Unfavourable Environment and Chronic Poverty:
Some Preliminary Findings

Quazi Shahabuddin
Bangladesh Institute of Development Studies (BIDS)
Dhaka, Bangladesh

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I.   Introduction

Poverty has different and varying manifestations. In fact, Hulme et al (2001) proposes a five-tiered categorisation of poverty. This identifies the always poor, usually poor, churning poor, occasionally poor and never poor. The first two categories are chronically poor, the next two transitory poor and the last one is non-poor. Charting the factors that are associated with transition in the poverty status of a household should help us to understand the processes that create or erode chronic poverty and relate these to policy and action. In general, research should focus primarily on those who experience or are likely to experience poverty for extended periods of time, and the processes that keep them poor. This is not to deny, however, that while "long duration" is the key criterion, chronic poverty can often be multi-dimensional and severe. While poverty trends are of interest, the prime focus of research should be on the poverty dynamics of individuals, households and social groups.

It should be recognized that the chronic poor are heterogeneous group and must be studied at individual, household (intra and inter) and social group levels. They include those experiencing deprivation because of their stage in the life cycle, those who are socially discriminated against (within the household, community or nation), those with impairment and health problem, and people living in remote rural areas and/or ecologically unfavourable areas. Generally, the chronic poor experience several forms of disadvantage at the same time – gender, age, ethnicity and location. In this paper, however, we shall concentrate on the latter i.e. how the locational factors contribute to perpetuation of chronic poverty in these areas.

II.   Conventional Wisdom

The adverse interface between chronic poverty, remote rural areas and unfavourable agricultural environments is well known. These environments can be salinity-prone, flood-prone, drought-prone and susceptible to river erosion. The analysis of the 1974 famine as well as the experience of major flood events in 1988 and 1998

highlights these environments as being highly vulnerable to extreme shocks and severe entitlement failures. In fact, Sen (1981) pointed out more than two decades ago that chronic poverty in South Asia is to a large extent the result of adverse ecological processes. The most persistent poverty in Bangladesh has historically been found in the river-erosion areas which in years of severe flooding have been susceptible to widespread starvation and even famine. The 1974 famine, for example, was particularly severe in the river erosion belts along both sides of the Brahmaputra. These form the most economically depressed thanas and unions of what are now Kurigram, Lalmonirhat, Gaibandha and Jamalpur districts. These were also the areas hardest hit during the massive floods of 1988 and 1998. In the later years, however, the damage was not so great.[1]

Apart from the impact of an immediate crisis, those living in ecologically vulnerable areas also find it more difficult to recover. This is because apart from having few savings or other assets they tend to have less access than richer areas to non-farm employment and to microcredit. They also find it difficult to borrow money to migrate. And since everyone is affected simultaneously the markets for both assets and credit also collapse – a consequence of "covariance risk": While all households in these areas are exposed to ecological risk, those most vulnerable are small landowners and agricultural labourers (Sen and Rahman, 2000).

III. Some Evidence on Regional Pattern of Growth and its Interface with Adverse Agro-ecological Environments

A disaggregated district-level analysis of the pattern of growth should highlight not only the geographical differences in growth performance but shed considerable light on their interface with adverse agro-ecological conditions. Some recent evidence in this area by Ahmed (2000) is presented here. The distribution of different districts by growth category is summarized in Table 1.

Table 1

Distribution of Districts by Rate of Growth in Rice Production

Fast Growth (3% to 7%)	Moderate Growth (2% to less than 3%)	Slow Growth (less than 2%)

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[1] In 1998 both the government and NGOs were very active with large-scale distribution of foodgrains via the Vulnerable Groups Feeding programme, the Cash-for-Works programme, and a variety of lean-season food-assisted programmes essentially aimed at preventing the potential entitlement failure that can lead to famine. It should be emphasized here, that compared to 1974 the rural economy itself was more resilient and the international aid climate was also more favourable.

(1)	(2)	(3)	(4)
Rajshahi	Khulna	Chittagong	Mymensingh
Dinajpur	Rangpur	Dhaka	Chittagong HT
Bogra	Faridpur	Kishoreganj	Noakhali
Kushtia	–	Tangail	Sylhet
Jessore	–	Pabna	Barisal
Comilla	–	–	Patuakhali

Note: Col. 3 represents slow-growth but technologically progressive districts; Col. 4 represents slow-growth but technologically stagnant districts.

Source: Ahmed (2000).

The table includes three growth categories: (a) fast-growth districts with annual growth rates ranging from 3 to 7 per cent; (b) modestly fast-growth districts with rates varying from 2 to 3 per cent, and (c) slow-growth districts with less than 2 per cent growth rate. However, the slow-growth category is further spilt into technologically progressive but slow-growth sub-group and a technologically stagnant group, which are termed groups 3 and 4 respectively. It is readily evident that the fast-growth districts are almost all located in the western region of the country, except Comilla, the marginal one in this group. Rajshahi, Bogra, Kushtia and Jessore have growth rates ranging from about 5 to 7 per cent, while Comilla's growth rate is just over 3 per cent. Only three districts – Khulna, Faridpur and Rangpur – are in the moderate-growth group and two of these three districts are also in the western region of the country, which is relatively flood-free but prone to drought. The slow-growth districts, in which growth rates are lower than population growth, are all located in the areas characterized by low elevation and subject to flooding, salinity and cyclones. These areas are located in the (a) central and north-eastern regions and (b) coastal districts, except Chittagong Hill Tracts; a hilly land tract that has been plagued by political disturbance for a long period. The fact that all slow-growth districts are located in the coastal, central and north-eastern region of the country is indicative of the locational constraints affecting rice production (Ahmed, 2000).[2]

IV.   Economic Conditions and Livelihood in Unfavourable Environment

What is more significant and perhaps more relevant for our purpose is to examine the economic conditions and livelihoods of households in unfavourable environment. Fortunately, some empirical evidence based on field survey data on this is available (Quasem, 1992 and Hussain et al, 2003). Quasem (1992) attempted to assess to what

extent the households in ecologically unfavourable areas are worse-off (as generally perceived) and what adjustment mechanisms are being followed to compensate for the lower crop income due to adverse ecological environment. The general perception is that rural households in the unfavourable ecological zones are financially worse-off specially from crop production activities and hence as a compensatory mechanism these households diversify economic activities.

The estimated household income disaggregated by sources and by ecology indicate that the average household income in the unfavourable ecologies in 1988 was not lower but higher (by 18 per cent) as compared to those in the favourable ecologies (Table 2). Thus measured in terms of total household income, the ecologically unfavourable areas are not worse-off as generally perceived. To what can this differential and counter-intuitive performance be attributed to? A closer look at the sources of household income in these two types of ecologies would serve to provide some answer (Table 2).

Table 2
Source of Income by Ecology

(Tk. Per Household)

Ecological Zone	Crop	Household	Wages	Non-farm	Remittances	Total
A. Unfavourable Areas	7016	2352	2018	9446	851	21683
	(33.7)	(11.3)	(9.7)	(45.4)	(3.7)	(100.0)
1. Drought-prone	8528	2516	2910	4890	315	19158
	(44.5)	(13.1)	(15.2)	(25.5)	(1.6)	(100.0)
2. Flood-prone	5739	1331	1559	9913	935	19478
	(29.5)	(6.8)	(8.0)	(50.9)	(4.8)	(100.0)
3. Salinity Affected	6751	3184	1573	13545	1302	26355
	(25.6)	(12.1)	(6.0)	(51.4)	(4.9)	(100.0)
B. Favourable Areas	7463	2162	3180	5465	68	18338
	(40.7)	(11.8)	(17.3)	(29.8)	(0.4)	(100.0)
All Areas	**7129**	**2302**	**2310**	**8444**	**653**	**20841**
	(34.2)	**(11.0)**	**(11.1)**	**(40.5)**	**(3.1)**	**(100.0)**

Source: Quasem (1992).

In the favourable ecology, crop and non-farm income (inclusive of remittances) account for 41 and 30 per cent respectively, as compared to 34 and 50 per cent in the unfavourable ecology. The difference is also noticeable in case of wage income — about 10 per cent in unfavourable areas as compared to about 17 per cent in favourable areas.

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[2] These areas were once considered to be natural habitats for rice under traditional technology. Conditions for modern technology are, however, different from those suitable for traditional technology. As modern technology has spread,

This differential level of contributions from diversified sources indicate that the households living in unfavourable agricultural environments diversified their economic activities, depending less on crop income and more on income derived from non-farm activities.[3] This is particularly true for households living in flood-prone and salinity-affected areas. People in these two areas also migrate out as evidenced from the amount of remittances received.

The empirical evidence presented in Quasem (1992) study thus indicate that the households in ecologically unfavourable areas are not financially worse than those in favourable areas. Households in the unfavourable ecologies earned a significant amount from non-farm sources, specially in the salinity affected region. Remittances also contributed significantly in augmenting income for households in the unfavourable areas. However, it should be emphasized here that this provides an average picture of those living in the unfavourable areas. A more disaggregated analysis of different groups, specially those in the lower end of income spectrum is warranted to throw light on the incidence of chronic poverty in these unfavourable ecological areas. Quasem (1992) does not explicitly deal with this phenomenon. The study, however, provides some information on wage employment which may be useful to consider.

Labour market is tight in both the ecologies but this is more so in the unfavourable areas. Only 30 per cent of total workers are employed in agriculture in unfavourable areas, compared to 38 per cent in the favourable areas. In case of non-agricultural market, the difference is more pronounced — only 15 per cent in unfavourable areas, as compared to about 30 per cent in favourable areas (Table 3). This is particularly true in flood-prone areas with hardly any opportunities for work in non-agricultural market because of poorly developed infrastructures.

Table 3

Wage Employment by Sector and by Ecology

(per cent of total workers engaged in)

Ecological Zones	Agricultural Wage Market	Non-Agricultural Wage Market

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these traditional rice growth areas have fallen behind.

[3] Surprisingly, the income derived from crop production are greater (both the absolute amount and the share in total income) for the households living in drought-prone areas, as compared to those in favourable areas. For an elaboration of this phenomenon, see Hossain et al (2003).

A. Unfavourable Area	<u>30.3</u>	<u>14.9</u>
1. Drought-prone	38.5	24.6
2. Flood-prone	30.6	1.6
3. Salinity Affected	21.3	18.0
B. Favourable Area	<u>37.8</u>	<u>29.5</u>
All Areas	32.1	18.5

Source: Quasem (1992).

What is more interesting is the information on the extent of employment and the wage rates by sector and by ecology. These are presented in Table 4.

Table 4

Mandays of Employment and the Wage Rates by Ecology and by Sector

Ecological Zones	Agriculture		Non-Agriculture		Total	
	Mandays	Wages	Mandays	Wages	Mandays	Wages
A. <u>Unfavourable Area</u>	<u>111</u>	<u>26</u>	<u>44</u>	<u>42</u>	<u>89</u>	<u>28</u>
4. Drought-prone	95	28	46	42	76	31
5. Flood-prone	143	22	28	35	138	22
6. Salinity Affected	96	28	43	42	72	33
B. <u>Favourable Area</u>	<u>123</u>	<u>31</u>	<u>41</u>	<u>40</u>	<u>88</u>	<u>32</u>
All Areas	**114**	**27**	**44**	**40**	**89**	**30**

 Source: Quasem (1992).

There is hardly any difference about total mandays of employment for a wage worker across different ecology (about 89 mandays in a year). Larger mandays of wage employment is observed in case of agriculture in favourable areas, while the level of employment remain roughly at a similar level in case of non-agriculture in both areas. However, the agricultural wage rates are observed to be substantially lower (by about 20 per cent)in ecologically unfavourable areas. In case of non-agricultural employment, there is hardly any differential in wage rates. The average wage earnings in the unfavourable ecology were found to be lower compared to what was earned in the favourable areas which may be attributed to higher agricultural wage rates in the latter as compared to the former. The study estimated that a household, on average, earned Tk. 3180 in favourable areas compared to Tk. 2018 in the unfavourable areas. This suggests that the favourable ecology provides greater wage earning opportunities. The study also indicated that migration was practised as income-compensatory mechanism in both the ecologies. However, the incidence of out-migration was observed to be more pronounced in case of the unfavourable ecology — about 20 per cent of the households in unfavourable areas as

compared to 15 per cent in the favourable areas. The incidence of out-migration was observed to be the highest in the drought-prone villages.

Hossain et al (2003), more recently assessed, the change in agriculture and the livelihood of the people in the unfavourable rice growing environments in Bangladesh. The study explored in particular, whether the people overcame the limitations in increasing rice production through increasing incomes from other means and try to be self-reliant in food, when they cannot be self-sufficient because of the bio-physical constraints. It may be worthwhile to recapitulate the major findings of this study.[4]

First, the households in the unfavourable ecosystems have substantially higher endowments of land compared to their counterparts in the favourable ecosystems. The lower productivity of land in the unfavourable ecosystems is thus compensated by higher endowment of land, leading to little variation in rice production per household across ecosystems.

Second, the rural households have been accumulating physical and human capital to compensate for the negative pressure on the livelihood imposed by the small size and declining availability of land. The most impressive has been the accumulation of capital for organizing rural non-farm activities. The households are also moving labour out from agriculture to rural non-farm activities.

Third, the coastal ecosystem has the most favourable endowment with regard to non-agricultural assets and education. The number of workers engaged in rural non-farm activities was also the highest in this ecosystem. The flood-prone ecosystem also has better endowment of non-agricultural capital but it is disadvantaged with regard to endowment of human capital. The movement of resources from agriculture to non-farm activities was less pronounced for the drought-prone ecosystem presumably because of favourable conditions for agricultural growth.

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[4] The benchmark data for the study is drawn from a sample survey conducted in 1987-88 using a multi-stage random sampling method for IRRI-sponsored project, "Differential Impact of Modern Rice Technology in Favourable and Unfavourable Rice Production Environments (David and Otsuka, 1994, Hossain et al, 1994). A re-survey was conducted covering the financial year 2000 for all the villages.

Fourth, although the income from rice cultivation has declined, the economic progress in rural areas has been respectable, thanks to the performance of non-rice farming and non-agricultural activities. The increase in incomes was the highest for coastal areas, followed by the flood-prone and the drought-prone areas. The performance was less impressive in the favourable ecosystems (Table 5).

Table 5
Growth of Household and Per Capita Income by Ecosystem

Ecosystems	Household Income (US$)			Per Capita Income (US$)		
	1987	2000	Growth Rate	1987	2000	Growth Rate
Flood-prone	966	1350	2.6	156	242	3.5
Coastal	942	1396	3.1	150	267	4.5
Drought-prone	872	1065	1.6	146	223	3.3
Favourable	926	1159	1.7	157	226	2.8
All Ecosystems	931	1232	2.2	154	239	3.4

Source: Hossain et al (2003).

Fifth, the differing rate of economic growth has been reflected in the divergent pace of poverty reduction as well (Table 6). The drought-prone ecosystem had the highest incidence of poverty in 1987, but made good progress during the 1987-2000 period – the head-count ratio dropped from 64 to 45 per cent. The coastal areas had the lowest incidence of poverty in 1987 and also made the most gains compared to other ecosystems. In 2000, only 32 percent of the population in coastal areas were classified as poor, compared to 44 to 45 per cent for other ecosystems. The least progress in poverty reduction is observed for the "favourable" ecosystems.

Table 6

Changes in Head-Count Ratio of Poverty, Poverty-Gap Ratio
And Squared Poverty-Gap Ratio by Ecosystem

Ecosystems	Head-Count Ratio (% of poor people)			Poverty-Gap Ratio (%)			Squared Poverty-Gap Ratio (%)		
	1987	2000	Changes	1987	2000	Changes	1987	2000	Changes
Flood-prone	60.0	45.4	14.6	24.4	18.2	6.2	13.0	10.0	3.0
Coastal	54.8	31.9	22.9	20.3	9.4	10.9	9.5	4.3	5.2
Drought-prone	64.4	44.7	19.7	27.3	14.6	12.7	14.3	6.8	7.5
Favourable	57.3	43.9	13.9	21.4	17.2	4.2	11.2	9.3	1.9
All-ecosystems	59.2	43.0	16.2	23.4	16.0	7.4	12.1	8.4	3.7

Source: Hossain et al. (2003).

V. Chronic Poverty and Unfavourable Ecosystem – Some Further Evidence

Both Quasem (1992) and Hossain et al (2003) support the general perception that the farm-households tend to compensate for the loss of crop income in the unfavourable agricultural environments through augmentation of income derived from expansion of non-farm activities. However, this, as mentioned earlier, provides a picture for the average household irrespective of what happens to households belonging to different income groups in the unfavourable environment. A more disaggregated analysis of the sources of income of the sample households differentiated by their poverty status thus is required. A panel data from 16 flood-prone villages consisting of 273 households selected through a multistage stratified random sampling method, have been used for such an analysis. The sample households categorized by poverty status are presented in Table 7. While the number of poor households, especially the extreme poor has gone down, those of non-poor has correspondingly increased in year 2000 as compared to 1987-88.

Table 7

Poverty Status of Sample Households: 1987-88 and 2000

Poverty Status	1987-88	2000	Change
Extreme Poor	78 (28.6)	53 (19.4)	-25
Moderate Poor	85 (31.1)	79 (28.9)	-6
Non-Poor	110 (40.3)	141 (51.6)	+31
Total	273 (100)	273 (100)	-

Source: Re-Survey of DIS Study (2000).

A disaggregated analysis of the sources of income of sample households in flood-prone areas indicates that no such compensating mechanism seems to be in force, specially for the "extreme-poor". The share of income from non-agricultural activities for this group is quite small – only 8 percent (excluding non-agricultural labour income) in 1987 which increased to 13 per cent in year 2000 (Annex Table 1), presumably due to lack of access to financial assets and/or human capital. The corresponding shares for the "moderate-poor" and "non-poor" households are 26 per cent and 49 per cent in 1987-88, which increased to 39 per cent and 52 per cent respectively in 2000 (Annex Tables 2 and 3). This provides some explanation why chronic poverty persists in unfavourable agricultural environment.

A closer examination of the source of income by poverty status, presented in Annex Tables 1 to 3, indicates that the share of labour income in total household income, as expected, is the highest for the "extreme poor", claiming between 45-49%, and the lowest for the "non-poor" households with a share ranging between 7-12%. This share ranges between 25-32% for the "moderate-poor".[5] In other words, the share of labour income is inversely related to the poverty status of the households. It is also observed that while the share has increased for the "extreme poor" (from 45.0% to 49.3%), these have declined for both the "moderate-poor" (from 32.2% to 24.6%) and the "non-poor" households (from 12.5% to 7.3%) between the two survey periods (1987-88 and 2000). Another thing to note is that while the share of income derived from remittance has remained more or less unchanged (insignificant as well) for the "extreme-poor", those for "moderate-poor" and "non-poor" households have increased appreciably between the two survey periods.

The dynamics of chronic poverty can better be understood by tracking the changes in status of poverty of different households over time. For example, in our sample those households who were extreme poor in 1987-88 may continue to be so in year 2000 but not necessarily all of them. Some of these households may overcome extreme poverty and become moderate poor or may even become non-poor. Similarly, those households who were moderate poor in 1987-88 may continue to remain so in year 2000 but some of those households may become extreme poor (descending households) while others may escape poverty altogether and become non-poor (ascending households) in year 2000. Finally, the non-poor households of 1987-88 may continue to be so in year 2000 but again some of these households may descend into either moderate poverty or extreme poverty in year 2000. What are the drivers of such escape and descent leading to changing household fortunes merit serious investigation.[6] In particular, what are the constraining factors forcing the extreme poor to remain so over time thereby perpetuating their status of extreme poverty need to be studied in greater details using both quantitative panel data as well as in-depth case studies and qualitative probing.

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[5] This difference can be attributed to sharp difference in the share of labour income derived from agriculture. The share of non-agricultural labour income, however, does not show much variation either across three categories of households or for each category, over time (Annex Tables 1 to 3).

[6] For a comprehensive analysis of changing household fortunes in rural Bangladesh in terms of drivers of escape and descent using a panel data set of 379 rural households, see Sen (2003).

An attempt has been made to capture such movements into and out of poverty in our sample of 273 households living in flood-prone areas. The results are presented in Table 8. It is observed that out of 78 households who were extremely poor is 1987-88, 25 households continue to remain so in year 2000. These 25 households really belong to chronic poverty when it is defined in the time dimension focussing on the duration of poverty – the longer the duration, the greater the chronicity. In fact, the long duration of poverty in itself, from certain perspective, can be viewed as an aspect of "severity of poverty" itself. The tightest possible definition of chronic poverty would be intergenerational transmitted poverty (Moore 2001). Viewed in this perspective, the 25 households in our sample can be safely considered as chronically poor, with a time span of survey of about 13 years.

Table 8
Incidence of Chronic and Transitory Income Poverty:
Panel Data for 1987-88 and 2000 in Rural Bangladesh

	Year 1987-88	Year 2000		
		Extreme Poor	Moderate Poor	Non-Poor
Extreme Poor	78	25	22	31
Moderate Poor	85	16	27	42
Non-poor	110	12	30	68
Total	273	53	79	141

Note: The data for the analysis are provided from a resurvey of 16 flood-prone villages in Bangladesh consisting of representative panel of 273 households selected through a multi-stage stratified random sampling method.

The sources of household income for these chronically poor households are shown in Annex Table 4. Most income of these households is derived from agricultural income, in particular from (wage) labour income in agriculture. Only about one-fourth of income (including non-agricultural labour income) is derived from non-agricultural activities such as trade/business, services and remittances. In fact, the contribution of non-agricultural sources in total income has declined over the 13-year period. Our hypothesis holds good for such households who are chronically poor. These households living in flood-prone areas could not supplement their meager income derived from agricultural activities with income generated from non-agricultural activities.[7] The basic socio-economic characteristics of such households in the two survey periods are presented in Table 9. It is

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[7] What factors and processes – social, demographic, economic, political – have prevented them from doing so (to escape from extreme poverty) while other households could, merit further investigation. Individual case studies with qualitative information may throw some light in this respect.

observed that land owned per household has declined significantly (by about 20%) over the two survey periods. Land cultivated per household also declined, though not by as much (about 6%). What is alarming to note is the significant increase of landless households over this period. All these factors may have combined to perpetuate poverty of these households in the flood-prone areas.

Table 9
Basic Socioeconomic Characteristics of the Chronic Poor Households

	1987-88	2000	Change
Land Owned per Household (acre)	0.54	0.43	-20.4
Land Cultivated per Household (acre)	0.33	0.31	-6.1
Landless Households (%)	68	80	18.7
Family Size (no)	5.6	6.2	10.6
Illiterate Households (%)	72	68	-5.6
Age of Household Head (years)	40.6	49.0	20.0

Source: Re-Survey of DIS Study (2000).

VI. Concluding Observations

Unfavourable agricultural environments can be salinity-prone, drought-prone and susceptible to river erosions. The analysis and empirical evidence presented in this paper carry three important messages. First, the conventional wisdom underscores the adverse interface among chronic poverty, remote rural areas and unfavourable agricultural environments. This was especially true for population groups whose livelihoods is primarily dependent on crop agriculture. The strength of the argument is applicable in case of areas affected by river erosion, especially in the North-West. Second, the association between the incidence of chronic poverty – or for that matter – incidence of severe poverty and unfavourable agricultural environments, however, has weakened over time, as a large segment of population adopted alternative non-farm (both non-crop and non-agricultural) livelihood strategies. Indeed, environments may be unfavourable for agriculture but not necessarily for the non-agricultural activities. Indeed, at the average level of affluence, there is some micro-level evidence that some of the unfavourable environments from the agricultural point of view may display higher level of income, as in the case of drought-prone and salinity-prone areas. This, however, is not valid for the

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river-erosion areas where alternative non-farm opportunities are still severely limited.[8] Third, even in otherwise relatively less disadvantaged drought-prone and salinity-prone environments, the indicator of average affluence is misleading, since the benefits of diversification outside of crop agriculture have not been widely shared across income groups. It is the severe poor who have benefited the least.

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[8] In fact, both quantitative and qualitative evidence underscores the need for according priority to meeting the needs of the extremely distressed population residing in river-erosion belts (including remote charlands). One-crop dependent flood-prone areas (such as the haor belts) also need attention for the same reason, but the problem is much less severe.

Sources of Household Income for Extreme Poor (Tk. Per Household)

Sources of income		1987	2000
Agricultural income	Crop income	2887.76 **(28.39)**	3673.17 **(22.93)**
	Non-crop income	1845.92 **(18.15)**	2328.96 **(14.54)**
	Total agricultural income	4733.68 **(46.54)**	6002.13 **(37.47)**
Labor income	Agri-wage labor	3531.24 **(34.72)**	6561.19 **(40.96)**
	Non-agricultural labor	1049.10 **(10.31)**	1335.85 **(8.34)**
	Total labor income	4580.34 **(45.03)**	7897.04 **(49.30)**
Non-agricultural income	Trade and Business	419.81 **(4.13)**	909.43 **(5.68)**
	Services	260.58 **(2.56)**	789.89 **(4.93)**
	Remittance	176.92 **(1.74)**	418.87 **(2.61)**
	Total non-agricultural income	857.31 **(8.43)**	2118.19 **(13.22)**
Total household income		10171.34 **(100)**	16017.36 **(100)**

Note: Figures within parentheses indicate percentage shares in each category.
Source: Author's calculation.

Annex Table-2

Sources of Household Income for Moderate Poor (Tk. Per Household)

Sources of income		1987	2000
Agricultural income	Crop income	5731.48 **(31.10)**	6910.19 **(21.23)**
	Non-crop income	2061.76 **(11.19)**	4925.30 **(15.13)**
	Total agricultural income	7793.24 **(42.29)**	11835.49 **(36.35)**
Labor income	Agri-wage labor	4510.91 **(24.48)**	4392.32 **(13.49)**
	Non-agricultural labor	1414.63 **(7.68)**	3603.16 **(11.07)**
	Total labor income	5925.54 **(32.16)**	7995.48 **(24.56)**
Non-agricultural income	Trade and Business	2270.07 **(12.32)**	4860.76 **(14.93)**
	Services	2075.29 **(11.26)**	4033.62 **(12.39)**
	Remittance	362.35 **(1.97)**	3929.53 **(11.76)**
	Total non-agricultural income	4707.72 **(25.55)**	12723.91 **(39.08)**
Total household income		18426.50 **(100)**	32554.89 **(100)**

Note: Figures within parentheses indicate percentage shares in each category.
Source: Author's calculation.

Annex Table-3

Sources of Household Income for Non- Poor (Tk. Per Household)

Sources of income		1987	2000
Agricultural income	Crop income	14592.07 **(28.93)**	28920.84 **(29.39)**
	Non-crop income	4951.99 **(9.82)**	23994.21 **(11.77)**
	Total agricultural income	19544.06 **(38.75)**	40502.33 **(41.17)**
Labor income	Agri-wage labor	3098.64 **(6.14)**	4421.48 **(1.66)**
	Non-agricultural labor	3221.91 **(6.39)**	14514.32 **(5.65)**
	Total labor income	6320.55 **(12.53)**	7199.03 **(7.32)**
Non-agricultural income	Trade and Business	7441.55 **(14.75)**	17968.30 **(18.26)**
	Services	12746.36 **(25.27)**	11888.16 **(12.08)**
	Remittance	4386.36 **(8.70)**	20829.99 **(21.17)**
	Total non-agricultural income	24574.28 **(48.72)**	50686.45 **(51.52)**
Total household income		50438.89 **(100)**	98387.82 **(100)**

Note: Figures within parentheses indicate percentage shares in each category.
Source: Author's calculation.

Annex Table -4

Sources of Household Income for Chronic Poor Households (Tk. Per Household)

Sources of income		1987	2000
Agricultural income	Crop income	1818.82 **(17.90)**	3655.11 **(21.51)**
	Non-crop income	1348.60 **(13.27)**	2877 **(16.93)**
	Total agricultural income	3167.42 **(31.18)**	6532.11 **(38.44)**
Labor income	Agri- wage labor	4280.61 **(42.14)**	7209.48 **(42.42)**
	Non-agricultural labor	1042.00 **(10.26)**	1200 **(7.06)**
	Total labor income	5322.61 **(52.39)**	8409.48 **(49.48)**
Non-agricultural income	Trade and Business	816.00 **(8.03)**	288 **(1.69)**
	Services	549.00 **(5.40)**	1024.96 **(6.03)**
	Remittance	304.00 **(2.99)**	740 **(4.35)**
	Total non-agricultural income	1669 **(16.43)**	2052.96 **(12.08)**
Total household income		10159.03 **(100)**	16994.55 **(100)**

Note: Figures within parentheses indicate percentage share in each category.
Source: Author's calculation.

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