

# When the year turns ill

by Robert Chambers

**M**uch analysis of rural poverty examines who the poor are; some attention is paid to where they are; but there is little awareness of when they are poorest, of the times of year when rural people are most deprived, suffer most and are most at risk.

Yet there is much evidence that with tropical seasons the worst time often lies between the onset of the rains and the end of the harvest. For pastoralists the crisis comes earlier, in the late dry season. The great majority of rural people in tropical environments are, however, cultivators or labourers, and for them the worst time is usually during the wet season. Food is short, food prices high, cash reserves low, and agricultural work hard. Much human physical energy is needed for land preparation, sowing, and weeding at just that period when there is least to eat. It is no coincidence that there are many local names for this lean or hungry season. It is only too well known.

To make things worse, this is also a time of illness. Tropical rains encourage the breeding of insect vectors, fungal infections, and bacteria. Diarrhoeas often peak after rains have washed faeces into unprotected water supplies. In moist and warm conditions, cooked food left standing is more rapidly overgrown with bacteria. Malaria, guinea worm disease, dengue fever, and skin infections are often most prevalent during the rains. Weakened by hard work and lack of food, people are less resistant to disease. So the hungry season is also a sick season.

## The most affected

Women and children are particularly vulnerable. Rural women tend to terminate breast-feeding as the rains come, anticipating hard work, so that children change to a less nutritious diet at this time. Burdened with heavy work (weeding in Africa, transplanting rice in Asia) women have less time for childcare or preparing food. For those mothers who continue to lactate, the output of breast milk is reduced. Since conceptions tend to be common a month or two after harvest, the rains are also a time when women are often in late pregnancy. The stress can be extreme. In one village in the Gambia, a medical team found that in the month of August, women in their last three months of pregnancy on average lost 1.4 kg of weight. For children born at these times, lower birth weights reflect the physical stress of their mothers, and mean worse prognoses for growth and survival.

Indicators of well-being confirm these generalizations. Body weights decline in the rains where calorie output in work exceeds the intake in food and as sickness takes its toll. Morbidity and mortality rise, neo-natal mortality especially so. As so often, those who are poorer suffer more. They may need, desperately, to be able to work at this time: cultivators in order to secure future food for the family; the landless because they must earn at this time of the year when work can be found. Those who are less poor have food stocked or can buy it and can gain access to medical services. But those who are poorer may have to use up their body reserves, such as they are, and are often physically or financially out of reach of health services.

So this is a time of year when poor people are at their poorest. Regularly, seasonally, they are screwed down again and again in their poverty. This is

also when they are most vulnerable to becoming poorer. It is the time when they have least, in stocks of money or food, as buffers against contingencies. If food runs out, or if there is a sickness in the family, or if there is some other acute need for money, the family is forced to sell assets or to fall into debt, selling or mortgaging standing crops, livestock, land, jewellery, pots, pans or their future labour. Interest rates are high, and small farmers who borrow money for high-priced food before harvest lose heavily, having to repay in cash after harvest when prices are low for the food they have grown. Sales of assets and debts incurred often act like ratchets, irreversible shifts downward into deeper poverty and dependence.

To some of these generalizations there are exceptions. Notable among them are the stresses of the hot dry season in much of North India, making that in some respects a more difficult time than the monsoon. Each environment and each social group should be analysed in its own right before accepting that the generalizations apply but there is already much confirmation of most of them. They need to be boldly asserted because they are so often out of focus for those who are urban-based. Once stated, they are obvious to the point of embarrassment but they are also widely overlooked.

To see why this should be so, we can examine the behaviour and experience of urban-based professionals. Urban

The bias against perceiving the worst times of year is compounded by the pattern of rural surveys. Whole institutes concerned with rural research concentrate their fieldwork in the dry seasons. Spot nutrition surveys are carried out at just those times of year when things are best: roads are dry for travel, people are healthy, food stocks high, and the poorer people at their happiest, healthiest and heaviest.

Rural fieldwork is for the dry seasons: the rains are for data analysis with a good roof over one's head. And even when year-round surveys are conducted, the wet season data may be the least reliable. For that is when supervision is most difficult, travel most unpleasant, interviewers most likely to be sick, and above all respondents busiest, most under stress and least able or willing to give up time and energy for questioning. Concern to avoid inconveniencing respondents when they are pressed provides a neat justification, both practical and moral, for avoiding research at this time. And even when year-round surveys are conducted, the volume of data and the difficulties of analysis are such that seasonal deprivation may still remain hidden. Researchers or funds or both may be exhausted or diverted elsewhere before seasonal patterns are examined. Seasonal deprivation is hidden in annual averages.

Standard health statistics are also a problem, understating wet season sickness. Records of attendances at clinics and hospitals are all too easily accepted

Professional training also prevents the urban-based from recognizing the extent and nature of seasonal problems and seasonal deprivation. Much education and training in or for tropical areas is still influenced by experience in temperate climates where patterns are different. In the temperate climates, the period before harvest is summer, a healthy time of year; in the tropics, the rains which precede harvest are unhealthy. Nor is there any equivalent in temperate climates to the short flush of nitrogen in the soil following rain which makes timely cultivation so important in the tropics, so that crops catch the nitrogen before it is lost to weeds or the atmosphere. Key linkages between health and agriculture are easily missed. Professionals are trained in tunnel vision. A doctor may note a high incidence of malaria but not recognize its effect on small farmers' production and their subsequent poverty; an agriculturalist may note untimely cultivation or a failure to weed, but not the sickness and malnutrition which it reflects; and both may miss the dependence, indebtedness and exploitation which follow. It is all too easy to fall for partial diagnoses and partial prescriptions, underestimating seasonal adversity.

Several factors conspire thus to hide seasonal deprivation. Even in a country with an acute seasonal crisis in rural areas, it is not so surprising to be told in the capital city that there is no seasonal problem. The only seasonal problem of any seriousness for the urban elite or the visiting expert is travel during the rains, and that is easily solved by not going. The rural poor may be hit simultaneously by malaria, diarrhoeas, skin infections, hard work, lack of food and malnutrition, but urban-based professionals are not there to see it. They come later, if at all. The sick and hungry seasons go unseen.

The neglect of seasonal deprivation presents an opportunity. In many envi-

season. Sensitive agricultural research can seek to develop varieties and practices which fit farming systems so that some food crops can be harvested earlier, shortening the hungry season. Consumption credit through saving societies is one possible means of avoiding crippling loans and interest rates.

For health care the implications are strong. The costs of sickness to the family and to society are highest during the agricultural seasons. This suggests priority to those areas where sickness most affects agriculture, to the prevention and cure of those diseases which are most debilitating at times of peak agricultural labour and food shortage and to the stocking of rural clinics with drugs according to seasonal need. Caution is also indicated in introducing mobile clinics, since during the rains these are liable to be restricted in their movements and out of touch with precisely those who need their service most.

## Extra care

Women and children deserve special attention. Seasonal creches for children whose mothers have to work is an obvious measure, implemented already in some places. Less obvious is the value of techniques which reduce women's unpaid drudgery, such as fetching water, reducing pressures on their time and energy. Special attention is indicated for pregnant and lactating women during the rains, and for children born at that time.

More generally, the problem is one of learning on the part of urban-trained and urban-based professionals. Not themselves subject to seasonal deprivation, how can they recognize and understand its significance for others? Several measures can be suggested that those who fund research encourage and insist on seasonal analysis; that more rural surveys are counter-seasonal, concentrating on the worst times that in-service training for government staff require them to conduct rural research during the sick and hungry seasons; that seasonal analysis be insisted on as a part of rural planning.

One thrust is seasonal analysis conducted jointly by members of different departments and disciplines. The question: 'What is the worst time of year for the poorer people?' can be addressed by agriculturalists, health workers, economists, nutritionists, administrators, social anthropologists, and above all by the poorer people themselves. They, after all, are the greatest experts on most of their problems. The answers, set together, may draw together departments, disciplines and rural people, enabling them to see adverse interactions and to identify what can be done.

Counter-seasonal strategies are not panacea. They do not tackle deeper causes of poverty. But they do raise a agenda of questions which lead to more effective rural development. To enable poor families to stay above a minimum threshold for the worst time of the year may be easier and more cost-effective than trying to create entirely new livelihoods. A secure and better life at the worst times may also be a precondition for action by the poor to help themselves, to make other gains and to achieve reform through redistribution. After such gains and such reform counter-seasonal measures will still be needed; but the need will be less acute.

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Further information may be obtained from the Institute of Development Studies, University of Sussex, Brighton, BN1 9QE, UK. Of interest are: 'Seasonal dimensions to rural poverty: analysis and practical implications', IDS Discussion Paper 14 (1985) plus postage; Richard Longhurst and Phil Payne's 'Seasonal aspects of nutrition: review, evidence and policy implications', IDS Discussion Paper 145, 1979 (1985) plus postage; and Robert Chambers's 'Health, agriculture and rural poverty: why seasons matter', IDS Discussion Paper 148, 1987 (1987) plus postage. These papers also provide references to other relevant sources.



The tropical rainfall period not only provokes debilitating disease and food shortages but also renders assistance difficult and impedes research into the problems of remote rural areas at that time.

people are much less exposed than rural people to adverse seasonality. More significantly, and again embarrassingly obvious, is the simple fact that in the tropics the rains are a bad time for travel. Remote areas, further from main roads, where more of the poorer people are concentrated, are cut off or hard to reach because of floods, broken bridges, washaways, bad roads, mud, black cotton soil, and the like. High oil prices, shortages of spare parts, and cuts in funds for local travel by government staff inhibit travel anyway; and this is compounded by the greater risks of getting stuck or of damaging dilapidated vehicles during the rains. And when professionals do leave the towns, they hug the tarmac and see only the better off people along the road. Those most adversely affected by the wet season are those least likely to be seen at any time but especially when things are at their worst.

as indicators of relative morbidity. But they are nothing of the sort. Many factors depress attendances during the rains. These include the difficulties of travel, shortages of money, physical weakness, and the sheer need of all the family to work. Attendances may be depressed because drugs are out of stock, because of delivery problems in the rains, or because standard monthly quotas run out more quickly. What drugs there are may anyway be reserved for those who are less poor. The converse is also true. In the dry season after harvest, travel is easier, and money less scarce. The pressure of urgent work has lifted, and clinics may be better supplied. Poorer people are more likely to be able to go for treatment and more likely to receive it. One can see, thus, that attendance statistics at clinics and hospitals understate relative morbidity during the rains, and can easily mislead health planners about the true needs at that time.

Some are well known. Irrigation which provides two or three crops instead of one, and which increases yields and reduces risks; effective rural works programmes which provide employment, food and income in the agricultural off season so that labourers and small farmers can build up reserves to carry them through the rains; improvements in small-scale on-farm food storage; ensuring food supplies during the rains at reasonable prices; extending networks of all-weather communication. What has perhaps not been recognized fully is just how beneficial such programmes can be for those who are seasonally most at risk.

Other measures have received less attention. Guaranteed floor prices for food crops at and just after harvest can ease the burden of debt repayments by small producers and leave them more food to store for the following lean