Non-Farm Employment (NFE) in Prayagraj District of Uttar Pradesh: Determinants and Reasons for Taking up NFE

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ABSTRACT

The rural non-farm economy is a very important part of rural developing countries. It accounts for a large proportion of the employment and income in rural economy. Over the time this will continue to increase. From the point of view of rural development, rural non-farm activities provide important sources of employment and income to the poor small and landless farmers as well as women. Promoting this type of activities will therefore help to raise employment and income, especially of the poor. In this paper we attempt to explore the determinants of rural non-farm employments that are five factors education, size of land holdings, caste, gender and finance. The effort will be to present a micro level analysis of all these factors. Also discussed here about the reasons why people move from rural to urban areas and this is summarized as pull factors and push factors. The effect of push and pull factors may vary from place to place and for different regions. In most developing countries, especially low-income ones, urban areas are a symbol of many good things. They provide better employment, relief from toiling in the fields without a decent income, safe drinking water, short distances to medical doctors and health facilities.

Key Words : Linkages, Non-Farm activities, Pull factors, Push factors

INTRODUCTION

Heterogeneity of RNFE requires or rather compels a proper understanding of the sector. Discussions on the identified issue can be properly organized if sector is properly identified, so this part of the paper is attributed to the definitions of RNFE. The non-farm "sector" includes all economic activities conducted in rural areas except agriculture, livestock, fishing and hunting. Since it is defined negatively, as non-agriculture, it is not in any sense a homogeneous sector. The "rural non-farm economy" or "rural non-farm sector" includes all rural economy activity outside agriculture. However a 'sector' should imply a degree of homogeneity. Non-farm activity may take place at home or in factories or be performed by itinerant traders. It includes small-scale and large-scale activities of widely varying technological sophistication. The term 'non-farm' should not be confused with 'off-farm'. The latter generally refers to activities undertaken away from the household's own farm, and some authors (e.g. Ellis, 1998) use it to refer exclusively to agricultural labouring on someone else's land, so 'off-farm' used in this sense would not fall within the normal definition of 'non-farm'. As country of a size like India it becomes important to understand about the non-farm employment and rural nonfarm economy at more disaggregated, sub national or district level. The state like Uttar Pradesh, which is having the largest rural population in the country; it is imperative to have a study on non-farm employment in this region without which a macro level understanding about country as a whole will not provide sound base for theoretical formulation.

Literature Review:

Reardon (1998) concluded that the varying nature of rural non-farm activity over regions and sub regions is the different nature of linkages between the farm and (Rural Nonfarm Economy) RNFE. Because nature of

linkages between the farm and RNFE depends upon many factors, those are not similar across the regions of world, so the nature of RNFE is not similar across the different regions. He described three existing stages of Rural Non-Farm Economy in different part of developing world. Extent of linkages between farm and non-farm economy depends upon the extent of urbanizations.

Bairagya (2001) finds that the performances of informal sector (including non-farm sector) during liberalization period is linked to the performances of the whole economy because the informal sector accounts for about 86% to the total employment generation in 2004-5 and about 60% to the net domestic product in 2005-06.

The report of NRI is based on qualitative research in two communities in Romania-Rotbov and Motatei-Gara. The research has aimed to increase our understanding of the dynamics of involvement in the non-farm sector and of the factors which determine rural non-farm livelihoods in the context of the changes which have occurred since 1989 in the Romanian economy, and to inform policymakers who aim to promote sustainable livelihood strategies in the rural non-farm Economy. This study by Bleahu and Janowski (2002) finds that most activities are informal and aim to ensure the survival of household members, not the accumulation of capital.

Singh (IIT Roorkee, 2006) : Determinants of RNFE can broadly be categorised as demand-pull, distress-push and policy induced. Several factors such as increase in education, urbanisation, access to productive assets, development of infrastructure in terms of roads, electricity, banks, and markets, etc., pull the work force, especially from better off households of relatively developed regions into the RNF sector. Contrary to this, low agricultural productivity, high man-land ratio, lack of irrigation facilities, low public investment in agriculture push many rural workers, especially from poorer households of underdeveloped regions, out of agriculture to the non-farm sector (Start and Johnson, 2004). Government policies and programmes related to wage and self-employment in the rural areas may also be crucial factors in influencing the structure and growth of the rural non-farm sector. However, effectiveness of these factors in explaining the RNFE may vary across regions and gender. As stated earlier, we have identified 11 explanatory variables to know their impact on the RNFE. Three regression models have been applied using percentage of rural main non-farm workers to total rural main workers (RNFE) as dependent variable separately for person, male

and female RNF workers.

Acharya (2003) observed from the study that rural non-farm sector cannot attain impressive growth unless it responds to changing macro-economic environment. A comparative advantage of construction, trade, services, rural and eco-tourism, handicrafts, health and communication are some of the areas of comparative advantages for rural non-farm sector. Public spending on rural roads, electrification and social amenities have high payoff in terms of reduction in rural poverty, unemployment and growth of rural non-farm sector.

General aspects of rural employment- during the period 1983-2000, the share of in the total rural employment has increased marginally, Jha (2006) studies find. This studies suggest that there is limited land for agriculture is fix, so the share of non-farm income and employment becomes an important option and the process of development of the share of non-farm income and employment in the total income and employment increases in the developing countries.

Kuiper's study (2006) has about Interplay between farm activities, non-farm activities and the resource base rural livelihood. Non-farm activities has play a principal role directly by contributing considerably to rural household's income, and indirectly, by influencing agricultural activities with potential implications for sustainability pressure on natural resources may be reduced when households have alternative source base, such as the use of fertilizer, might be facilitated by cash income from non-farm activities.

Uwe Deichmann, Forhad Shilpi and Renos Vakis (2008) discussed about relative importance of farm and urban linkages for rural non-farm employment in Bangladesh. They are suggests that people are more likely to be employed in well paid wage employment and self-employment in the non-farm sector if they are closer to urban centre. Those who are further away from such centres are even less likely to be in well-paying non-farm jobs if they are living in areas with greater agricultural potential.

Objectives :

The objectives of the study are following-

– To examine the role of rural-urban linkages in the growth of rural nonfarm economy in Prayagraj district.

– To know about the determinants of Non-Farm Employment in Prayagraj.

– To examine the reasons for Taking up Non-Farm

Employment in Prayagraj.

METHODOLOGY

This study is based on primary data. Study has been done to identify the role of rural urban linkages in growth of non-farm sector with the help of primary data collected from Prayagraj district with determinants of NFE. This study has use three stages sampling, including block at first stage, village at second stage and household at third stage. The selection of the sample households has broadly involved the following stages. The important consideration of the present work is to see how agriculture and urbanization is affecting the RNFE in Prayagraj, two blocks: one agriculture prosperous block and one agriculturally less prosperous block have been surveyed. Villages in particular blocks classified into two groups. The first group include all villages situated within a radius of 5 km from block headquarter. Villages within the ratio of 10 and more Km from market have included in the second group. From each group one village has been selected on random basis. Thus, two villages from each block have selected for this study. 300 household of selected villages have surveyed to study the determinants of Non-Farm Employment in Prayagraj district. Statistical tools used as it required in the analysis.

RESULTS AND DISCUSSION

Determinants of non-farm employment in Prayagraj:

In this paper we attempt to explore the determinants of rural non-farm employments. There are five factors education, size of land holdings, caste, gender and finance. The effort will be to present a micro level analysis of all these factors. The benefit of such an analysis would be to improve our understanding of the impact of these factors on non-farm employment.

Education and skill:

A significant and positive association between education levels and non-farm income at the household

has been empirically established in different developing country contexts (see for example Barret et al, 2001; Coppard, 2001; Deiniger and Olinte, 2001; Reardon, 1997). We have classified the landownership of non-farm households with their educational status across the all four villages (Table 1 and Fig. 1). The table shows that in Sarai Madansingh urf Chanti and Girdharpur, 25 per cent amongst the all workers are illiterates. On the other hand, in Aruwahw and Hata Jagir, nearly 40 per cent amongst the all workers are illiterates. The inclusion of primary level educated workers will take the figures to between 21 to 30 per cent in all villages. However, a few workers amongst them had education upto the UG/PG level only, but their numbers would be very small. It is also important to note that no worker had education beyond the UG/PG level in Hata Jagir Village.

On the other hand, skills are concerned, we found that the majority of workers pursued agriculture or MGNREGA worker as their activity irrespective of their educational status in all four villages. Similarly, other occupations chosen by workers regardless of educational level are brick moulding, dairy, carpentry and tailoring which are treated as occupations of lower social order. Although a few educated workers do practise skill-based activities like those of machinery fitters, retail merchants and teachers yet better-educated workers work also in low skill based activities like those of MGNREGA work, brick moulding, shop assistant, dairy and transportation. It appears that education is by no means a predominant factor inducing workers towards adopting non-farm activities in Aruwahw and Hata Jagir village. This is possibly because the lack of rural-urban linkages restricts various non-farm employment opportunities. Impact of lack of better linkages, quite a number of workers choose to leave the village to seek more remunerative work outside the village.

In Sarai Madansingh and Girdharpur, the formal education level appears to have an important bearing on the size and nature of non-farm activities. The primary level educated workers engage in low skill activities such

Table 1 : Education of the Non-Farm Workers							
Blocks	Villages	Education of the Respondents					
		Illiteracy	5th	10th	12th	UG/PG	Total
Holagarh	Sarai Madanshingh Urf Chanti	09	10	05	08	04	36
	Aruwahw	11	06	08	02	01	28
Manda	Girdharpur	08	07	10	05	02	32
	Hata Jagir	13	10	07	04	00	34
Total		41	33	30	19	07	130
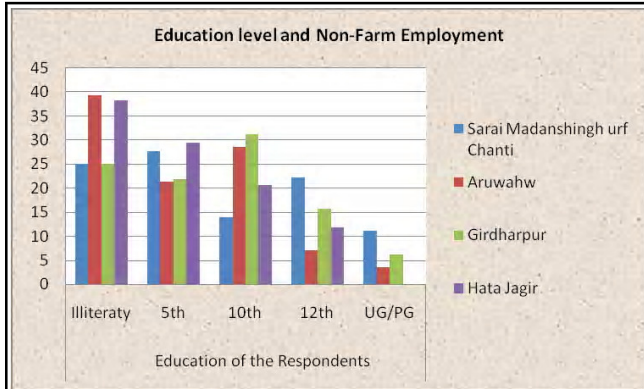
Source: As in Table 1

Fig. 1 : Education level and non-farm employment

Fig. 2 : Relationship between land ownership and non-farm employment

as brick laying, auto driving, pig rearing and plumbing. The middle school level workers engage in occupations like retail sectors and shopkeepers, tailoring, postmen, work in cold storage and selling agents that require a better skill level. Education for this category of workers imparts at least a certain minimum level of skills to handle such jobs. At the other extreme, graduates and above are involved in highly skilled jobs like those in teaching, pharmacists, physicians and beauticians. It may be stated that formal education is not necessarily a determining factor in the workers participation in non-farm activity. In Sarai Madansigh urf Chanti, there are a Cold Storage and Brick Kiln and nearly about 100 permanent workers and 50 part time workers are engaged here.
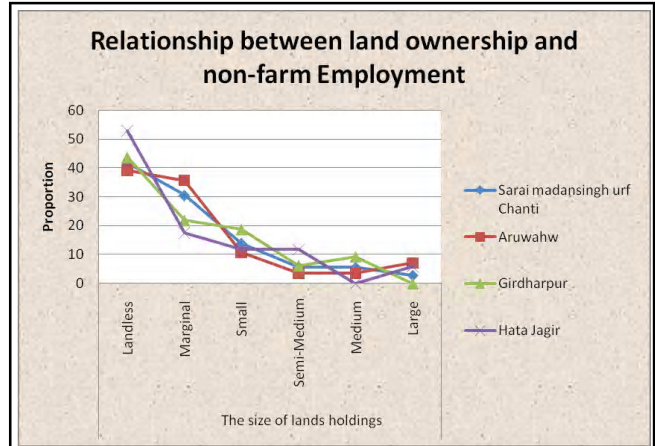
Size of land holdings:

The size of lands holdings was found to be an important factor influencing the decision to take to non-farm units/activities. In agriculture Census, the operational holdings are categorized in five size classes as follows:

Trends observed at the micro level (at village level) in the relationship between non-farm employment and land ownership status are given below. Table 2 and Fig. 2 shown that inverse relationship between land ownership and non-farm activities at the village level. Consequently,

Land Size		
Sr. No.	Category	Lands Size
1.	Marginal	Below 1 hectare
2.	Small	1 to 2 hectare
3.	Semi-medium	2 to 4 hectare
4.	Medium	4 to 10 hectare
5.	Large	10 or above hectare

Source: Agriculture census, India

as the size of the landholding becomes smaller, the incidence of non-farm work increases. The landless non-farm workers constituted 41.67 per cent, 39.28 per cent, 43.75 per cent and 52.94 per cent of the total workers in non-farm households in Sarai Madansingh urf Chanti, Aruwahw, Girdharpur and HataJagir villages respectively. On the other hand, the proportions of marginal landholders in Sarai Madansingh urf Chanti, Aruwahw, Girdharpur and HataJagir are 30.55 per cent, 35.71 per cent, 21.87 per cent and 17.64 per cent. As we advanced up the farm size, the proportions of non-farm employment further come down. Further, amongst the big farm holders, 2.78 per cent workers in Sarai Madansingh urf Chanti, 7.14 per cent worker in Aruwahw, none in Girdharpur and 5.88 per cent worker in HataJagir are found to be involved in non-farm jobs.
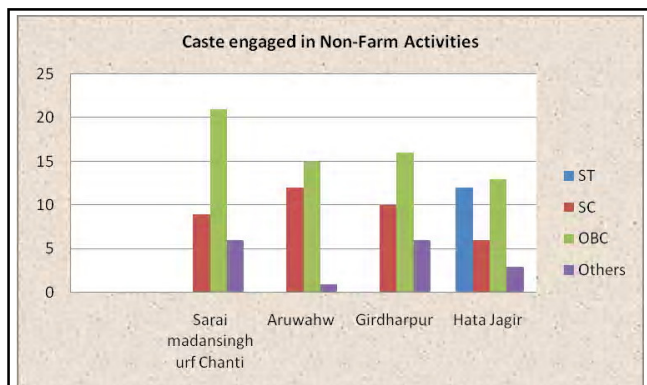
Caste, skill and non-farm activities:

Despite considerable changes over the past decades, the caste system remains a major stratifying force in rural India. In case study region shows that members of the upper castes tend to dominate local power dynamics and to enjoy better asset endowments and more favourable access to education and information. In the study region, the participation in economic activity is gradually transcending the traditional caste-based division of labour, the latter continues to play a significant role. The upper castes, especially the Brahmins and Kshatriyas, are reluctant to engage in most activities traditionally assigned to specific low caste groups. Fig. 3 shown about the relationship between caste community and non-farm activities.

Table 2 : Size of Land Holdings								
Blocks	Villages	The size of lands holdings						Total RNFE
		Landless	Marginal	Small	Semi-Medium	Medium	Large	
Holagarh	Saraimadansingh urf Chanti	15	11	5	2	2	1	36
	Aruwahw	11	10	3	1	1	2	28
Manda	Girdharpur	14	7	6	2	3	0	32
	HataJagir	18	6	4	4	0	2	34
Total		58	34	18	09	06	05	130

Source: Field Survey

Source: As in Table 3

Fig. 3 : Caste and Non-Farm Activities

Table 3 is about classification of occupations pursued by different castes and these occupations are based on Skill demand. In all four villages, the occupations of general castes are medical practices, beautician, shop keeping, grain and rice milling, Jewellers, Teaching, Selling/purchasing agents, Mechanics, Electrician and milk vending etc. Schedule castes are involved in Brick moulding, Shop assistant, Sweeping, Drivers of animal drawn, Brick laying, Pressing, Milk vending, Shop keeping, MGNREGA, mining and cold storage. STs engaged in Housekeeping, personal servant, brick moulding and Brick laying, MGNREGA and mining. OBC community is the majority in the study area and during research it was found that this community has maximum participation in non-agricultural activities in the village in comparison to the other communities. The people coming from this community are engaged in almost all non-farm activities, especially in all the areas in which people belonging to general, scheduled caste and scheduled tribe communities are engaged.

Table 3 classify caste-wise occupations based on the degree of skill required to pursue an activity in all four villages.

Gender:

A gender is significant insight into rural poverty and livelihood issues. Gender has emerged as an important factor influencing participation patterns and trends in the RNFE. Generally, both men and women work in agriculture, but average female participation rates in the non-farm sector are low compared to those for men. During the survey, it was found that most of the non-farm activities are being done by male household. But in

Table 3 : Classification of occupation pursued by different castes based on skill demand		
Caste	Skill Level	
	Low skill	Medium to high skilled
General castes	Drivers of animal drawn, Milk vending, Tailoring and shop keeping.	Medical practice. Beautician, Shop keeping, Grain milling. Jewellers, Teaching, Selling/purchasing agents, Mechanics, Electrician etc.
Schedule Castes	Brick moulding, Shop assistant, Sweeping, Drivers of animal drawn, Brick laying, Pressing, Milk vending, and Shop keeping, MGNREGA labour.	Open labour, Carpentry, Barbering, house painting, tailoring, shop keeping, automobile mechanics, Mining labour, gur making, labour in cold storage.
Schedule Tribes	Housekeeping, personal servant, brick moulding and Brick laying, MGNREGA labour.	Mining labour, Dhobies.
Other Backward castes	Milk vending, shop keeping, tailoring, bus and auto drivers, e-rickshaw drivers, MGNREGA labour.	Car/ bikes mechanic, Carpentry, House painting, Photographing and Medical practices, Gas and water suppliers, barbering, teaching, mining labour, Gur making, plumbing, Labour in cold storage,

Haat Jagir village, it was found that the share of female non-agricultural workers is very high as compared to other villages. The reason for this is being found the population of Scheduled Tribe in this village, all who are landless. The some female women from general caste are working in subsidiary activities as like teaching job, beautician and shop keeping. The female worker in the Muslim community pursues the caste-based activity as tailoring and bangles shop. One thing emerged that in villages where general caste population is good, non-agricultural activities (about 90%) are male dominated, whereas in other villages where SC and ST community population is more, women's participation in non-farm activity is up to 30%. The Scheduled Tribe population in HataJagir village and the Scheduled Caste population in Sarai Madansingh urf Chanti village are very high, hence the participation of women in non-agricultural activities is high while Girdharpur and Aruwahw villages have more general community, so the participation of women in non-farm activities is very low. Clearly, female participation in non-agricultural activity is scanty in all four the villages.

Finance:

The role of government policies in promoting the rural non-farm sector is also noted when looking for the source of the initial funding needed to set up their efforts. In the study, we found that self-financing, not reliance on external finance, was the major source. For most, own wealth, and relatives and friends were the principal sources of initial wealth. Very few of them, in Girdharpur and Sarai Madansingh alias Chanti villages, depended on moneylenders as sources of investment as well as working capital. None of them had borrowed money from banks to start their venture. Clearly, the role of the government in promoting rural non-farm employment has been extremely limited.

**Some wider determinants of non-farm employment:**

There are some wider determinants of access to non-farm employment- Agriculture development, natural resources, economic infrastructure, Social-capital, level of public service and investments, development of local towns, business environment and Finance.

Reasons for taking up non-farm employment in Prayagraj district:

In Prayagraj district, a complex set of linkages together have transformed and integrated rural and urban areas. Following Rondinelli and Ruddle (1976) we have identified five types of linkages between rural and urban areas in this district. These are physical, economic, population movement, service delivery and political administrative linkages.

In this exchange and transfer of people's spatial locations, capital and between regions, transport and communication systems need to be efficient and effective. There are reasons why people move from rural to urban areas and this is summarized by a report of 'Action Against Hunger' in the following diagram.
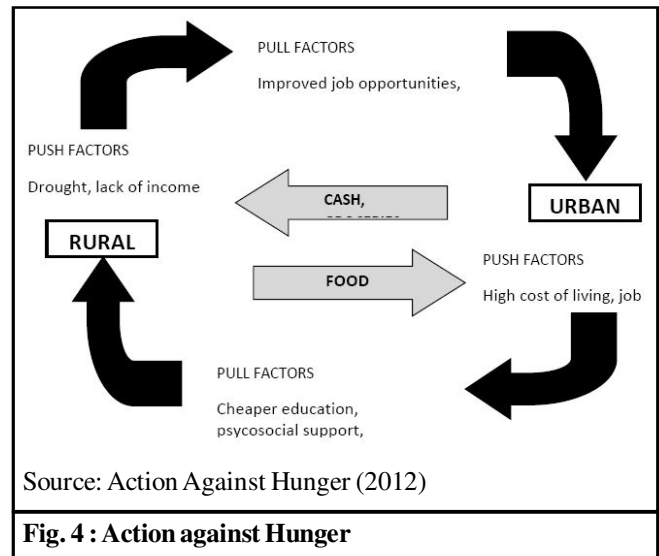
Source: Action Against Hunger (2012)

Fig. 4 : Action against Hunger

The effect of push and pull factors may vary from place to place and for different regions. In most developing countries, especially low-income ones, urban areas are a symbol of many good things. They provide better employment, relief from toiling in the fields without a decent income, safe drinking water, short distances to medical doctors and health facilities.

During the survey in study region, we questioned every non-farm worker to assign the reasons for taking up the non-farm activities. Two things have emerge from this; first, workers view non-farm jobs as an economic opportunity while second only take it for lack of other employment. The conclusions based on worker's responses are shown in Table 4. It may be pointed out here that in the figures included in the tables, the total number of responses is more than the total number of non-agricultural workers. The apparent discrepancy stems from the fact that quite a few workers attributed more than one reason to doing non-agricultural activity

Table 4 : Cross tabulation of the reason behind switching farm to non-farm activities				
Development Block	Sample village	Non-farm activities	Push factors are the main Reason for switching	
			Yes	No
Holagarh	Sarai Madansingh urf Chanti	36	08	28
	Aruwahw	28	10	18
Manda	Girdharpur	32	07	25
	HataJagir	34	12	22
Total		130	37	93

Source: Field survey.

for livelihood. Conclusions arrived at are below given. The workers' responses attributed their choice of non-farm activity to pull factors. The proportions of such respondents in the four villages are 77.77 per cent in Sarai Madansingh urf Chanti, 64.28 per cent in Aruwahw, 78.14 per cent in Girdharpur and 64.70 per cent in Hata Jagir and overall in 71.53 per cent. The push factor seems to play a comparatively moderate role in Sarai Madansingh urf Chanti (22.23%) and Girdharpur (35.30%) compared to Aruwahw (35.72%) and HataJagir (28.47%). Here, presented the test of the relationship between growth of RNFE and its impacting factors. Before testing, write down the hypothesis related to the testing.

H0 : The growth of RNFE in Uttar Pradesh (U.P.) and Prayagraj is not accounted for by the push factors.

H1 : The growth of RNFE in Uttar Pradesh (U.P.) and Prayagraj is accounted for by the push factors.

Table 5 : Chi-square distribution-critical value approach	
Probability	Degree of freedom
Probability = Level of Significance	(r-1)(c-1)
Level of significance = 0.05	
X^2 =2.8731 df = 3	CV = 7.8147
CV < X^2	Reject to H$_0$
CV > X^2	Fail to Reject H$_0$

Source: Calculated from Table 4

On the basis of the test result the null hypothesis is fail to reject *i.e.*, accept the null hypothesis (H$_0$). It means the growth of RNFE in Uttar Pradesh (U.P.) and Prayagraj is not accounted for by the push factors associated at 5% level of significance. It's resulted the growth of RNFE is accounted for by the pull factors.

Suggestions:

In this paper, there are discussed about to determinants of non-farm enterprises and non-farm employments. There are five determinants as education,

size of land holdings, caste, gender and finance. The effort is to present a micro level analysis of all these factors. In this paper there are also explore some wider determinants of access to non-farm employment- Agriculture development, natural resources, economic infrastructure, Social-capital, level of public service and investments, development of local towns, business environment and Finance. Author explained the reasons for Taking up Non-Farm Employment here and found that the growth of rural non-farm activities is accounted for by the pull factors.

There are some suggestions for improving non-farm activities:

– In the sample villages, Sarai Madansingh urf Chanti and Aruwahaw villages of Holagarh block, Girdharpur and HataJagir villages of Manda block, being placed at low to moderate levels in terms of linkages with Allahabad town and in the levels of development of rural non-farm activities, may be upgraded with more services and product diversification. For example, the people of Sarai Madansingh urf Chanti might be more tied up with Holagarh and Dahiyawan market than with Allahabad city for selling of their products and labour. Again, Aruwahw should be linked more with Dahiyawan market than with the town concerned, at least for marketing of products. Further, Girdharpur and HataJagir certainly require an intermediate settlement equipped with markets and other basic services. The Manda market might be an intermediate habitat for those villages for interaction.

– By improving transport linkages, *i.e.,* establishing proper metal road connections and increasing the frequency of connecting buses to them and respective city.

– By developing rural non-farm activities with the help of agricultural produce and to the use of

modern methods.

– To improve the existing domestic industry and establishing industries suitable for the local environment; For example, traditional milk separator industry, bidi making industry, established stone crusher machine, flour mill and rice mill should be upgraded in some villages around Manda block.

– Decentralizing many urban activities, even to remote villages that have good transport connectivity to the main city.

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