

Mitigating Seasonal Hunger: Evidence from Northwest Bangladesh

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The seasonality of poverty and food deprivation is a common feature of rural livelihood in Bangladesh, but it is more marked in the northwest region of Rangpur where the interlocking of seasonality and endemic poverty results in severe seasonal hunger. The recently launched policy interventions in the region provide a test case of what works and what does not in combating seasonal hunger. The quasi-experimental designs of some of these interventions are particularly suitable for assessing their impacts.

Policy Motivation

More than 70 percent of the country's nearly 150 million people live in the rural areas of Bangladesh, where life revolves around what is called its "rice economy". Although the rural economy has become increasingly diversified with the growth of non-farm activities, nearly 60 percent of the rural workers (and about half of the country's entire workforce) are still employed in the agriculture sector. The country is also prone to floods and other natural disasters. In such a setting, one would expect regular occurrences of seasonality of income and consumption, which are only made worse by the natural calamities.

To analyze the interlocking nature of seasonality and poverty, this research particularly draws on the experience of rural households from a region in northwest Bangladesh – the greater Rangpur region. Rangpur is well-known in the famine literature; it was among the worst-hit districts in the Great Bengal Famine of 1942-44 and was literally the epicentre of the 1974 famine in Bangladesh. The region has not only lagged in poverty reduction behind other regions, but has also remained particularly vulnerable to seasonal hunger, locally known as *monga*.

The objective of this research is, therefore, several-fold: (a) To understand the nature and the extent of seasonal hunger in Bangladesh in general and in the greater Rangpur region in particular; (b) to examine why seasonality of income and consumption is still persistent and more marked in Rangpur than in other parts of Bangladesh; (3) to identify the reasons for failure of the traditional policies and to determine how effective the new initiatives are; and (4) to draw lessons from these new initiatives for tackling the problems of other areas in the country that are emerging as new poverty pockets because of environmental degradation and climate change.

Key Messages

- Policies for improving food security need to explicitly take into account the seasonal dimensions of poverty and food deprivation in rural areas.

Seasonal food deprivation remains an important feature of food insecurity in rural Bangladesh, particularly in economically depressed and ecologically vulnerable regions such as Rangpur in the northwest of the country. Unaddressed by the official annualized poverty estimates, the seasonal stresses are often ignored by the policy makers and draw attention only when they get worse by natural disasters such as floods or drought.

- The gains from the recent initiatives for combating seasonal hunger in the Rangpur region need to be monitored and consolidated to ensure sustainable impact.

The various interventions recently launched by both the government and the NGOs need to be coordinated to ensure a proper balance between short-run measures that prevent immediate hardship and programmes that have long-run effects on promoting livelihoods.

- Policies need to focus also on the areas that are emerging as new poverty pockets because of environmental degradation and climate change.

Besides greater Rangpur, there are certain areas, particularly in the southern coastal belt, that have emerged as new poverty pockets due to agro-climatic adversities such as the intrusion of salinity and increased severity, frequency and unpredictability of natural disasters.

Research Design

The first set of data used in this research comes from the 2000 and 2005 rounds of the nationally representative Household Income and Expenditure Survey (HIES); the data can be used to construct seasonal panels across years at the sub-district (upazila) level to examine the determinants of seasonal poverty and food deprivation, including the role of infrastructure, the safety net programmes, microcredit, and local area characteristics.

The second data set came from a baseline household survey conducted by the Institute of Microfinance (InM) in 2006 to assess monga (seasonal hunger) in the Rangpur region. This data was collected as part of a new initiative of the Palli Karma-Sahayak Foundation (PKSF), a premier wholesale facility of microfinance, designed to combat extreme and seasonal poverty in that region.

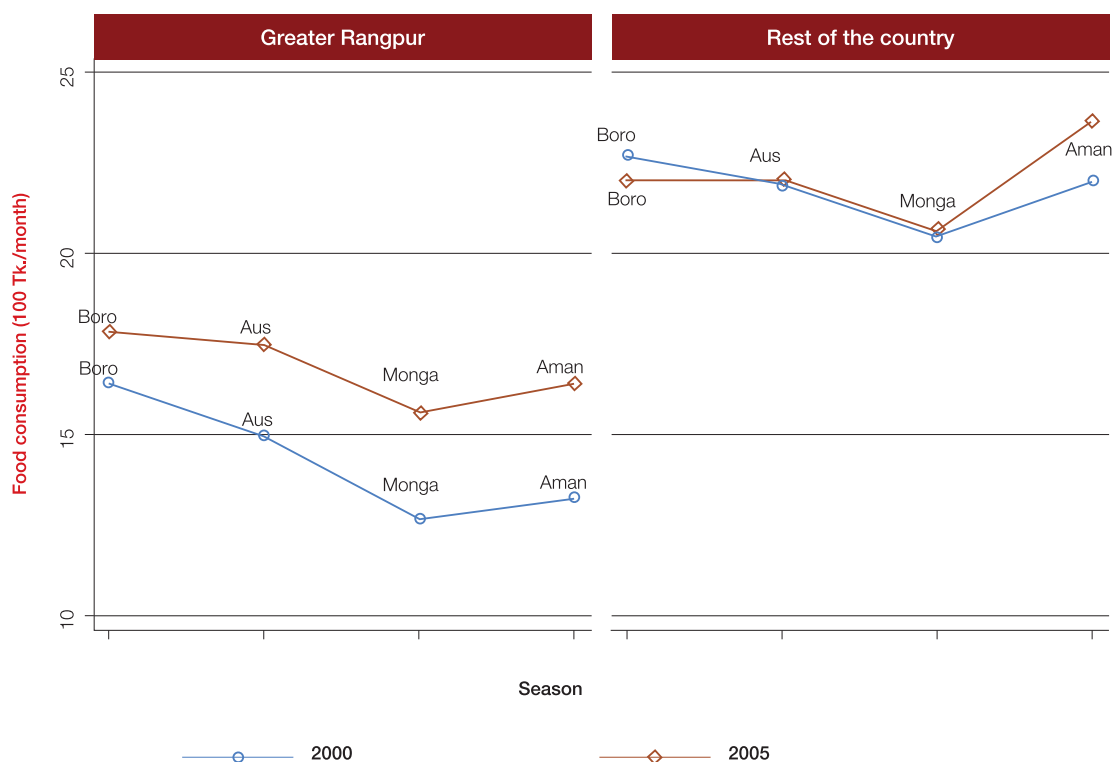
This undertaking, as a part of household census in the selected villages, collected information on almost half a

million poor households which represented nearly the bottom 60 percent of all households in the survey villages. This data collection was followed by three follow-up surveys conducted in 2008, 2009 and 2010 for a sub-sample of the baseline sample, which allow for impact assessment of the new initiatives in a quasi-experimental setting.

Research Findings

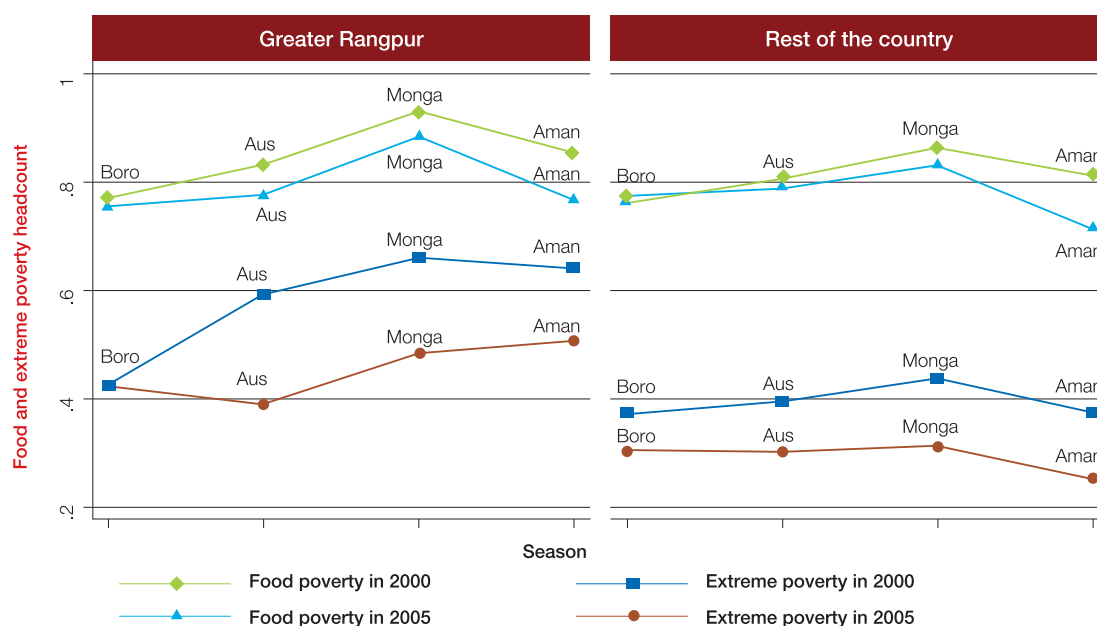
The seasonality in food consumption and poverty is observed across all over rural Bangladesh, but is more pronounced in Rangpur (Figure 1). Seasonal food consumption is found to be related with seasonal income at least as strongly as with year-round income. Seasonal poverty and hunger can thus be seen to result from the marked seasonality in agricultural income combined with the lack of poor households' capacity to smooth consumption year round (such as by savings, borrowings or food storage).

Figure 1: Monthly household food expenditure by season and year, 2000 and 2005



Source: Estimated from the data of the HIES, 2000 and 2005, rural samples.

Figure 2: Food and extreme poverty by season and year



Source: Estimated from the data of the HIES, 2000 and 2005, rural samples.

Figure 2 shows the seasonal variation in food and extreme poverty in the greater Rangpur and rest of the country during 2000 and 2005. However, this seasonal dimension of poverty is not captured by the official poverty estimates. According to the baseline survey of 2006, starvation among the rural households in the Rangpur region rises from 10% in the non-monga period to a staggering 50% in the monga season. About same proportion of households also have to ration food during both the monga and non-monga periods. Seasonal hunger is thus found to be an extension of year-round poverty and food deprivation.

The vast majority of poor households in Rangpur are found to adopt some forms of monga-coping mechanisms. While few of these measures may be welfare-enhancing (such as support provided by the government and the NGOs), others risk undermining future livelihoods (such as sale of assets). Poverty and its seasonality can thus be mutually reinforcing in an interlocking cycle that needs to be understood in the context of long-run livelihood strategies of the poor.

Among the most proximate causes of seasonal hunger in Rangpur is the seasonal loss of employment for landless wage labourers, which is explained by their overdependence on the agriculture sector and lack of employment diversification in the rural areas in general. Seasonal food price inflation may make monga more severe but is not a necessary correlate, as is usually the case in most famines. That is why monga may remain unnoticed as a form of silent hunger, since it is the abnormal food price hike that usually creates public outcry. This also explains why the government's interventions for food price stabilization as means to ensure food security have not worked in mitigating monga.

The various recent initiatives undertaken for combating monga in Rangpur includes introduction of new crop technology, public works and other safety nets, facilitation of out-migration, transfer of assets such as livestock, and specially designed microcredit programmes in addition to the regular ones. These measures are found to alleviate seasonal hunger in varying degrees. Together, their impact seems to have been greater than the separately estimated impact for each one, suggesting the existence of beneficial synergies and complementarities.

The beneficial impact of these initiatives in reducing the extent of monga is already visible (Figure 3). There are two important contexts in which these findings need to be interpreted. First, the accelerated rate of overall poverty reduction in Bangladesh during this period – by nearly 2 percentage points annually according to the official headcount poverty estimates – is likely to have had a favourable impact on alleviating monga. Second, the poverty reduction countrywide and the alleviation of monga in Rangpur have been possible in spite of the food price hikes of 2007-08.

Policy Implications

The official poverty statistics need to incorporate the seasonal dimensions of poverty and food deprivation. As shown by this research, this does not require additional data collection. Policy interventions should be designed in a way so as to strike a proper balance between short-run seasonal measures and longer-run programmes of removing endemic poverty. Social safety net programmes need to focus on both the protection and promotion aspects of livelihoods.

Since the monga season (coinciding with the late rains) is not often suitable for food for work and other public works, the year-round cash transfer programmes as well as seasonally targeted feeding programmes may be strengthened in the monga-prone areas. While monga can be dealt with in a sustainable way only by removing extreme poverty, seasonal programmes provide the poor more room to manoeuvre and enable them to better utilize their livelihood options.

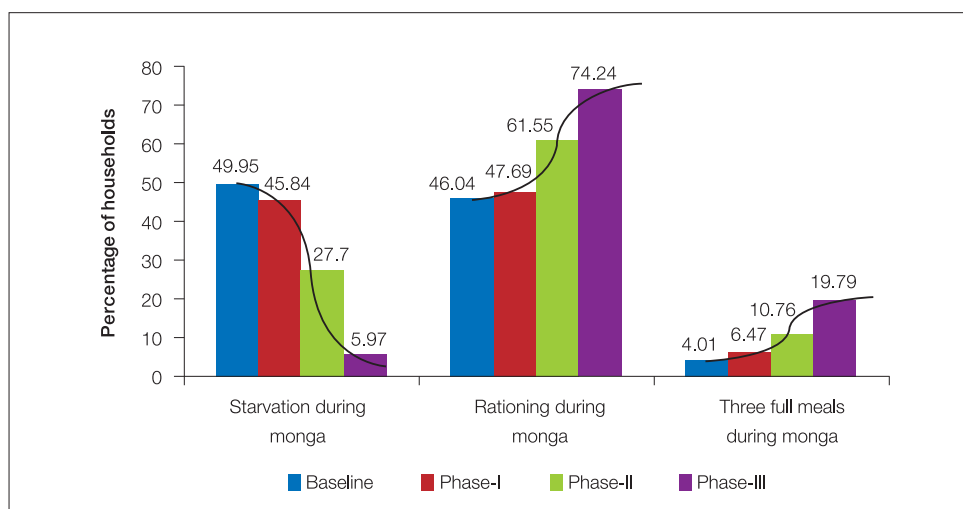
Agricultural R and D is clearly seen to have a key role in mitigating the agro-ecological and seasonal adversities while also boosting agricultural production. The recent introduction of some early-maturing modern rice varieties during the aman season in the Rangpur region is having a perceptible impact in reducing the extent of monga.

The evidence regarding the effectiveness of specially designed microcredit programmes is particularly important given the on-going debates surrounding the subject. The findings of this research suggest that microcredit programmes can be flexibly designed to reflect two very different characteristics: a banking

operation for the poor requiring financial viability, and a subsidized social safety-net type program for the hardcore poor. While the recent initiatives have produced positive results in reducing the intensity of monga in Rangpur, the sustainability of these results needs to be monitored. These initiatives have been prompted by widespread public awareness. Lack of similar awareness may have resulted in neglect in other regions vulnerable to seasonal poverty and hunger.

In the north, the areas on the eastern bank of the Jamuna in the Jamalpur district and the haor (depressed land) areas in the other northern districts remain ecologically vulnerable poverty pockets. The southern coastal regions are increasingly facing threat to livelihoods because of environmental degradation and climate change. This research has found that the areas with adverse agro-ecological environment are doubly disadvantaged; these areas are particularly vulnerable to seasonal shocks and may be neglected by the public infrastructure investments and other development programmes that help mitigate seasonality.

Figure 3: Alleviation of monga in Rangpur Division, 2006 - 2010



Notes: Based on panel data on 3,664 households out of 480,918 poor households in the baseline survey. The monga seasons refer to 2006 (baseline), 2008 (phase-I), 2009 (phase-II) and 2010 (phase-III). Starvation means skipping meals on some days and rationing means skipping a meal or having three half-meals daily.

Further Readings:

- *Khandker, Shahidur R. and W. Mahmud, 2012. Seasonal Hunger and Public Policies: Evidence from Northwest Bangladesh*, (book to be published by the World Bank, Washington, DC, with support from the Institute of Microfinance).
- *Khandker, Shahidur R., 2012. "Seasonality of income and poverty in Bangladesh"*, *Journal of Development Economics* (forthcoming).
- *Khandker, Shahidur R., M. A. Baqui Khailly and Hussain Samad, 2011. "Seasonal migration to mitigate income seasonality: evidence from Bangladesh"*, *Journal of Development Studies* (forthcoming).
- *Mahmud, W., "Revisiting seasonality of rural poverty and hunger: the role of public policies"*, V. V. Giri Memorial Lecture 2010 of the Indian Society of Labour Economics (*The Indian Journal of Labour Economics*, Vol. 54, No.1).

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