Decentralised food security systems and women: an examination of sustainable food security arrangements in Chhattisgarh

Ilina Sen

Summary

This paper argues that centralised food security systems have, by and large, failed to meet the needs of the poorest tribal people. It documents the decentralised food security systems that have existed in Chhattisgarh, traces of which remain today, though the traditional systems are being undermined by the forces of capitalist patriarchal modernisation. Further, it highlights the role of women, who traditionally played a central role in the management of food security systems, and calls for a radical reformulation of food security management systems, with women in a pivotal position.

The Chhattisgarh region is an area that is ecologically, linguistically, and culturally distinct. The Chhattisgarh region has a large area under forest cover, rich mineral reserves (limestone, quartzite, iron ore, bauxite, and alexandrite), and a large tribal population. The river Mahanadi flows through the central part of the region, and the plains' areas in the river valley are famous for rice cultivation, with input intensive high-yielding varieties (HYVs) having replaced traditional seeds in much of this region. Chhattisgarh has approximately 34% Scheduled Tribe population, 12% Scheduled Caste population, and more than 50% Other Backward Classes. While the process of modernisation seems to be apparent in the valley areas, the situation in the forest and hill areas on the periphery of the district is quite different. Although being affected more and more by invasive forest and mineral exploitation, traditional lifestyles and population compositions have survived to a far greater extent here.

Chhattisgarh has had an amazing variety of food production systems. It is one of the last places on earth to have a remembered history of an amazing diversity of food resources. These food resources include many kinds of rice

germplasm, a wide range of millets and other dryland crops, pulses, oilseeds, fruits, edible flowers, tubers, mushrooms and other gathered foods. Many of these are dependent upon access to and close proximity of the forests. The area has traditionally been known as the 'Rice Bowl' of India. The region is known to have grown an amazing diversity of rice varieties in the not too distant past. These include indigenous rice varieties capable of giving the equivalent of, or even higher yields than, the Green Revolution varieties. These yields have again been achieved without the use of chemicals and in the field conditions of simple tribal farmers having a low resource base and little, if any, formal education.

There has been a range of technical and production practices adopted by the farmers of Chhattisgarh. For example, the *Biyasi* system of rice cultivation was very beneficial for the farmers cultivating on lowlands. Under the broadcasting method, the farmers kept the seeds ready for sowing just before the onset of rains in June. After the seeds germinated for a little over five weeks and the water reached the height of the seedlings, the fields were ploughed with the standing crop to take care of weeds in July-August. Thereafter, the crop was left for growing with the villagers guarding it until harvest. The Marias of Abhujmarh practised this type of rice cultivation under the shifting system of cultivation where these tribals burned the trees in the forests to convert a strip of forests into cultivable land just before the rains. Practising the *Biyasi* system, they shifted their fields every two to three years, coming back to the same fields after its forest cover had regenerated after a gap of 13 to 14 years.

There are several other forms of paddy cultivation. For example, the Nagesia grew paddy along with other crops in the lowest portion of the uplands called the *Bahra*. The *Bahra* was suitable for paddy cultivation because it was a lowland and could retain moisture throughout the year. For this reason, the Nagesia only propagated the rice seed on these lands and no other. Then there was another type of land known as *Chanwar* that consisted of the middle lands. Here, paddy could only be grown when the monsoons came, as the soil had no capacity of retaining the moisture throughout the year, although other crops requiring less water could be grown.

There was also a variety of sowing practices known to the farmers. Apart from broadcasting, there was *Laichopi*, in which the seeds were germinated in a controlled environment and then sown. This was useful in areas/years where the rains came early, and the fields did not retain enough warmth for *in situ* seed germination. To cover seed shortage, the farmers knew the technique of *chaalna*, in which broken earheads were replanted in the soil using a technology of clonal propagation. Although Chhattisgarh is drought-prone, the farmers here are the inheritors of a rich heritage of biodiversity in rice and dryland crops, and this, together with great resilience, has helped them survive.

The diversity of rice crops found in Chhattisgarh is extensive but now under attrition because of the organised promotion of monocultures. Centuries of rice farming by indigenous communities have resulted in an evolution of a diversity in rice adapted to a variety of soil and micro ecosystems. These varieties have a good yield potential under normal fertility and organic manuring and vary in maturity period ranging from 55 days to more than 180 days, drought resistance, and water tolerance capacity. There are low rainfall area varieties to deep water ones standing in up to 10 ft. of water, short rice of 50 cm in height to tall ones of more than 150 cm. The grain size also varies from short fine to long fine, long bold to short bold and round, oval ones, beaked and awned ones, and awned ones of various colours, sizes and shapes. The kernel may be coloured white, dull white, red opaque white, the grain may be of various designs and shades such as yellow, straw golden, red black, brown, purple, and blotches of various colours and the grains may be of various quality and scent, and with protein content up to 14%. The world's longest rice Dokra-Dokri is found in Chhattisgarh. Wheat is also cultivated in some areas, but the area commanded by wheat is very little.

Farmers in Chhattisgarh are well aware of drought resistance and the ecologically wholesome nature of indigenous varieties and practices. Normally, each farmer grows about four to five varieties of rice. Thus, if some variety fails to grow during a particular season, another would make up for it. Beside this, the farmers grow different crop varieties for their different uses and preferences; in the Nagari region, for example, the farmers grow the *Danwar* variety of rice for its high nutritive and medicinal value. It is believed to be helpful as a tonic in recuperating from illness. There are a number of other rice varieties which are believed to have medicinal value, for example *Baisur* and *Alcha* for pregnancy.

Dryland crops are a very major aspect of the food security of the region as assured irrigation in the area is only 13% and supplementary irrigation is available in 35% of the area. It is, therefore, of paramount importance to develop dryland crops in the region. There is a rich tradition of dryland agriculture in the region but seeds and skills have been lost due to the penetration of market forces and capital in agriculture. Many dryland crops are nutritionally very valuable, although their market value may be low. Their loss has meant serious deterioration in the diet of peasant families, as well as a loss in terms of knowledge base.

It is not possible to have a discussion on the biodiversity in food resources without referring to the many kinds of uncultivated foods used in Chhattisgarh. These include many kinds of roots and tubers (*jimi kanda, keu kanda, karu kanda*, and *chind kanda*, to name a few), many kinds of greens, and the many seasonal edible mushrooms. There is a large range of tree leaves and bush and shrub leaves that are eaten here as *bhaji*. Some of these, the *tinpania* and *chanori bhajis*, for instance, grow naturally in the many rice fields after the rice

harvest. As a matter of fact, the distinction between what is a *bhaji* and what is a weed is a product of the culture of agricultural monoculture that is in complete contradiction to the culture of biodiversity prevalent in Chhattisgarh.These foods lend richness to the diet and, in times of drought and food scarcity, these food resources have sustained generations of the people of Chhattisgarh.

In Chhattisgarh we also have several models of decentralised distribution system. The *Charjaniha* (literally belonging to several people) is a community-based grain bank that is found in several areas of the southern hills, and variants are seen among the different tribal groups of the area. Procurement is through voluntary contributions, and/or preferential collection from the more affluent families, or those wishing in any given year to donate to a public fund. Community collections through the *Cherchera* rituals or through groups of women dancing the *Relo* also go towards building up the collection. The *Charjaniha* resources can be held in paddy, in the minor millets, and even in an NTFP product like *Mahua*, and are used for community functions, as well as for distribution to needy households in drought years.

The network of local traders, or *kochiyas*, was originally the link persons between the many local markets, and acted as the major agents in the local trade in primary food resources. It is an interesting fact that the *kochiyas* operating in the food trade were mainly women, while those dealing in forest produce or utility items were mostly men. Today, the system exists in a distorted form, with male *kochiyas* having become agents of a centralised trade system. However, the role of women belonging to the *Sonkar* (vegetable farmer) community in primary marketing up to the present day and institutions, such as the *Turi Hatri* (women's market) of Raipur, bear witness to the vibrancy of women-centred local distribution networks.

The major role that women have played in maintaining these systems is unappreciated. They work in each and every aspect of crop production, preservation, and storage. In certain parts of the state, such as Abujhmar and Sihawa, women are also known to use the plough, a function that is tabooed and prohibited for them in almost all other parts of the country. Apart from crop weeding, maturing, and harvesting, women are the leading players in all post harvest and storage operations. Women also play a major role in the collection and processing of the many kinds of uncultivated foods found in Chhattisgarh. Many of these foods are collections from the forest, and women use them for maintaining household food security and nutrition needs outside the market system.

Women are the primary gatherers of all uncultivated foods, and inheritors of an ancient knowledge system about food biodiversity. They are also gardeners and herbalists with the primary knowledge and responsibility for maintaining

the home gardens, the *baris/bakhris*. Again, it is the women who take the produce to the primary markets and barter or trade in the items related to primary food needs..

Women are also the keepers of the seeds. As stated above, women are responsible for all post harvest operations. An important aspect of these is the preservation of the seeds of biodiversity. In traditional Chhattisgarh, the crop to be harvested as seed is identified in the field of standing crop, and women take special care while reaping these. A wide variety of seed storage structures are used in subsequent stages, and the exact storage structure used for seeds depends on the length of time the seed is to be stored away, the moisture content, and other factors. Some seeds, such as rice, are stored in bamboo *dholgi* (or *dhongi*), thatched and sealed with cow dung, and kept away. These can last for up to three years. Other seeds, such as the minor millet seeds or vegetable seeds, are stored in *Sal* leaf containers and often hung up in the kitchen above a wood fire, so that the smoke can act as a pesticide and preservative. The extremely complex knowledge of seed storage and preservation, including its technical aspects, is in the hands of women.

The author believes it is important to encourage a debate on the viability of centralised and non-centralised systems of food security in this tribal-dominated state. The fact that widespread starvation and hunger have stalked this land and that we live in a time when the buffer stocks in food have been among the highest in the history of post-independent India, only raises questions about the distribution systems. She contends that it forces us to think whether a public distribution system (PDS) based on centralised procurement and centralised distribution mediated through a cash exchange ever fulfilled the food security needs of forest-based communities. Not arguing for the dismantling of the PDS, she makes a plea for radical rethinking about the role of the state and other institutions in understanding, maintaining, managing, and bolstering food security systems that are based on different paradigmatic realities. As the work of Amartya Sen has shown, it is the enforcement of food entitlement that holds the key to food security rather than mere plentitude of production or injection of food aid.

Conclusion

The issues involved in strategising creatively on sustainable food security are extremely complex and cover a very wide ground. Food security issues go beyond food production through agriculture and its procurement alone. The author believes that, for sustainable food security systems, it is important to recognise women's role as upholders of food security at the household and community levels, and to evolve strategies that are able to build upon this role. Although they play a major role in maintaining sustainable food security systems, their economic roles are often not matched by their political control

over the systems they create with their blood and toil. She recommends action in the following areas for intervention.

- Strengthening gender-based management of systems and democratisation of institutions, as indicated above.
- Need to regulate the NTFP trade. In view of the possibly negative connection between NTFP trade and forest-based food resources (FFR), there is a strong need to extend forward and backward linkages to develop FFRs.
- Maintain and strengthen crop and gathered food biodiversity.
- Seek and evolve structures of water management that are participatory and do not have to stop at the *lakshmanrekha* of forestland.
- Recognise the importance of local markets in food security systems and develop them under community control.
- Engage in policy and advocacy action at local and non-local levels on the importance of indigenous technology and food security systems.
- Establish seed exchange networks among subsistence communities that do not necessarily see money as the only means of exchange.
- Promote institutional structures that highlight community rather than individual achievement.
- Promote community-based rather then state-based PDS – transfer PDS subsidies from state-corporate to community structure.