

Drought by Design: The Man-made Calamity in Bundelkhand

PERSPECTIVES

Despite its rich resources like forests and minerals, Bundelkhand is a region of distress and crisis. A study finds that the distress of the region simply cannot be explained by the absence or irregularity of rainfall. There are long-term structural problems which have had a cumulative effect over the years. Reasons for the present unviability of agriculture should be sought in the historically determined social relations of production, the intimate correlation of caste and landownership in the region as well as the neglect of traditional water management systems and the push towards cultivation of water-intensive commercial crops.

The failure of south-west monsoon in 2009 has, for once, drawn an attention towards agriculture in our country. Newspapers and television channels in July, August, September and October were filled with news of distress from different parts of the country. Drying up of lakes and fights over water in Bhopal, empty reservoirs of big dams, more farmer suicides in Andhra Pradesh and Vidarbha, migration from parts of Bihar and Bundelkhand, distress sale of cattle (one of the most valuable assets of peasant households), informal loans at usurious rates for arranging irrigation, and abandonment of cattle at the famous Pushkar fair of Rajasthan – all underlined once again, the monsoon dependence and vulnerability of agriculture in our country.

However, as the kharif season ended and October witnessed a spell of heavy rainfall in some parts of the country, the concern for agriculture receded as well, just like the south-west monsoon. The government has even announced that the problems of rural economy will be taken care of, if the rabi (winter) crop is successful. In order to understand the impact of drought, in October 2009, a 13-member team from Perspectives visited three districts of Bundelkhand, a region known for its history of drought-proneness.

Bundelkhand

Bundelkhand is the name of the cultural-geographic region in central India, which is bounded by Vindhyan Plateau in south, Yamuna river in north, Ken river in east and rivers Betwa and Pahuj in west. Despite a long-standing demand for autonomy and statehood, Bundelkhand remains administratively divided between Uttar Pradesh (UP) and Madhya Pradesh (MP). The seven districts of UP (Jhansi, Jalaun,

Hamirpur, Lalitpur, Banda, Chitrakut and Mahoba) and the six districts of MP (Datia, Tikamgarh, Panna, Damoh, Chhatarpur and Sagar) spread over an area of 70,000 sq km form the Bundelkhand region. It has a population of 15.5 million people. The region is famous for the reign of Bundela (16th-18th century AD) and Chandela (10th-13th century AD) kingdoms, Rani of Jhansi and the legendary king Chhatrasal, the temples of Khajuraho, the tiger sanctuary and the diamond mines of Panna. But in the last four to five years, it has been in the news for the drought conditions and distress that has plagued it. There have been reports of mass migration, starvation deaths, farmer suicides and even the “mortgaging” of women over the years. According to the J S Samra Committee report, on draught mitigation strategy for Bundelkhand, historically, the Bundelkhand region of UP and MP had a drought every 16 years in 18th and 19th centuries, which increased by three times during the period 1968 to 1992. The most recent and continued period of poor rainfall recorded in Bundelkhand was in 2004-07, when below average and erratic rain was reported in most parts of the region in all the years.

A Region Without Hope

The week preceding our visit had witnessed some rainfall, so the dry and parched earth landscape usually associated with drought conditions were absent. However, the greenery, as the villagers told us, was deceptive. The untimely rainfall had adversely affected the *arhar*, *til* and *moong* crops (these pulses had been sown late in view of the deficient rains), and allowed the growth of poisonous field grasses, which were unfit for cattle consumption. As a newspaper reported, “Wild grass has taken over farm lands, growing indiscriminately and giving the illusion of drought-recovery”.

There was no illusion of recovery amongst the villagers though. The narrow dust filled lanes of the villages, stray cattle on the roads (abandoned by their owners because there is not enough fodder or water), broken mud huts, the few utensils and implements that were all the material possessions in the households, and the

Perspectives (contact.perspectives@gmail.com) is a non-funded group of students and teachers of Delhi University working to create a space for debate and discussion on issues of social, economic and political relevance.

children with brown hair, distended bellies and bow legs, tragically illustrated the abject poverty of the region and its people. The Dhimar mohalla (whose traditional caste occupation is fishing and other water-related activities) in Ragholi village in Chhatarpur did not even have electricity in their households.

There was a winding queue of women carrying pitchers, buckets and drums, in front of the lone water tank with four taps in Adhiyara village (Chhatarpur), when we reached there at 11 in the morning. Women of the dominant caste families were given preference for drawing water, and the dalit women got water only in the end. When the rains fail completely for successive years, the situation is like this in all villages of the region. Villagers of Adhiyara had to take drinking water from the pond used by their cattle in case of severe shortage. The peasants and the local activists told us that the water in the lakes and ponds of Bundelkhand today, would dry up in a month or so, and then the villagers will be dependent on the tube wells (sometimes, in other villages) or water supply tankers, provided at the whims and fancies of the district administration.

What we witnessed in Bundelkhand was much more and worse than the ravages of a failed monsoon. The entire economy of the region has collapsed. There has been massive migration, where millions of people have left their villages to come to cities like Delhi, Mumbai, Mainpuri, Etawah, Aligarh and Lucknow to work in the brick kilns, pull rickshaws or labour as construction workers. The "drought" has now lasted for more than 10 years, with the exception of 2008 when rainfall was adequate. This continuous failure of rainfall has meant that agricultural land can neither provide work for the landless labourers, nor can it provide sustenance or livelihood to the cultivators who are dependent on it. Villagers told us that if we had arrived 10 days later, that is after Diwali, we would have found most of the villages empty and devoid of all the able-bodied members. There were three starvation deaths in Maudaha block of Hamirpur district in this season and 18 farmer suicides in Lalitpur district in 2008. The question then before us is whether the failure of rainfall is an adequate explanation for distress,

poverty and migration of such magnitude and scale.

Lives and Livelihoods

Agriculture forms the backbone of the rural economy in Bundelkhand. However, the soil and semi-arid climatic conditions of the region (characterised by recurrent floods as well as drought) make cultivation an extremely difficult occupation with uncertain returns for the farmers. Both the red and the black soils found across the region have poor organic content. The red soil has poor phosphate and nitrogen content; hence, it is not suitable for farming. Most of the cultivation is rain-fed in nature. Only 44% of the net sown area in the seven districts lying in UP and 46% of the net sown area in the six districts of MP are irrigated by some or the other means, i.e., major or medium irrigation schemes, surface water sources or groundwater.¹ The traditional crops of the region are millets (*jowar* and *bajra*), pulses, mustard (*lahi*) and linseed. In fact, Bundelkhand was known as the bowl of pulses for the country (just as Punjab was known as the breadbasket). The cultivators here grew linseed (*alsi*), arhar, *masoor*, and til for sale in the market. But the drive for water-intensive commercial crops (like wheat), which are unsuited for the agro-climatic conditions of Bundelkhand, has reduced the acreage under pulses.

The yield of crops is low. Farmers in Mamna village (Hamirpur) told us that they get only 3-4 quintals of wheat per bigha when there is adequate water available (1 bigha equals 0.4 acre approximately).² In drought conditions, the output declines to one quintal per bigha. Similarly, the yield of arhar is two quintals per bigha in case of adequate rainfall. Sometimes, when the rains fail completely, the crop yield is less than the amount of the seed sown. According to farmers in Mamna, a family has to possess at least 20 bighas of land to subsist on agriculture. Any family which owns less land is forced to work as labourers in the village or migrate.

We saw in the different villages that cultivable land and other natural resources are inequitably distributed across classes and castes in the region. Caste is an important determinant of access to natural resources like forests, land and water, and

to political and social power in Bundelkhand. Families belonging to the upper and middle castes (Thakur, Rajput, Yadav and Lodhi) own large landholdings of 50 to 250 bighas, while the dalit families (Chamar, Basod, Koli) were almost uniformly landless or marginal farmers. The dominant castes occupied positions of power in the panchayats (and other local administrative bodies) and benefited from all the government schemes and financial resources, even in cases where the panchayat seats were officially reserved for the scheduled castes. The *pradhan* (panchayat president) of Dhanauri village (Hamirpur) owned 50 acres of land. Sukhiya of Jalalpur village (Hamirpur) narrated how *Thakurs* of the neighbouring Kheda village had taken over 25 bighas of land owned by her family. Rajput families controlled the bore wells used for irrigation in Teeli village in Mahoba district. The poor and landless families in the villages complained that the upper caste landowners possessed below poverty line (BPL) ration cards, while they possessed above poverty line (APL) cards. There was evidence of caste-based discrimination as well. The dalit families of Ragholi village said that their women were abused by the Thakurs when they went to fetch drinking water from the private wells. Wages for agricultural work were paid with a delay of 8-10 days, and needless to say, much lesser than the legal minimum wages. Deeply rooted caste and class hierarchies permeate every aspect of social and economic life of the people, from access to basic resources like water to the functioning of government-funded schemes like the public distribution system (PDS) and National Rural Employment Guarantee Scheme (NREGS).

The shifts in cropping pattern, mechanisation and the introduction of hybrid varieties of seeds have brought new problems with them in Bundelkhand. Commercial cultivation of water-intensive crops like soybean (in the districts of MP), cotton and wheat have meant increasing demands on the scarce water resources and made drought resistance even more difficult. Traditional crops like gram, als and mustard have long roots, which makes them more compatible with the arid topography of the region. Indigenous seed

varieties like *gathiya* (a variety of wheat) required little water and no fertilisers, and were thus suited to the climate of the region; they have disappeared after introduction of high-yielding variety (HYV) seeds. The machines used for ploughing leave bigger fissures in the soil which causes a greater loss of moisture.

In sum, it can be said that agriculture does not even fulfil the subsistence requirements of the majority of the people, especially the lower castes, landless and the poor. There are virtually no industries, work or opportunities for employment outside agriculture in the region (except mining, which will be discussed later). We witnessed basket weaving using stems of the arhar crop in Mamna village. The income for the weavers is barely Re 1 per basket. One person can earn Rs 50 in a day from basket weaving. The dalit landless labourers have to harvest the arhar crop of the cultivators, store it in the godowns for free and then pay Rs 1,000-1,500 to acquire a trolley of stems (which can be used to make 200-250 baskets). Clearly, this was an occupation which the small and marginal farmers and agricultural labourers resorted to, more out of desperation than out of choice.

Desperation inevitably leads to migration. Thousands of men and women leave their homes after November and migrate to the brick kilns in Etawah, Lucknow and Mainpuri. Or, they go to cities like Jabalpur, Indore, Bhopal, Delhi or Mumbai where they work as manual labourers and construction workers. They return only in June when it is time for sowing the kharif crop. The adolescent boys and girls also go with them, either to work themselves or to take care of the infants. Villagers reported that only the old and the infirm were left in the villages during this period, with no one to take care of them. Life is not easy at the brick kilns; two people can make 500 to 700 bricks in a day and a 1,000 bricks fetches as low as Rs 350. But there is not any choice. The government, after all, has forsaken the region and its people.

Where There Is No Welfare

In the midst of such despair and distress, what came across as striking was the complete absence of all the welfare schemes and functions of the government. We

found almost no beneficial presence of the government – functioning schools, health centres, aanganwadi, integrated child development services (ICDS) centres or ration shops – in the villages we visited. The only exception was the village revenue official (*lekhpal*) we met in Mamna, moving around in his bicycle distributing cheques under the “agricultural grant scheme” to the villagers. The villagers said that this was in lieu of the failed crop of that season. The amount fixed was Rs 320 per acre for all peasants who own less than five acres of land and a fixed amount of Rs 2,000 per acre for landholdings above five acres. That this meagre amount is grossly insufficient to cover for a season’s crop losses does not need to be said. The insensitivity of the government is underlined by the fact that only those cultivators who had actually sown the crop are entitled to drought relief; those who did not sow in anticipation of the poor rainfall remain excluded. Agricultural workers and sharecroppers are automatically excluded because they do not own any land. It is also an example of cruel humour that Hamirpur district has not been declared drought affected by the UP government, despite the fact that all the adjacent districts have been so declared.³

The people have been left to fend for themselves for all the basic necessities of life – nutrition, drinking water, health, education and social security. The government schools are in an abominable condition with not more than one primary school for every two villages. The nearest high school is 18 kms away from Jalapur village (Hamirpur). One of the parents complained “We can either feed our children or spend money on the transportation to send them to school”. Teachers did not come to school on most days in Mamna village (Hamirpur) and parents said that they sent their children only for the mid-day meal. The school in Dhanori village was not open when the team visited the village. The primary health centres in villages were either absent or dysfunctional. Pregnant women in Ragholi village had to be taken to Chhatarpur town for delivery; a one way trip costs Rs 400. The only function that government hospitals in the area did perform was illegal sex-selective abortions for a bribe.

The NREGS has been a complete failure in all the districts of the region. There is little effective employment being provided under the scheme, with there being not one active work site visible in any of the villages. A number of families possess job cards which legally bind the government to give them employment within 15 days of applying for work, but in vain. Only those who are close to the village pradhan have received any benefit from the scheme. Others, who were able to gain employment, complained of having worked about five to six months ago, without having received a single paisa till date. Harish Kumar of Mamna village showed us his two-year old job card which did not have a single entry. He got work for one and a half months and even sustained an injury while working but is still waiting to be paid. We were shown at least 10 empty job cards in Mamna. In some cases, the scheme, instead of creating public utilities has resulted in ponds being constructed exclusively for the use of the pradhan and his family (belonging to the dominant castes, of course). Last year, 10 crore trees were planted in Hamirpur within one or two months under NREGS. The responsibility to oversee the work was given to the forest, irrigation and electricity departments which utilised it as an opportunity for unbridled corruption. The saplings were thrown in the forests and in the wells.

Natural Resources of the Region

Bundelkhand is (or more accurately, has been) a region rich in resources like forests and minerals (diamond, granite, sandstone, limestone, iron, rock phosphates, pyrophyllites, dolomites and marble). We saw the rampant – sometimes, illegal – exploitation of these natural resources but very few benefits accruing to the local people. Our journey from Harpalpur (Chhatarpur) to Rath (Hamirpur) on the first day was revealing enough. The 40 km-long road once had such a dense tree cover on both sides that there was no sunlight visible on it. Today, all that remains are some old trees which have been spared here or there. There has been massive deforestation in Bundelkhand during colonial rule and afterwards. The *imli*, *shisham* and *mahua* trees, typical of the region, are no longer found in abundance. The forest

area including the scrub forests is now only 8.79% of the geographical area in Bundelkhand region of Uttar Pradesh and 26.24% in Madhya Pradesh. According to the available estimates, 63% and 50% of the forests are degraded in the UP region and MP region, respectively.⁴

While one of the reasons for this deforestation may have been increasing need of the population for cultivable land and forest resources (like timber), the other important reason is the commercial exploitation of forests by the colonial and the post-colonial state. The declining forest cover has only made the lives of the poor more difficult. The people of Ragholi village told us that the forests were only 1.5 km away from their village just two decades ago and it was relatively easy for the women to get fuelwood. Now, the nearest forest is 5-7 km away. The women leave by 10 in the morning to get fuelwood and reach back only by 4-5 in the evening. The forest department officials take bribe if the women are caught carrying fuelwood.

The road to Rath was also full of potholes: a proof of the convoy of heavy trucks which travel on it every day carrying hundreds of tonnes of sand, granite and limestone from Bundelkhand to cities like Lucknow, Kanpur, Bhopal and Delhi, to be used in the construction of buildings, malls and flyovers. We saw sand mining on the banks of Betwa river near Jalalpur (Hamirpur) and the granite mines of Kabrai (spread over a distance of 50 km) in Mahoba.

Illegal sand mining worth crores of rupees takes place at various points on the banks of the Betwa river. Although the rule is that lease for sand mining be given only to fishermen, powerful contractors take the lease in the name of fishermen, pay them a meagre amount and conduct the mining. Sand mining has been going on throughout the year for the past 20 years. In a day, 1,000 trucks leave one spot of mining, every truck carrying 40-46 tonnes of sand. This kind of sand mining is occurring in the Ken, Betwa and Dhasan rivers of Bundelkhand. They have ruined the livelihoods of fishermen in the region, besides affecting the course and water levels of the river and adversely affecting groundwater recharge systems.

One of the enduring images that have stayed with us was that of the huge craters in the ground – 250 feet deep – at Kabrai; mountains 400-450 feet high reduced to craters by blasting due to granite mining. According to Sumitra Seva Sansthan, a non-governmental organisation, 5,000 trucks filled with granite leave Kabrai every day. And Kabrai is one of the numerous mining sites of limestone and granite in Bundelkhand. Mining also happens to be the only “industry” for the desperate people of the region. Dalits, landless agricultural labourers and marginal farmers work in these mines in extremely hazardous conditions for pitifully low wages. Accidental deaths due to blasting, loss of hearing, blindness due to flying stone chips (during the manual breaking of stones) and silicosis are regular occurrences. Kabrai mines have 165 stone crushers in an area 20 km long. There are more than 1,000 stone crushers in and around Mahoba which crush the stones mined from the hills. Industrialists of Delhi and Lucknow and even some multinational corporations (MNCs) have invested in these mines. Thousands of acres of cultivable land have been spoiled because of the white dust which rises from the stone crushing units. Cultivators of these lands have been reduced to labourers in the mines. The only people who seem to

benefit from this kind of destructive mining were the local mining mafia, lorded over by the dominant caste politicians, and the urban-industrial interests of big towns and cities.

Water: The Missing Lifeline

The major sources of water in Bundelkhand are the rivers Ken, Betwa, Dhasan, Baghain, Pahuj, their tributaries, rivulets and seasonal *nallahs*. The rivers dry up during the summer months, and lakes, ponds and dug wells and bore wells remain the only sources of water for human and animal consumption. The other source of water is rainfall. The average annual rainfall in Bundelkhand varies between 75 cm and 100 cm, 90% of which is experienced in the months of August and September. In the last 10 years, the number of rainy days has progressively gone down from 52 to 23 days per year, severely affecting the availability of water in the region.

Bundelkhand has historically been a drought-prone region. The ruling dynasties before the advent of colonial rulers, the Bundelas and Chandelas, had ensured the construction of an extensive network of lakes and ponds across the region. These were constructed in order to minimise surface run-off after rainfall and harvest the rainwater. We witnessed one such arrangement in Charkhari tehsil (Mahoba),

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where a network of 11 interconnected reservoirs on top of the hills and in the valley had been constructed to harvest rainwater. Similarly, the Vijay Sagar Lake in Mahoba is one of the oldest lakes built during the Chandela period in 1040 AD. These traditional water management systems fell into disuse and disrepair during colonial rule and in independent India as well. They were not cleaned regularly, silt was allowed to deposit, the inlet channels for the rainwater were blocked and there was encroachment on these water bodies. As a result, a major source of water security in the region has been eliminated. The destruction of these water bodies has also limited the potential for groundwater recharge. More importantly, the new water management systems that have been created took no cognisance of either the local ecology or topography, further ruining the water scenario in the region. Also, deforestation in the region has led to a reduction in the effective resistance to the flow of rainwater, resulting in major run-off during monsoon season. Instead of traversing a wider area, the rain water forms into narrow streams, ravaging the land by eroding the top soil, forming gullies and causing significant degradation of land. Mining, which has been described above, also affects the flow of surface water and the underground water channels and aquifers, further depleting the water resources.

The "Ground Water Statistics" prepared by the Central Ground Water Board in 1991 reported that of the total 70.008 cm per year rainfall that the region received, only 15% accounted for groundwater recharge. The situation has only worsened due to the increasing deposits of shale and sandstone, which have poor water retention capacity, on land and on the surface of existing water reservoirs. The exploitation of groundwater has steadily increased with the cultivation of water-intensive crops like wheat and cotton. Groundwater levels have gone down due to the increasing dependence on bore wells and hand-pumps. Water is now available only at a depth of 150 feet to 250-300 feet. Older bore wells have become defunct due to the decline in groundwater and only the rich can afford to sink bore wells deeper at a greater cost.⁵ Many peasants in Mamna village (Hamirpur) had lost their land

because they could not repay the loans taken for bore wells.

The drought period of 2003-08 dried out the traditional and masonry wells of the region, primarily used for drinking water purposes. According to the Samra Committee report, 70% of tanks and ponds dried up during this period. This caused a severe drinking water shortage crisis. According to various estimates, the 13 districts with population of around 16 million were provided water through 5,000 tankers during May-June 2008 for domestic and drinking purposes.⁶ The state governments of UP and MP deployed police to "protect" these water tankers.

The scarce water resources available for irrigation, fisheries, human and animal consumption are distributed unequally across caste-class hierarchies. Thus, we were told that the Vijay Sagar Lake in Mahoba had been drained due to illegal drawing of water through pumps by the dominant caste farmers. The fishermen of Dhimar mohalla in Ragholi village (Chhatarpur) narrated how they were unable to rear fish and grow *singaras* in the village lake because the peasants used up all the water for irrigation. They had thus been reduced to agricultural labourers and migrant workers.

Explaining the Distress

(1) Our field experience of Bundelkhand has given us one definite conclusion: the levels of distress and crisis in the region cannot be explained simply by the absence or irregularity of rainfall. In other words, the government of the day cannot explain away the crisis as a natural calamity, fail to admit its own culpability and respond only with ad hoc and superficial relief measures.

(2) There are long-term structural problems which have had a cumulative effect over the years. For example, reasons for the present unviability of agriculture must be sought in the historically determined social relations of production, the intimate correlation of caste and landownership in the region, as well as the neglect of traditional water management systems and the push towards cultivation of water-intensive commercial crops. Even the irregular rainfall is as much the effect of deleterious human activity as it is the specificity of the climate in Bundelkhand.

(3) The access to both agricultural land and water – critical (and scarce) resources for survival – is highly inequitable. The class-caste hierarchies ensure that the poor and the landless, mostly belonging to the lower castes, are deprived of access to these resources. In the absence of any other sources of non-farm employment (rural industries), they are forced to migrate to cities to earn a livelihood. Even the small and marginal farmers have to migrate, at least for a part of the year, either because the rains fail or because income from rain-fed agriculture is not adequate for subsistence.

(4) Economy and ecology are closely and complexly interrelated in an agriculture dependent region like Bundelkhand. When the natural resource base (water, forests) of the region shrinks rapidly, it affects the livelihood of the rural people, disproportionately affecting the poor and the lower castes.

Mining and deforestation, which we witnessed in the three districts, are characteristic of the entire region. Amongst the first casualties of mining on the hills are the forests. Mining adversely affects groundwater, surface water, and indeed, the entire water cycle. Such ecologically destructive practices have a contributory effect towards increasing the irregularity of rainfall patterns, declining groundwater recharge and worsen the overall water scarcity in the region. As one report puts it,

Granite quarrying and other forms of stone quarrying in Bundelkhand has been flattening the hills and ruining the chances of their afforestation, which is basic to the interception of clouds and infiltration of rainwater into the soil. Quarrying of granite has, moreover, been causing large-scale deliberate destruction of precious groundwater. Since granite formations run hundreds of metres deep, the quarrying goes on becoming deeper; and the groundwater accumulations that are encountered are regarded as obstacles to the mining operation, hence thrown out to dry up on the surface area.⁷

(5) The government of MP has allowed multinational companies to survey and exploit the diamond resources of the region. ACC Rio Tinto of Australia, De Beers of South Africa, BHP Minerals of Canada and the National Mineral Development Corporation (NMDC) were given permission to

start survey and exploration of diamond mines in the Panna, Chhatarpur, Tikamgarh, Sagar, Angor and Majhgawan areas of the state. For example, ACC Rio Tinto had been issued four reconnaissance permits for 10,000 sq km area in the Panna, Damoh and Chhatarpur districts.⁸ The entry of MNCs will only increase the reckless exploitation of the mineral resources, harming the ecology of the region without any concurrent benefits for the local economy or the people.

(6) The question that must be asked is what factors have rendered the different sections of the rural population completely vulnerable to the vagaries of the monsoon. What are the reasons behind the absence of mechanisms to cope with monsoon failure (whether in the form of buffer stocks, harvesting and management of rainwater, livestock rearing or rural non-farm employment), which ultimately cause such massive distress and migration?

(7) Instead of trying to find answers to these questions and developing a holistic plan for the agricultural and industrial development of this cultural-geographic region, the focus of the government seems to be to treat Bundelkhand as a drought-prone region, and to implement "drought mitigation measures". It need not be reiterated that drought relief measures, like the distribution of money which we witnessed, cannot make any dent on the situation and they make a mockery of the people's desperation.

One of the drought mitigation measures the government is propagating in Bundelkhand and elsewhere is the NREGS, which it feels is sufficient to alleviate the distress in the rural areas. The basic objective of the scheme is to provide a social safety net for vulnerable groups by making work available at minimum wages at times when there are no other sources of work available. Even if the scheme works with 100% efficiency (without any corruption), it cannot alleviate distress in a situation where the rural economy has completely collapsed (as in Bundelkhand) or in situations of drought when *all sections* of the rural population are affected. The reliance on NREGS by the government has led it to ignore the structural factors responsible for the intensification of the drought situation.

(8) There are certain regions of our country which have become a source of cheap unskilled labour and raw materials (like minerals and forest resources) for the industrialisation and development of other parts of the country, especially the towns and cities. What happens to the economy, ecology and people of these peripheral regions is of no concern to the government. Bundelkhand seems to have become such a region in recent times. Whether it is the diamond, gold, granite, sand or limestone which adds to the luxury and comforts of the cities, or the migrant workers from the region who ensure that wage labour is available in the cities at cheap rates, there is a steady transfer of resources from Bundelkhand to urban and industrial regions of the country.

Conclusions

There will be an estimated 18% decline in the yield of the kharif crop all over the country, which includes rice, coarse cereals and pulses, owing to the drought this year. The sowing area of paddy – the most important kharif crop – has declined by 60 lakh hectares.⁹ Even as the government worries *only* about the rise in food prices this is likely to cause, we want to ask what has been the fate of the lakhs of cultivators who were unable to sow or whose crop failed in the kharif season. How will they cope with this loss in income and livelihood? Will they be able to feed their families through the year, pay the school fees of their children, and meet the emergency health expenditures that arise from time to time? Or, have they been constrained to sell their assets (like cattle) and forced deeper into the clutches of village moneylenders, *arhatiyas* and seed and fertiliser distribution agents? What happens to the 56% workforce dependent on agriculture if the output of the sector faces a decline of 2%?

Just as the crisis in Bundelkhand cannot be explained by a simple failure of rainfall, the distress caused by drought in other parts of the country also has a history of state neglect and discrimination. The drought-induced distress only underlines and portrays the vulnerability of the Indian farmers; the reasons for this vulnerability must be sought elsewhere. It is the generalised crisis in agriculture

which causes 40% of the farmers in our country desperate to leave their occupation (though they have no other option), even when there is no drought. The different trajectories of agricultural development in different regions – land relations, land reforms, introduction of modern techniques and technology, commercial cultivation and integration with the national and international market – have to be appreciated to understand the problems in each region. While the uncertainties associated with commercial cultivation and withdrawal of state support might be the reasons for distress in some regions, the highly unequal landownership patterns and technological backwardness might be acting as impediments to agricultural growth in some other parts of the country. A government which cares only about the growth rates of the economy cannot and will not look into the reasons for the crisis in agriculture, much of which is of its own making.

NOTES

- 1 "Report on Drought Mitigation Strategy for Bundelkhand Region of Uttar Pradesh and Madhya Pradesh" by the Inter-Ministerial Central Team led by J S Samra, April 2008.
- 2 1 bigha equals 0.4 acres of land approximately.
- 3 List of drought-affected districts on the government of India, web site: http://www.agricoop.nic.in/DroughtMgmt/Drought_271109.pdf
- 4 J S Samra report op cit.
- 5 It costs Rs 2,50,000-Rs 3,00,000 to dig a private bore well and Rs 50,000 for a bore well dug by the irrigation department.
- 6 *Half Full Half Empty: Drought and Drinking Water Crisis in Bundelkhand*, WaterAid India, September 2008.
- 7 *Problems and Potentials of Bundelkhand with Special Reference to Water Resource Base*, CRDT, IIT Delhi and VSK, Banda (UP), 1998.
- 8 "Multinationals All Set to Enter Diamond Mining in MP", *Business Standard*, 1 June 2004.
- 9 "All Hopes on Rabi after Drought Pulls Kharif Crop Down by 18%", *Indian Express*, 4 November 2009.

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