

# Mitigating Seasonal Hunger: Evidence from Northwest Bangladesh

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The seasonality of poverty and food deprivation is a common feature of rural livelihoods 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.

## Key Messages:

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

**The gains from the recent initiatives for combating seasonal hunger in the Rangpur region needs to be monitored and consolidated for ensuring sustainable impact.**

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

## Summary

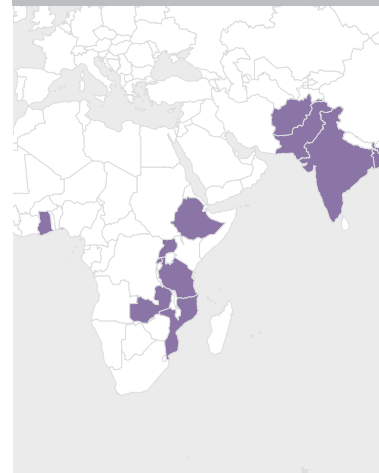
Seasonal food deprivation remains an important feature of food insecurity in rural Bangladesh, particularly in economically depressed and ecologically vulnerable regions like Rangpur in the northwest of the country. Not captured by the official annualised poverty estimates, the seasonal stresses may escape policy attention unless when made worse by natural disasters like floods or drought.

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

Some areas other than Rangpur, particularly in the southern coastal belt, have emerged as new poverty pockets due to agro-climatic adversities like the intrusion of salinity and increased severity, frequency and unpredictability of natural disasters.

## Policy Brief

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## Policy Motivation

Seasonal hunger induced by agricultural seasonality is a common feature of livelihoods in rural Bangladesh. More than 70 percent of the country's nearly 150 million people live in the rural areas, 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 employed in agriculture. The country is also prone to floods and other natural disasters. In such a setting, one would therefore expect to find seasonality of income and consumption to be a regular phenomenon, only to be made worse by the occurrence of 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 compared to 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 the greater Rangpur region in particular; (b) to examine the causes of why seasonality of income and consumption is still persistent and more marked in Rangpur as opposed to 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 of the country that are emerging as new poverty pockets because of environmental degradation and climatic changes.

## Research design

The first set of data used in this research comes from the 2000 and 2005 rounds of the nationally representative official Household Income and Expenditure Survey (HIES); the data can be used to construct seasonal panel 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 the situation of *monga* (seasonal hunger) in the Rangpur region. This data was collected as part of a new initiative of the Palli Karma Shayak Foundation (PKSF), a premier wholesale facility of microfinance, to combat extreme and seasonal poverty in that region. This was in fact a household census in the selected

villages, collecting information on almost half a million poor households which represented nearly the bottom 60 percent of all households in the survey villages. The InM survey data used in this research also include household panel data from two follow-up surveys conducted in 2008 and 2009 in respect of a sub-sample of the InM baseline survey of 2006, which allowed examining the impact of the new initiatives in a quasi-experimental setting.

## Research findings

The seasonality in food consumption is observed across all of 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.

The official poverty estimates cannot capture the much larger numbers of households that are seasonally poor. Among the poor households surveyed in Rangpur in 2007, the proportion which faced the most severe form of hunger, that is, occasional starvation went up from less than 10% in the non-*monga* season to a staggering 50% in the *monga* season. The households which undergo starvation during the *monga* season are also likely to experience food deprivation, though in a milder form of food rationing, in the non-*monga* seasons. 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; some of these may be welfare-enhancing (such as support provided by the government and the NGOs), but others are adopted only under distress at the risk of 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 the lack of agricultural and rural diversification. Seasonal food price inflation may make *monga* more severe but is not a necessary correlate as in the case of 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 a means of food security have not worked to mitigate *monga*.

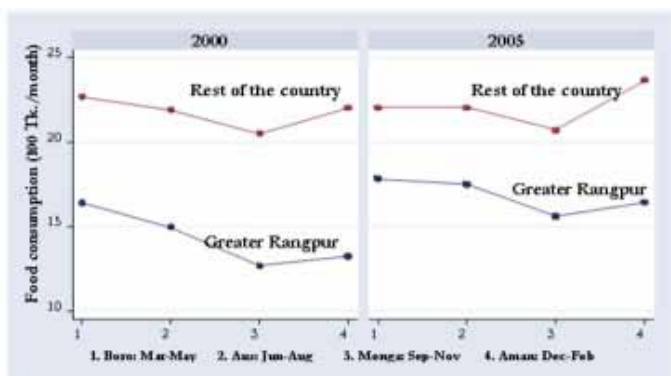
The various recent initiatives undertaken for combating *monga* in Rangpur include introduction of new crop technology, public works and other safety nets, facilitation of out-migration, transfer of assets like livestock, and specially designed microcredit programmes in addition to the regular ones. 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.

### 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 seasonally-oriented measures and longer-run programmes of removing endemic poverty.

**Figure 1: Monthly household food consumption by season, 2000 and 2005 (deflated by regional cost of living indices at 2000 prices); rural samples of the HIES**



Social safety net programmes need to focus on both *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 safety net programmes such as cash transfers and vulnerable group feeding may be seasonally targeted in the *monga*-prone areas. While *monga* can be dealt with in a sustainable way only by removing extreme poverty, seasonally-oriented programmes provide the poor more room to manoeuvre and enable them to better utilise their livelihood options.

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 their two very different characteristics: a banking operation for the poor requiring financial viability, and a subsidised social safety-net type programme 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 creation of 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 the 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 public infrastructure investments and other development programmes that help to mitigate seasonality.

## Further reading

This research has been supported by the Institute of Microfinance, Dhaka, and the World Bank; further details may be found in the following:

Khandker, Shahidur R. and W. Mahmud, *Seasonal Hunger and Public Policies: Evidence from Northwest Bangladesh*, book manuscript, Washington, DC: World Bank (forthcoming).

Khandker, Shahidur R. "Seasonality of income and poverty in Bangladesh", *Journal of Development Economics* (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. 5, No.1).

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