

Climate Change and Massive Distress in Bundelkhand

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After nearly five years of drought conditions, rains came to the Bundelkhand region in a big way in June and July last year, and the authorities were quick to announce the end of drought. But six months later, as I sat surrounded by people of Niduwa village (Nairani Block) of Banda district, I was repeatedly told that the drought may have ended for the government but if anything, their condition this year is even worse than the previous year.

To understand what these villagers are trying to say, one must look at not just the total quantity of rainfall in a particular year but also its timing and pattern. Last year it is true that when heavy early rain came in June, there were initial hopes of a good crop. But what happened actually was that the July rains were so continuous that most kharif seeds could not be sown properly. '*Beej jam nahi saka*' is how many farmers expressed the prevailing conditions. While early rains were continuous, there were hardly rains after mid-August. Again for the rabi crop, till the time of my visit in the first week of January, there had been no winter rain. As a result although the excessive rain within a very short span of time may result in the total annual rainfall for this region being close to the average rainfall, a more detailed story of the crucial farming stages when rainfall failed the expectation of farmers based on long experience will help to explain why conditions in the village are pathetic long after the officially declared 'drought' has ended.

Niduwa is one of those villages which has benefited relatively more extensively from the Central Government's loan waiver scheme. Yet as an educated youth, Ved Prakash Pandey, asserts,

Most villagers are still so indebted to moneylenders that they are fearful of going to the main road for fear of being troubled by moneylenders. What is more, most villagers have either already migrated to distant areas, or else are preparing to leave in the near future.

As Siyaram, a worker, says,

People may wait till the festival of Makar Sakraanti,

but they will not really celebrate the festival as they have nothing to celebrate.

Villagers invited me to come and take a look in their houses to see whether there is any grain left.



THERE have been reports of extreme distress from many parts of Bundelkhand—reports of hunger, starvation deaths, large-scale migration, suicides related to extreme economic stress and indebtedness. Several factors have been at work, including inequalities and oppression. While these socio-economic distortions existed earlier also, what has been highlighted in recent years is a prolonged drought. In Banda district, deficit rainfall (as compared to the estimated normal rainfall for the district) was 30 per cent in 2004-05, followed by two per cent, 52 per cent and 57 per cent in the next three years. In neighbouring Mahoba district, the situation was even worse—19 per cent deficit in 2004-05, followed by deficit of 40 per cent, 21 per cent and 66 per cent in the next three years. In Tikamgarh district of Madhya Pradesh also, we see continuing deficit for all four years—46 per cent in 2004-05, followed by 28 per cent, 43 per cent and 64 per cent in the next three years. This, overall, is the situation in all the 13 districts of Bundelkhand with some variations, more or less.

But these official statistics of deficit rainfall need to be pursued further to include other aspects of erratic, unexpected weather behaviour. The experience of Niduwa village regarding erratic rainfall has been shared by most other villages of the Bundelkhand region and the villagers complain that rainfall has been departing from expected patterns leaving farmers in the lurch. For example, winter rain for a stretch of a few days, called Jhari, is considered very good for the rabi crop but has been missing in recent years. On the other hand, there is a greater tendency for rains, accompanied by strong winds and hailstones, to come around crop harvesting time or just before this when the crop is ready,

and this causes very great damage after all the hard work has been done by farmers. Yet another aspect of erratic rainfall in recent times has been rain occasionally being limited to very narrow patches.

In addition, people here talk of wheat crop maturing earlier due to greater exposure to heat and in the process grain formation being weaker; reduced flowering of trees like Palash and greatly reduced yields of valuable minor forest produce like the highly nutritious *mahuwa*, *anvula* and *chiranjai* as well as commercially useful *tendu* leaves.

Ved Prakash Singh, the Extension Scientist at Kisan Vigyan Kendra, Majhgavan, says:

Recent records relating to rainfall, humidity and temperature indicate erratic behaviour of weather

and weather patterns which are different from established norms. During the last five years not only has the quantity of rainfall been below average norms, in addition the distribution of rainfall, its timing has been erratic, with rainfall deceiving farmers at critical times of farming when rain is needed.

He adds:

Due to overall increase in heat, cereal crops particularly wheat mature earlier. The stalk grows quickly without allowing adequate tillers to emerge, leading to overall reduction in yield. There are problems in proper grain formation.

All this taken together indicates a more emphatic change in weather patterns, a more pronounced departure from expected weather behaviour than would have been observed in the

Confronting Ecological Ruin and Oppression: A Profile of Madulihai Village

Madulihai village is located in Majhgavan block of Satna district (Madhya Pradesh). This block, bordering Chitrakut district (Uttar Pradesh), is generally considered a part of the Bundelkhand region. Madulihai village is very close to Chitrakut district. This is one of those villages from where child deaths related to malnutrition were reported and much discussed in Madhya Pradesh.

In this village (a part of Singhpur Panchayat), on the one hand, we see rapid deterioration in forest and farming related livelihoods due to increasingly erratic and hostile weather. On the other hand, we also see how oppressive conditions have resulted in the alienation of the land of tribals.

Mavasi tribals like Dadu Lal, Premiya bai and Devkali related a sad story of declining and erratic rainfall due to which their rain-fed agriculture (on whatever meagre land they have) has collapsed. Due to low land-base, they had been depending more on collection of minor forest produce which provide a good source of nutrition and also some cash earnings. However, compared to the situation a decade back, the availability of *mahuwa* has declined by 90 per cent, the availability of *anvula* has declined by 95 per cent. Collection of *tendu* leaf is down to about 50 percent of what was possible earlier. Earlier roots and tubers like Angitha, Birain, Kaanda, Khaniwa, Bhasura and Chaunga used to provide protection from hunger as these use

to be available in plenty for all people, but now these are simply not available.

We just lit a fire, roasted these roots and tubers and ate them with one *maatha* (*chaach*) and then slept peacefully with no worry.

But now this free food from forest is just not available.

But not all decline can be attributed to ecological ruin. Tribals here recall how their forefathers used to own land, but this was snatched from them under one pretext or the other by resourceful, influential persons. Keshali recalled how her father-in-law used to own land, but when he died an influential person occupied this land. Her mother-in-law Sonia was denied wages for a long time. Such examples reveal how oppression of tribals has played an equal role in their impoverishment which ultimately led to malnutrition related deaths of children. Social activists reported at least six such deaths from this village last year.

The much publicised Rural Employment Guarantee Scheme has performed poorly here. These people don't even have job cards, and even if they got some work they didn't receive a major part of the wages due to them. But the potential remains that such schemes are used to increase water and moisture conservation as well as green cover, and this combined with restoration of their land, can check the steep decline in the livelihoods and nutrition of these people. ■

case of just a prolonged drought. It is in this context that the increasing erratic weather behaviour as seen by people, particularly farmers and forest-produce gatherers, should be linked to the global phenomenon of climate change and understood in this context.

HOWEVER, while the impact of climate change on the life and livelihood of these villages needs to be recognised and assessed, a note of caution is also needed. In recent decades large-scale ecological ruin has also been caused by indiscriminate cutting of natural forests, ruthless mining operations, chemical-intensive agricultural technologies and excessive extraction of ground water. It is very important to check these local causes of ecological ruin and their harmful impacts. Those responsible for such damage should not be allowed to take cover behind climate change (in the sense of attributing all ecological damage to climate change, so as to divert attention from their misdeeds). Any planning for sustainable development of the region has to include reduction of all these causes of ecological ruin and checking the activities of those responsible for this ruin.

Raja Bhaiya, a promising young activist and co-ordinator of Vidya Dham Samiti, says:

The earlier well-demarcated seasons are increasingly less predictable, enhancing the vulnerability and uncertainty of farming operations. Protecting traditional water sources, increasing green cover and giving more attention to the needs of poorest, more vulnerable sections is important.

Gaya Prasad Gopal, the founder of the Akhil Bharatiya Samaj Seva Sansthan, a leading voluntary organisation of this region, says:

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In these times of greater vulnerability we can learn much from traditional wisdom - farming methods as well as diversity of seeds and crops. This will be helpful to find crop varieties which can cope with many different types of weather conditions and yet are suitable for local soil conditions. Conserving water and moisture is of the greatest importance to cope with these difficult times.

The ABSSS has embarked on several promising initiatives which hold out a lot of hope for ensuring sustainable development in these uncertain and difficult times. As Bhagwat Prasad, the Director of the ABSSS, says:

We have taken up these initiatives in Patha region, a region known for serious drinking water problems for a long time. We are treating about 5000 hectares of land to try to stop and conserve as much flowing rainwater as possible through a series of checkdams, tanks and other structures. Once the base of water and moisture conservation is achieved, we plan a range of environmental friendly activities to raise farm production and increase indigenous trees-species, improve pastures and animal husbandry. All this will be achieved with the close involvement of people with special emphasis on weaker sections.

The funds for these watershed projects come partly from the government (through the National Bank for Rural Development—NABARD) and partly from donors like Sir Dorabji Tata Trust. Such initiatives need to increase, no doubt, but in addition basic changes in the overall thrust of the government policies need to be made. The government policies need to reflect the understanding that it is not 'business as usual', that we've to confront increasingly difficult conditions which are probably irreversible and which are probably harming people's life and livelihoods in worse ways than ever before. This seriousness should equally be reflected at the implementation level.

In the recent past even when the government's priorities have been right and more funds have become available for small tanks and for a '100 million trees' massive afforestation project, these proper priorities and good intentions have been marred by poor implementation—careless chase of steep targets as well as that old enemy, corruption. Unless the government policies and governance practices change adequately to cope with the fast deteriorating environmental and livelihood conditions, it will not be possible to check the extreme and worsening distress of the people of this region. ■

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