger conflict.

¹ More than 6,000 people have been killed during their 20-year fight of Maoists for a communist state. The rebels operate in 182 districts in India, mainly in the states of Jharkhand, Bihar, Andhra Pradesh, Chhattisgarh, Madhya Pradesh, Maharashtra and West Bengal with large tribal concentration. The states though rich in natural resources are very poor in terms of human development indicators (Source: India plans all-out attack on Maoists, by Siddharth Srivastava, Asia Times, September 29, 2009 (http://www.atimes.com/atimes/South_Asia/KI29Df01.html)).

² This is against the four-decades-old Naxalite (communist rebel) insurgency that affects hundreds of millions of people across the country. There are records of more than 1,405 Naxal-related violent incidents reported across India in which 580 persons were killed. In 2008, there were 1,591 incidents and 721 killings. (Source: India plans all-out attack on Maoists, by Siddharth Srivastava, Asia Times, September 29, 2009 (http://www.atimes.com/atimes/South_Asia/KI29Df01.html)).

There is lack of framework³ and also little or no estimates of such cost of conflicts and civil war on local livelihoods and also on those forest-based communities residing in the forest areas. It is in this context, that the paper attempts to provide some estimates of the present conflict situation on the lives and livelihoods of forest-based communities and their local coping strategies. Such estimates are important since they provide an idea of the size of impact on local livelihoods and poverty dimensions, whether big or small and can also be used as indicators for social security measures and transfer payments to those affected and thereby reduce hardship during such conflict period/situation. The study is based on field research, which is on-going and some preliminary findings are presented in this paper.

The present conflict situation is expected to continue since official attempts to resolve the conflict situation have remained futile with little or no opportunities for peace and normalcy in sight. The paper does not delve into the proximate causes of such mass conflict. Rather its focus is to evolve a tool to estimate the effects of such conflict-situation on the livelihoods' of forest-based groups/communities.

2. METHODOLOGY

For purposes of estimating such changes in local livelihoods from the on-going conflict situation, a base line data on estimates from livelihoods' sources covering all households in one typical forest village has been compared to similar data during the conflict situation. Data from Khayerboni village in the Jhargram Sub-division of Paschim Medinipur district of West Bengal (which is affected by the conflict) has been utilized to construct a picture of local livelihoods 'before' the conflict situation and then to compare it with the 'on-going' situation so as to assess the changes in terms of livelihoods, if any. Such livelihoods'-related data for different social groups in the base period 2008 has been compared to that of the conflict period in the year 2009 for estimating the short run effects on local livelihoods and also attributing them to their proximate causes. The exact periods compared are June to November 2008 (base period) and June to November 2009 (conflict period).

Based on primary household data from Khayerboni village in the conflict area the paper has arrived at estimate/s of livelihoods' impacts as incurred by different socio-economic groups residing locally and on that basis has drawn some suggestions and recommendations. It is important to mention that the agriculture year in 2009 has been a bad year due to erratic rainfall and drought conditions and the crop production has suffered as a result with sharp increase in food prices. Impacts of both local conflict

³ A review of research literature on the topic shows that some scholars have analysed the causes of civil war and armed conflict situation how to resolve them at a national and international level (Ballentine and Sherman: 2003; Collier: 2007; Evans: 2009; Stathis: 2003; and The World Bank: 2007); and also about impacts on development and household welfare (Justino: 2009). However, there exists major research gaps in terms of impact analysis on local community decision-making on composition of local livelihoods and household behaviour and welfare, risks and insecurity and impacts on community-based political and social capital.

situation and the failure of agriculture production were transmitted to local livelihoods in Khayerboni village apart from the effects of the price rise.

For generating the base line data and current data, a participatory inquiry was followed along with a check list of issues for which the Participatory Rural Appraisal (PRA) tools were applied for interacting with local women and men and also for generating data, both qualitative and quantitative. In the first round, households from different socio-economic strata in the village were interviewed with regard to their sources of livelihoods; type and extent of earnings; savings, if any; borrowings made and food consumption patterns. Savings included those made in both money terms and also in terms of commodities while expenses were divided into several categories.

The data generated was based on household and group interviews undertaken by a group of volunteers from a local community-based organization where many issues were raised and doubts were clarified by means of group discussions. For cross-checking of data, key informants were consulted apart from conducting additional interviews for filling gaps and for checking errors and omissions. Participatory tools such as semi-structured interviews, focus group discussions, social grouping, livelihoods analysis, time line, food calendar and others were applied by the local volunteers for the purpose of interacting with the villagers and for data generation. The proportion of households covered is 70 per cent or about 105 households, where coverage of households from the bottom layers of poor group have been almost exhaustive while few households from the top-most layer have been also covered. The participatory tool of social grouping helped to arrive at criteria for grouping/clustering of households as illustrated in Table 1, column 1. Village participants in the study villages in discussion with the field facilitators discussed and identified social groups of households based on local criteria.

In the second round, during the conflict period, the local volunteers interacted with households and key informants though no group discussions could be held. The local block office and gram panchayat office were also contacted to cross-check data and fill gaps. Some telephonic interviews of development workers, banks and local panchayat office-bearers were also made to verify data, gather their views and to bridge gaps. In addition, pass books of NREGS beneficiaries and others were referred to obtain data on the payments made and other benefits incurred under such official programmes.

3. BACKGROUND OF THE STUDY

Khayerboni village is the sample village in this study which is located in Patashimul Panchayat Samity of Jhargram, which is a much deprived block in Paschim Midnapore district⁴ of West Bengal. The Jhargram sub-division is mostly a dry area with rain-fed

⁴ Paschim Medinipur, a dry area with some parts forested is one of the most deprived districts of West Bengal ranks 18th amongst the 18th districts of West Bengal (India) in terms of percentage of villages covered with *pucca* (concrete) roads and social and physical infrastructure. With 90 % rural population dependent on rain-fed farming, the district has one of the lowest average wage rate of Rs.38/- per day. With one of the highest numbers of Schedules Caste and Scheduled Tribe families below-the-poverty line, Paschim Midnapur has a considerable proportion of a primitive tribe – the *sabar/lodha* and the year 2004 saw 5 hunger deaths in the remote village of Amlashol in Binpur of the same district and another starvation death of 30 year old Parbati Shabar in the same village in February 2005 (The Telegraph: 2005).

farming – and now facing climate change problems⁵. Jhargram has a much higher proportion of tribal population and chronic poverty conditions despite a multitude of on-going poverty reduction measures⁶.

Chronic Poverty in Jhargram

Panel data from earlier field study showed that in Jhargram there are generally 2 difficult seasons - one is April–May–June and the other is that of August–September–October–November, when there is scarcity of work opportunities coupled with health problems and high expenses and rice also becomes expensive. There are generally three categories of poor – the destitute⁷, the very poor⁸ and the poor⁹ in such areas. For destitute households, the difficult months are coped with 1 or 2 meals a day with high dependence on minor forests produce and food items from other common property resources and homestead. Many households are engaged in selling/exchanging forest products such as *sal* leaves, wild fruits, fuel wood, mushrooms, wild potato and other items as locally available. Their local forests are mostly under the Joint Forest Management programme overseen by their local Forest Protection Committees. Forest-related livelihoods are especially crucial for the women-headed households and elderly women as compared to other groups - one primary reason being that seasonal migration is difficult for them. For the very poor households seasonal migration or *nabal* is generally undertaken in selected seasons for a few days. In April-May-June, after migration, some families use their earnings to repair huts and re-thatching, pay off their old debts and few are able to get their daughters married with the cash earned.

Khayerboni Village – Criteria for selection - Khayerboni village has been selected as the study village because of its strategic location in the conflict area, at the intersection of the forest areas of two other states – Jharkhand and Orissa, which have strong Maoist presence and the study village provides a convenient passage for the Maoists to operate in the Jhargram and other forest areas of West Bengal and also move around in the other

⁵ Volatility of climate change are being felt through high winds, storms, rainfall and flood since 2005

⁶ The rural development schemes/programmes in Paschim Midnapore district include Indira Awas Yojana (IAY), Sampoorna Gramin Rojgar Yojana (SGRY), Integrated Tribal Development Programme (ITDP), Annapurna Yojana (AY) etc. In addition, there are Antyodaya Anna Yojana (AAY) implemented since 2005 Was introduced around 2003-04 to buy wheat INR 2/kg and rice at INR 3/kg, self-help group scheme of Swarnajayanti Swarajgar Yojana since 2005 and National Food for Work Programme (NFFWP) introduced effectively from November 2004 and Rashtriya Swyam Vikas Programme (RSVP). The National Employment Guarantee Scheme (NREGS) is the latest programme for which job cards are issued and bank accounts have been opened in the names of the beneficiaries for accessing wage payment and for financial inclusion. NREGS based on NREGA is India's flagship initiative undertaken by the Government of India in 2005 to guarantee the right to employment. The NREGA "guarantees 100 days of employment in a financial year to any rural household whose adult members are willing to do unskilled work". NREGS covers 27 India States.

⁷ live in mud house, no assets, sell forest produce, beg and borrow; some are also beneficiaries of huts under the Indira Awaas Yojna

⁸ live in mud house, engaged as wage labour and have some land to grow little food. some are also beneficiaries of huts constructed under the Indira Awaas Yojna

⁹ live in mud house, engaged in wage labour and have some land to grow food for 6-9 months. some are also beneficiaries of huts constructed under the Indira Awaas Yojna

two neighbouring States. Located near the borders of two such states with similar problem of violent conflict, Khayerbani village is 17 kms away from Dharsa, Jharkhand and 35 kms from Baripada, Orissa. The study village was affected by the conflict due to the local forest being used as a hideout for those being pursued by the protection forces and for its usage as inter-state passage, presence of police personnel and encounters, killing of local political leaders, arrests of suspects and high level of tension and anxiety prevailing in the village and its surrounding areas.

The study village has a high proportion of poor households (68 % of households), which are dependent on local forest resources and rain-fed agriculture. Khayerboni village covers an area of 250 ha and is located near the Lodhashuli forest. It has a *sal* forest of 70 ha, wasteland of 50 ha, residential area of 15 ha, cultivable land of 80 ha, *khal* (ditch) of 10 ha and ponds covering 10 ha. In 2008, there were 150 households in Khayerboni village which increased to 155 households in 2009 with 39 Scheduled Tribe (ST) households, 7 Scheduled Caste (SC) households and 119 general households. This also includes 24 households (with 3 female-headed households) of a primitive tribe (*sabar-lodha*), whose livelihoods are traditionally forest-dependent.

The 155 households in Khayerboni village can be categorized into four socio-economic groups as per locally decided criteria related to type of dwelling, land holding, trees owned, sources of livelihoods, possession of livestock and other assets. The four socio-economic groups include (i) the 10 destitute households; (ii) the 25 very poor households; (iii) the 70 poor households; and (iv) the 50 non-poor households.

Poverty Reduction Measures in Khayerbani

The ST households including the *sabar/lodha* households in village Khayerboni received subsidized component of MTP tribal loan of Rs. 8000/- per household during 2000-2001, which was utilized by some households to buy livestock by combining their own cash earned from migration. Some households reared livestock and leased them to plough other's lands through which they could get Rs. 80/- per day. Some reared goats and sold them in the local market. Attacks by wild elephants damaged many of their huts and they benefited under the subsidized housing scheme of the government – the Indira Awaas Yojana and saved on recurring expense of maintaining their huts. Most tribal households also benefited from small sized wasteland allotted to them under the official patta scheme on which they started cultivating, bamboo plants, cashew nuts etc. since paddy cultivation was not possible given its quality. Some households could organize themselves to lease additional land and/or share-cropped.

Under the Antyodaya Anna Yojana (AAY) scheme since 2003-04, each household got 17 kg of rice and 17 kg of wheat in a month from the public distribution system. During difficult seasons some households took loan to procure such food while some others sold bamboo trees to do the same. They also purchased items such as cooking oil, chilies, vegetables etc. So according to local estimates, AAY helped to cut household expenses on food by 18 % or so. The Sabar-lodha and other poor tribal households held two cards – AAY card since 2006 and below-poverty line ration card for sugar and kerosene. Since beginning of 2009 they could procure rice at Rs. 2/kg and wheat at Rs. 2/ kg under the AAY card, though earlier rice was being procured at Rs. 3/kg/- and wheat at Rs. 2/per kg.

Many households in the study village of Khayerboni were able to have productive assets (such as livestock, leased land, trees etc.) at the household level, which produced some economic return. Some households could tap seasonal job opportunities in the forest and elsewhere and hence, the need for seasonal migration became less compelling. They also spent less on liquor consumption (daily average of Rs. 30/- per household) as compared to other nearby villages with daily average expense of Rs. 60/- per household.

4. ARMED CONFLICT

The conflict and violence is mainly affecting the Jhargram subdivision of the Paschim Medinipur district which lies in the left of the district (see Map 1) and consists of Jhargram municipality and eight community development blocks¹⁰: Jhargram, Binpur–I, Binpur–II, Jamboni, Gopiballavpur–I, Gopiballavpur–II, Nayagram and Sankrail. The eight blocks contain 79 gram panchayats and the subdivision has its headquarters at Jhargram. As per 2001 census the Jhargram sub-division has a total population of 8930295 with 51.9 % male and 48.1 % female.

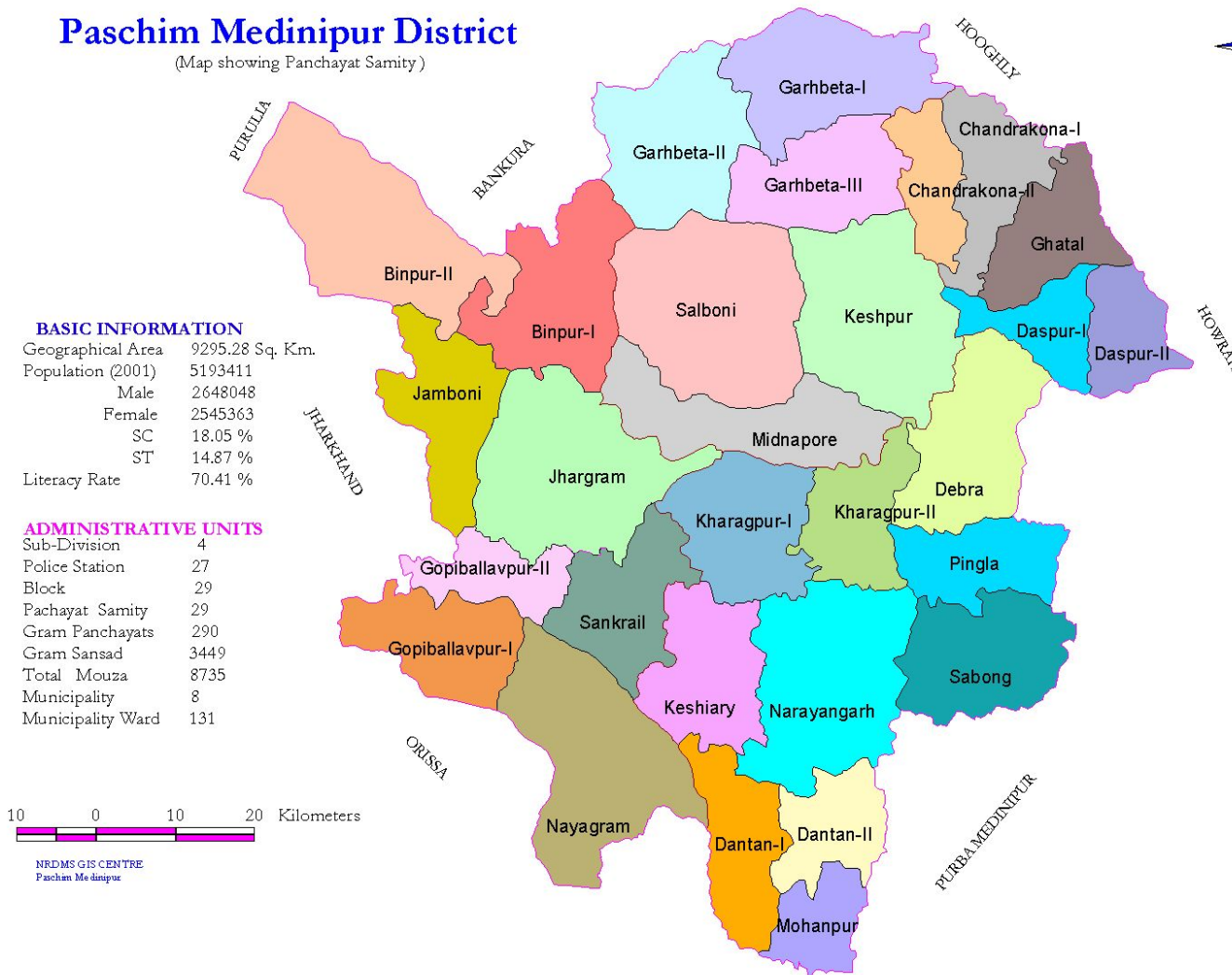
In November 2008, following reports of alleged police brutality, enraged tribal villagers apparently blockaded roads and protested against the police and paramilitary forces in the area of Lalgarh, which is the headquarter of Binpur 1 block of Jhargram subdivision. Reportedly the Maoists were able to exercise control over the villages in that area and its surrounding areas for eight months until Operation-Lalgarh was launched on June 18, 2009 by India's para military Exchange of fire and the long gun battles between the security forces and the Maoist continue even today and conflict situation continues nearly unabated.

Map 1 – District of Paschim Medinipur – West Bengal

¹⁰ http://en.wikipedia.org/wiki/Jhargram_subdivision

Paschim Medinipur District

(Map showing Panchayat Samity)



Source: http://paschimmedinipur.gov.in/map/distmap_data.htm

5. FALLOUT OF THE LOCAL DEVELOPMENT PROCESS

The socio-economic development process in the conflict-ridden areas of Paschim Midnapore was badly affected and different development programmes were either stalled or even discontinued. Many social impacts of the mass conflict are not easy to estimate but are problematic enough for the local poor. For instance, in the sector of education the *Sarva Siksha Abhiyan* (Education for All Mission) which started functioning since 2002-03 in an effort to universalize elementary education faced not only a law and order problem in the district due to mass conflict but also a space constraint due to police force and para-military personnel occupying many school buildings as there was lack of space to house them for carrying out their operations in the conflict-ridden areas. Reportedly since police forces occupied 14 school buildings in Lalgahar area, at least 20000 students were faced with the problem of regular education in an area where illiteracy has remained high for long years.

Those Government programmes based on direct people’s participation and delivery of services were adversely affected due to the conflict situation culminating into road blockades, gun battle, closure of transport and establishments on days of *bandh* (closure) and apparent lack of security of government personnel in the affected areas. In a few areas, wages from jobs offered by the forest department dried up when the conflict intensified.

6. DATA ANALYSIS AND TENTATIVE FINDINGS

Some preliminary findings from Khayerboni village over the period June to November 2009 as compared to the same period in 2008 are presented and discussed below. Table 1 presents break-up of estimated nominal earnings from different sources of livelihoods in the two periods under comparison – June to November 2008 and that of 2009 for different socio-economic groups from the Khayerboni village. While, Table 2 shows the average changes in livelihoods’-related nominal earnings of households at an aggregate level for the four socio-economic groups for the periods under comparison. The estimated changes in Table 2 are based on Table 1, which shows the average nominal earnings from different sources of livelihoods for the four socio-economic groups in Khayerboni village.

Such sources of earnings include

- (i) Non-Timber Forest Products (NTFPs);
- (ii) Agriculture and non-agriculture labour;
- (iii) Produce from one’s own land;
- (iv) Fruits and other items from homestead;
- (v) Earnings from migrating outside as labour; and
- (vi) Others such as wages, pension, salary, stipend etc.

TABLE 1 – Estimated Nominal Earnings from NTFPs and Other Sources of Livelihoods, 2008 and 2009, (Period: June to November) – Khayerboni Village

Socio-Economic Groups, Khayerboni Village	Estimated Earnings from Sources of Livelihoods Without Conflict Situation, June – November 2008	Estimated Earnings from Sources of Livelihoods During Conflict Situation, June to November 2009
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<p>Destitute Households (10 HH) (9 aged Female-Headed households (FHH) + 1 household comprising of one aged male only)</p>	<p>Total estimated earnings during June - November 2008 = Rs. 2600/-</p> <p><u>Break-up of main items</u> Harvesting NTFPs and other Activities <i>June-July 2008</i> Dantkathi (teeth cleaning twig) for 20 days = Rs. 200/- Dhuna (Sal resin) = Rs. 200/- Sal (<i>Shorea Robusta</i>) leaves = Rs. 200/ bartered for rice and puffed rice (muri) Sal (<i>Shorea Robusta</i>) seeds = Rs. 100/- (Rs. 2/kg) Mahua (<i>Madhuca Indica</i>) flowers = Rs. 100/- Estimated Earnings during June-July 2008 = Rs. 800/-</p> <p><i>August – September 2008</i> Dantkathi (teeth cleaning twig) = Rs. 200/- Dhuna (Sal resin) = Rs. 200/- Sal (<i>Shorea Robusta</i>) leaves = Rs. 200/ Mushroom = Rs. 200/- (Rs. 25/- kg) Estimated Earnings during August-September = Rs. 800/-</p> <p><i>October – November 2008</i> Dantkathi (mouth twig) = Rs. 200 Dhuno (Sal resin) = Rs. 200 Sal (<i>Shorea Robusta</i>) leaves = Rs. 200/- Bahara (<i>Terminalia balerica</i>), Haritaki (<i>Terminalia chebula</i>) = Rs. 400/- (cash) Estimated Earnings during October- November = Rs. 1000/-</p> <p>Estimated earnings from NTFPs during June to November 2008 = Rs. 2600/-</p>	<p>Total estimated earnings during June - November 2009 = Rs. 6450/-</p> <p><u>Break-up of main items</u> Harvesting NTFPs and other Activities <i>June-July 2009</i> Dantkathi (teeth cleaning twig) for 20 days= Rs. 250/- (bartered for muri, rice) Dhuna (Sal resin) = Rs. 250/- (bartered for rice) Sal (<i>Shorea Robusta</i>) leaves = Rs. 250/ bartered for rice and puffed rice (muri) Sal (<i>Shorea Robusta</i>) seeds = Rs. 600/- (cash) (Rs.4/kg) (larger quantity) Mahua (<i>Madhuca Indica</i>) flowers = Rs. 100/- (cash paid directly by traders) Estimated Earnings From June to July = Rs. 1450/-</p> <p><i>August – September 2009</i> Dantkathi (teeth cleaning twig) = Rs. 250/- Dhuna (Sal resin) = Rs. 500/- Sal (<i>Shorea Robusta</i>) leaves = Rs. 250/ (bartered) Mushroom = Rs. 500/- (Rs. 40/50/kg) Estimated Earnings during August-September = Rs. 1500/-</p> <p><i>October – November 2009</i> Dantkathi (mouth twig) = Rs. 250 Dhuno (Sal resin) = Rs. 500 Sal (<i>Shorea Robusta</i>) leaves = Rs. 250/- Bahara (<i>Terminalia balerica</i>), Haritaki (<i>Terminalia chebula</i>) = (Rs.5/kg) = Rs.500/- Estimated Earnings during October-November = Rs. 1500/-</p> <p>Estimated earnings: (i) NTFPs during June to November 2009 = Rs.4450/- (ii) Old age pension for 4 months at the rate of Rs. 500/- per month received in September 2009 from the local post office = Rs. 2000/-</p>
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<p>Very poor Families (25 Households)</p>	<p>Total estimated earnings during June - November 2008 = Rs. 20025/-</p> <p><i>June –July 2008</i> Firewood = Rs.1000/- Dhuno (Sal resin) (Rs. 60/- per kg) = Rs. 175/- Sal (<i>Shorea Robusta</i>) leaf plate-making (10 days) (Rs. 65/per 1000)= Rs.1000/- *2 months = Rs. 2000/- Sal seeds (Rs.4/5 per kg) = Rs.500/- NREGS Digging work in June for 5 days = (Rs. 75/- *2*5) = Rs. 750/- NREGS Digging work in July for 4 days (Rs. 75/- *2*4) = Rs. 600/- Cashew seeds = Rs. 500/- from forest Mahua (<i>Madhuca Indica</i>) flowers = Rs. 500/- Mango, Jackfruit (own trees) = Rs. 1500/- Estimated Earnings during June-July= Rs.7525/-</p> <p><i>August- September 2008</i> Agricultural labour for 20 days (Rs. 40/- per day)* 2 persons= Rs.1600/- Firewood = 15 days *2 months = Rs.2000/- Mushroom = (Rs. 25/30 per kg) = Rs.500/- Out-Migration = 10-15 days (Rs. 75/- plus rice etc.)= Rs.750/- plus Rs. 750/- = Rs. 1500/- Estimated Earnings during August-September = Rs.5600/-</p> <p><i>October –November 2008</i> Sal (<i>Shorea Robusta</i>) leaf plate-making = 10 days * 2 months = Rs.2000/- Firewood (Rs. 10 per bundle) = 15 days – Rs. 1000/- NREGS - Digging earth for 6 days = (Rs.75/-* 2*6) = Rs.900/- Agricultural labour for 20 days (Rs. 40 per day) * 2 persons = Rs. 1000/- Out- migration 10-15 days (rs. 75/- plus rice etc.)= Rs.750/- plus Rs. 750/- = Rs. 1500/-</p> <p>Estimated Earnings during October-November = Rs.6900/-</p>	<p>Total estimated earnings during June - November 2009 = Rs. 20883/- plus</p> <p><i>June-July 2009</i> Firewood (Rs. 15/per bundle)= 10 days = Rs. 1500/- Dhuno (Sal resin) (Rs. 85/- per kg) = Rs. 250/- Sal (<i>Shorea Robusta</i>) leaf plate-making (Rs. 85/- 1000 plates) = 10 days = Rs.1200/-* 2 months = Rs. 2400/- Sal seeds (Rs. 5 per Kg) = Rs. 600/- Digging work** (NREGS) = days on average 8.5 = average of Rs. 162/- (Rs. 81/- * 2= Rs. 162/-) = Rs. 1377/- Cashew seeds (Rs. 30/- per tin of 15 kg) = Rs. 1000/- for labour Mahua (<i>Madhuca Indica</i>) flowers (Rs. 60/70/- per kg) = Rs. 300/- Estimated Earnings during June-July = Rs.7427/-</p> <p><i>August – Sep 2009</i> Firewood (Rs. 14/15 per bundle) = Rs. 1500/- Mushroom (Rs. 45/50/- per kg) = Rs. 500 (less rain affected production) NREGS - Digging earth = July = 10 days on average = Rs. 1620/- August = No digging work Fish (Rs. 10/- 100 gram) = Rs. 500/- Out-Migration = 10-15 days = Rs. 1500/- + food Sal (<i>Shorea Robusta</i>) leaf plate-making = 15 days = Rs. 1800/- (due to less rains, they could do it) Estimated Earnings during August -Sep = Rs.7420/-</p> <p><i>October -November 2009</i> Sal (<i>Shorea Robusta</i>) leaf plate-making – 20 days = Rs.2400/- Firewood = Rs. 1500/- Bahara (<i>Terminalia balerica</i>) –Haritaki (<i>Terminalia chebula</i>) = (Rs.5/kg) for 2 days = Rs. 700 (25 Kg) Dhuno (Sal resin) = Rs. 250/- Tashar silk cocoon (guti) – Re 1/- per piece = Rs. 700/- Out-Migration last week of November = (to be paid in December) NREGS in November = 3 days = Rs. 486 (at the rate of Rs. 81 * 2 = Rs. 162/- Estimated Earnings during November = Rs.6036/-</p> <p>Total NREGS days worked during June-November = 21.5 days</p>
<p>Poor Families, 70 Households</p>	<p>Total Estimated Earnings = Rs.21600/- during June to November 2008</p>	<p>Total Estimated Earnings = Rs.21896.4/- during June to November 2009</p>

	<p><i>June-July 2008</i> Sal (<i>Shorea Robusta</i>) leaf plate-making – 20 days = Rs. 2000/- Sal seeds = Rs 500/- NREGS = Digging earth = very days = 7 to 8 days = Rs. 1000/- Sell fire wood (Rs. 8-10/- per bundle)= Rs. 2000/- (2 months) Cashew seed harvesting = Rs. 500/- Mahua (<i>Madhuca Indica</i>) flower= Rs. 500/- Mango = Rs. 1000/- Jackfruit = (Rs. 30-50 per piece) = Rs. 500/- Total Estimated Earnings = Rs. 8000/-</p> <p><i>August – September 2008</i> Agriculture labour = 20 days = Rs. 1600/- Firewood = Rs.2000/- Out-Migration = Rs. 1500/- Mushroom = Rs. 500/- Fish (Rs. 10/100 gram)= Rs.700/- Total Estimated Earnings = Rs.6300/-</p> <p><i>October –November 2008</i> Sal (<i>Shorea Robusta</i>) leaf plate-making 20 days = Rs. 2000/- Fire wood = Rs. 1000/- Out -Migration = Rs.1500/- Agriculture labour on other’s land = 1000/- NREGS = Digging earth = Rs. 1000/- Tashar guti = Rs. 500/- Total Estimated Earnings = Rs.7000 /-</p>	<p><i>June-July 2009</i> Sal (<i>Shorea Robusta</i>) leaf plate-making = (Rs. 85/1000 plate) = 20 days = Rs. 2400/- Sal seeds = Rs. 600/- NREGS = Digging earth = 9.2 days on average = average of Rs. 162/- (Rs. 81/- * 2= Rs. 162/-) = Rs.1490.4/- Sell fire wood = (Rs. 15/bundle) = Rs. 1500/- (2 months) Cashew seeds collection labour (Rs.30/tin) = Rs. 1000/- Dried Mahua (<i>Madhuca Indica</i>) flowers (Rs. 50/60 per kg) (dried for one month) = Rs. 300/- Jackfruit (Rs. 50/-/Rs. 60/- per piece)= Rs. 500/- Total Estimated Earnings = Rs.7790.4/-</p> <p><i>August - September2009</i> Agriculture labour (Rs. 60/- per day)- 10 days = Rs. 1600/- Firewood = (they also harvested felled trees destroyed due to violent storm though secretly) = Rs. 2000/- Mushroom = Rs. 500/- Out migration = 10 to 15 days = Rs. 1500/- NREGS - Digging earth = July = 10 days on average = Rs. 1620/- August = No digging work No mango crop Total Estimated Earnings = Rs.7220/-</p> <p><i>October - November 2009</i> Sal (<i>Shorea Robusta</i>) leaf plate-making = 20 days = Rs. 2400/- Firewood = Rs. 1500/- (2 months) Bahara and Haritaki = Rs. 500/- Agr labour = 5 to 7 days (Rs. 70/75) = Rs. 500/- Out migration = 10 to 15 days = Rs. 1500/- (2 persons) in December NREGS 3 days = Rs. 486 (at the rate of Rs. 81 * 2 = Total of Estimated Earnings = Rs.6886/-</p> <p>Total NREGS days worked during June-November = 22.2 days</p>
<p>Non-Poor Families, 50 Households</p>	<p>Total Estimated Average Earnings = Rs.58,600/- during June to November 2008</p> <p><i>June –July</i> Sal (<i>Shorea Robusta</i>) leaf plate-making (Rs. 65/- per 1000)– 20 days –2 months = Rs.,3000/-</p> <p><i>August –September</i> Return from own farm land = 2/3 bigha = Rs.1500/- Salpata leaf plate making = Rs.1000/-</p>	<p>Total Estimated Average Earnings = Rs.52600 /- during June to November 2009</p> <p>Return from own farm land = 2/3 bigha = Rs.4000/-</p> <p>Unable to access NTFPs since July 2009 Salary/wages/pension/business from different sources:</p>

<p><i>October – November</i> Sal (<i>Shorea Robusta</i>) leaf plate-making = 40 days = Rs.3000/- for 2 months Return from own farm land = 2/3 bigha = Rs.1500/-</p> <p>Salary/wages/pension/business from different sources: <i>ICDS workers and teachers in 15-20 HHs – salary of Rs.2500/- per month per employee</i> <i>7 HHs helpers in ICDS – salary of Rs. 1500/- per month per employee</i> <i>5 HHs in shishu sikhsha Kendra - 1-4 class – Rs. 4000/- each per month per employee</i> <i>Nurse in 1 HH – Rs. 7000/- each per month per employee</i> <i>Asha helper -1 HH – Rs. 1200/- per month per employee</i> <i>Factory workers – 20 HHs - Rs. 3000/- to 4000/- per month per employee</i> <i>Also there are workers in railways, forests, high schools and those getting pensions</i></p> <p>Estimated earnings = Rs.10000/- from sal leaf plate making and other activities for June– November 2008 plus</p> <p>Salary/honorarium ranging from Rs. 1200/- (per month) to Rs. 15000/- (per month) Salary estimates (June to November) - Between Rs. 7200/- to Rs. 90,000/-</p> <p>Range of total estimated earnings (from all sources) for 6 months = Rs.17200/- to Rs.100000/- Average earnings = Rs. 58600/-</p>	<p><i>ICDS workers and teachers in 15-20 HHs – salary of Rs.2500/- per month per employee</i> <i>7 HHs helpers in ICDS – salary of Rs. 1500/- per month per employee</i> <i>5 HHs in shishu sikhsha Kendra - 1-4 class – Rs. 4000/- each per month per employee</i> <i>Nurse in 1 HH – Rs. 7000/- each per month per employee</i> <i>Asha helper -8 HH – Rs. 1200/- per month per employee</i> <i>Factory workers – 20 HHs to 25 HHs - Rs. 3000/- to 4000/- per month per employee</i> <i>School master – 10 HHs –Rs.15000/- to Rs.20000/-</i> <i>Also there are workers in railways, forests, high schools and those getting pensions</i></p> <p>Items for Estimated earnings Negligible earnings from forest NTFPs Salary/honorarium ranging from Rs. 1200/- (per month) to Rs. 15,000 (per month)</p> <p>Salary estimates (June to November) – Ranging between Rs.7200/ - to Rs.90000/-</p> <p>Range of total estimated earnings (from all sources) for 6 months = Rs.11200 /- to Rs.94000/- Average earnings = Rs. 52600/-</p>
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Note 1: HHs = Households; NTFPs = Non-Timber Forest Products

Note 2: NREGS = National Rural Employment Guarantee Scheme

Note 3: Khayerboni Village = For NREGS activities, five households and 2 households were taken from the poor group and the very poor groups, respectively, at random and interviewed; also, their pass books for NREGS job cards were studied to collect primary data. It was gathered that two persons from each households were engaged in local NREGS work at a wage rate of Rs. 81/- per unit of work in 2009 in selected months, for a few days. For 2008, the same sampled households were studied for NREGS work when payment of wages was at a rate of Rs. 75/- per unit of work. Funds for NREGS were invested by panchayat samiti and gram panchayats of Jhargram blocks into (i) water conservation and water harvesting (ii) drought proofing, micro irrigation works, irrigation facility in land owned by SC/ST, renovation of traditional water bodies, land development, flood control and rural connectivity

As shown in Table 2, there were significant changes in the livelihoods of the local groups in the short run in the study village based on a comparison of average earnings at the household level ‘before’ the conflict and ‘during the on-going conflict’ These can be traced to a mix of factors, where some changes can be directly attributed to the conflict situation (especially differential access to NTFPs), sharp rise in prices of many NTFP items (see Table 3), failure of monsoon (lack of agriculture work), government transfers to destitute households (old age pensions) and others.

Some interim findings which follow from Table 1 and 2 are as follows.

- (i) While destitute households saw an average increase in nominal earnings by 148.1 % (with old-age pension) and 71.1 % (in case of a scenario of not getting old age pension) for the periods under comparison, the average nominal earnings of other groups were apparently worsened by a mix of factors, though the major factors being both the conflict situation and the lack of rain.

TABLE 2 – Average Changes in Livelihoods’-Related Earnings in Nominal Terms at a Household/Group Level: Estimates from Khayerboni Village

Socio-Economic Groups	June to November 2008	June to November 2009	Percentage change in 2009 over 2008 (June to November)	Notes on Proximate causes
(i) Destitute Households 10 HHs	Rs. 2600/-	Rs. 6450/-	+148.1 % (with pension) + 71.1 % (without pension)	In 2009 old age pensions helped the destitute households to supplement their earnings and also they could harvest somewhat more from the local forest along with price increase of NTFPs.
(ii) Very Poor Households 25 HHs	Rs.20025/-	Rs.20883/-	+ 4.28 %	In 2009, July-November, though the prices of NTFPs increased there was avoidance of the dense part of the forest area due to the conflict situation; In 2009 there was some work available for road repair, digging a canal etc. Many borrowed food from shops and other sources and also sold livestock and bamboo
(iii) Poor Households 70 HHS	Rs.21600/-	Rs.21896.4/-	+1.37 %	In 2009, July – November, though the prices of NTFPs increased there was avoidance of the dense part of the forest area due to the conflict situation; In 2009, there was some work available for road repair, digging a canal Many in this group borrowed food from shops they also borrowed from banks (Rs. 800/- per households and faced difficulties in monthly savings of Rs. 80/- per month from June –Nov in 2009 for their SHG group, also sold livestock and bamboo out migration also increased towards the end of the year.
(iv) Non-Poor	Range of total estimated earnings for 6	Range of total estimated	- 10.24 % Change in earnings of	IN 2009, the women in the households could not access forests for NTFP’s , there was little or no farming due to lack of rain,

Households 50 HHs	months = Rs. 17200/- to Rs.100000/- Average earnings = Rs.58600/-	earnings for 6 months = Rs.11200/- to Rs.94000/- Average earnings = Rs.52600/-	the lowest strata of non-poor households = - 34.88 % Change in earnings of the higher strata of non-poor households - 10.23 %	no sale of oxen power, no labour services to provide
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Source: Estimated from Table 1 as above.

- (ii) Though prices of most NTFP items increased by an average of 44 % over the period under reference (see Table 2) the apparent security concerns and restrictions in accessing dense forest for higher quantities of NTFPs for both the very poor and the poor groups led to non-reaping/negation of benefits from such price rise of NTFPs.

TABLE 3 - Village Khayerboni – Prices of NTFPs

	2008	2009	Change in prices in 2009 over 2008 (%)
Firewood	Rs.10/bundle	Rs. 15/- bundle	50.00
Sal (Shorea Robusta) leaf plate	Rs. 65/- 1000	Rs. 85/- per 1000	30.77
2 sal (Shorea Robusta) leaves joined	Rs. 12/- 1000	Rs. 20/- per 1000	66.67
Tashar silk cocoon	Re 1/- piece	Re 1/- piece	0.00
Mushroom	Rs. 25/30 /kg	Rs. 45/50/ kg	80.00
Jackfruit	Rs. 40/50/ piece	Rs. 60/80/piece	50.00
Agriculture labour	Rs. 40/50 per day	Rs. 70/80/ per day	75.00
NREGS	Rs. 75/ per unit	Rs. 85/- unit	13.33
Bahara (<i>Terminalia balerica</i>), Haritaki (<i>Terminalia chebula</i>)	Rs. 4/kg	Rs. 5/kg	25.00
Dhuno (Sal resin)	Rs. 65/kg	Rs.85/- kg	30.8
Mango	Rs. 30/-kg	Rs. 60/- kg	100.00
Fish	Rs.80/kg	Rs. 100/kg	25.00
Kurkut (insect) egg – November to January	Rs. 12/13/1gram = total 50 grams	Rs. 15/20/1 gram = total 50 grams	25.00
Average change in prices (unweighted)			Total of proce change = 571.57/13 = 43.97 = 44 % = average change in prices

Source: Based on primary data form Khayerboni village, Jhargram

- (i) Only the destitute households fared better in nominal terms under the prevailing circumstances not only due to rise in prices of NTFP items but also due to higher quantities harvested (for e.g. of *sal* (*Shorea Robusta*) seeds, *dhuna* (Sal resin) and mushroom, especially harvested by them and also receipt of old age pensions from government. See Table 1. It may be pointed out that some of NTFP items harvested by the destitute group such as mouth twigs and others are not harvested by other groups. Moreover the destitute group also sell unprocessed stuff such as twin *sal* (*Shorea Robusta*) leaves while other groups make *sal* (*Shorea Robusta*) plates which have higher value addition.
- (ii) Livelihoods'-related earnings of the very poor group and the poor group suffered doubly due to inability to harvest higher quantities of NTFPs despite rise in their prices and lack of agriculture work with little or no fruit production from homestead. Though some loss was made up by provision of NREGS work, such work opportunities were by and large limited to an average of 21.5 days and 22.2 days for the very poor group and the poor group respectively, especially when it was most needed during those 6 months under reference.
- (iii) One of the worst victims was the non-poor group, which experienced a sharp decline in its NTFP earnings (due to security concerns and problem in accessing NTFPs) and poor production from their own farm land (due to failure of monsoon) and fruit trees though their normal income stream – salary, pension etc. remained as usual.
- (iv) It is the non-poor group which played a key role in Panchayat (local level elected bodies) and it is they who were the direct victims of Maoist conflict. Incidents of murders of local leaders apparently by the Maoist group led to a lot of tension and chaos and many male members, from this group also fled the village.
- (v) Out migration, especially of males increased from the village due to lack of local work opportunities and failure of monsoon and also due to increased tension, killings and action by the protection forces. It is not unreasonable to assume that as a consequence, the work load on women in the household and outside went up due to lack of availability of men. This was also mentioned by a few local women.
- (vi) The livelihoods'-related nominal earnings of the very poor and the poor households were affected in addition to those of non-poor households. One coping strategy of the very poor and the poor households was that of increased borrowings to compensate fall in real income. They suffered the conflict with fall in real earnings in the face of high prices of food items. Many of them

coped by borrowing cash to an average extent of INR 2500/- per month, per household, during the conflict period under reference.

- (vii) One may reasonably conclude that the distributional impact of such changes on livelihoods composition in Khayerboni village was shift in favour of much higher nominal earnings of the destitute households while those of others groups suffered to the extent.

7. SOME SUGGESTIONS

Compensatory packages can be designed based on different socio-economic groups which are conflict-affected declaring them as internally displaced persons. There are examples of such packages in other parts of the world like in Timor Leste.

Concept of hardship and insecure living can be introduced and hardship allowance can be paid to those adversely affected. This was introduced in certain public sector undertakings in North eastern states which experienced disturbances in the 1980s.

More NREGS work can be arranged in other suitable locations for those whose livelihoods are adversely affected. Other measures should be introduced to manage out migration including cash transfers include micro-credit.

Index-based Micro-Insurance to protect farmers from vagaries of rainfall commend itself very seriously.

It may be broadly concluded that during the conflict period access to NTFPs was better for the destitute groups (because they could harvest their usual NTFPs from the forest periphery) as compared to the very poor and the poor groups (which had inhibitions in accessing dense forest areas) while the non-poor groups (who did not venture out to the forest being primary targets of violence) saw a sharp fall in their NTFP earnings. Based on the above analysis it may be concluded that by and large local forests raised by community-based protection constitute important providers of livelihoods for the poor groups during critical times. Though forests are important providers there are other crucial factors such as price rise of forest and non-forest products, timely rainfall, produce from one's own land, opportunities for agriculture labour, out-migration and access to funds, which are also important drivers of local livelihoods.

However, it may not be unreasonable to mention that in case of armed conflicts over extended period, much uncertainty can creep into the system and it may become difficult to ensure the length of such support from local forests with little or no communication between local communities and forest department and uncertainty in consciously protecting forests by local Forest Protection Committees. This could lead to major breakdown in rules and procedures, where key arrangements and contracts with forest authority tend to lose their validity and can no longer be respected or automatically enforced. However, that is not the subject of discussion in this paper though that constitutes a critical issue over the medium and the long term and more evidence –based research is suggested.

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