
COMMUNITY-BASED FOOD SECURITY SYSTEMS

Local Solutions for Ending Chronic Hunger and Promoting Rural Development

Inter Pares Occasional Papers Series

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Community-based Food Security Systems

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Community food security - a condition wherein everyone has a safe, culturally acceptable, nutritious diet through a sustainable food system that maximizes community self-reliance and social justice.

Institute for Food and Development Policy

In 2001-2002, there was an extended drought in the Indian state of Andhra Pradesh. Crops withered and died in the heat. State authorities approached the federal government and asked for emergency food from the country's stockpiles. In Medak district, a semi-arid area that receives little rain and is considered one of the poorest in India, women leaders met to assess whether emergency food was needed. Women from village after village said they had no need for external food assistance. What they had grown in their villages through their own Community Grain Fund system was enough to meet their food requirements. This was surprising as these villages, like others nearby, were inhabited by among the least-materially privileged sectors of Indian society. Many of the people who live in Medak belong to the so-called "untouchable", or Dalit, caste – the lowest rung on the Hindu social hierarchy. In addition, Medak is considered part of India's "hunger belt", sections of the country whose residents regularly experience serious food shortages¹. How was it that these villagers, supposedly among the most food insecure in the whole country, turned out to have the greatest food security in the state in a time of scarcity and hunger?

To find answers to this question, one must look closely at how these communities have come together to develop common solutions to their shared problems. The food secure villages share a key feature: groups of women had organized themselves into sanghams, or village-level women's groups. The sanghams practice biodiversity-based agriculture emphasizing the cultivation of traditional coarse grains that have been grown in Medak for centuries, such as sorghum and various kinds of millet. As the land is rain-fed and extremely dry, these crops have adapted over generations to flourish in local conditions, without

irrigation or chemical fertilizers, pesticides or herbicides, and are much more nutritious than polished white rice². In addition to food, these crops offer a variety of materials to meet people's needs, such as stalks and husks to feed animals, dry stems to build fences and light stoves, straw to thatch huts and fiber to make ropes. Using inter-cropping and crop rotation, the sangham women grow these staple grains, as well as pulses, vegetables, fruit and medicinal plants – not only preserving, but enhancing biodiversity.

As no chemicals are used in this agricultural system, there is also an abundance of "uncultivated foods", such as plant greens, tubers and small wild animals. Many of these uncultivated foods are leafy green edible plants, providing a rich source of nutrition, including iron, vitamin A, folic acid and riboflavin³, and small animals providing key protein sources. Among the poor in South Asia, particularly during times of duress, uncultivated foods can provide between 40 and nearly 100 percent of people's food sources⁴. In addition to uncultivated foods, there are many varieties of uncultivated medicinal plants, as well as others used for fuel and fodder. Throughout history, uncultivated foods have been used to sustain people through lean agricultural seasons or food emergencies.

Growing crops in an ecological fashion and protecting sources of uncultivated food are two critical elements of rural food security. Key to genuine food security however, perhaps more akin to the newer discourse of food sovereignty, is the notion that farmers must have control over the whole food production system, beginning with seeds. In sangham villages, women are seed keepers and exchangers. In accordance with historic practices, the sangham women preserve, lend, borrow and exchange all the seeds they use in their fields. Women have historically

been the seed keepers in this area and many others, and work with their families to plant, nurture and harvest crops, thus playing a central role in agricultural production. In this way, farming families are able to be largely autonomous and non-reliant on the market for agricultural inputs. In areas where people regularly borrow money for agricultural inputs from money lenders at exorbitant interest rates, and where bonded labour and farmer suicides are common as a result⁵, food sovereignty can be the difference between a life of misery and one with options and opportunity.

Before the establishment of the Community Grain Fund, sangham women were generally only able to grow enough food for about six or seven months per year on their small plots of land, and suffered chronic shortages during lean seasons⁶. As a result, the women began to look at the issue of access to land. The sanghams, together with Deccan Development Society (DDS), the local NGO with whom they work, developed a strategy to regenerate fallow land within the village, and to grow, store and distribute traditional grain through their own Community Grain Fund and public distribution system. With an initial small loan from DDS, the women prepared village fallows and sowed the first crops. At harvest, a set amount of grain per borrower was re-paid to the Community Grain Fund at market rates as repayment for the initial loan. Often people grew up to four times the amount they paid back, keeping the rest for household use. If there was a bad crop, farmers could defer repayment with no interest. The grain was then stored by local sangham members, and sold at reduced rates to the poorest and most vulnerable villagers at the time of year with the greatest food scarcity, when market grain vendors are charging exorbitant rates and work is hard to find.

The amount of grain that villagers could purchase was established according to need as determined by the villagers themselves, in public participatory processes. The money earned from the sales was deposited in an interest-bearing bank account in the name of the Community Grain Fund, and used to fund loans to bring additional fallow land under cultivation. The initial bank deposit was for a five year term and the interest subsidized the reduced price the villagers paid when they bought the grain in lean times. Therefore, after the initial investment by DDS in providing small loans to bring land under cultivation, the Community Grain Fund did not require outside assistance, and continues to fund new cultivation, increasing the amount of food produced and consumed locally, as well as local employment possibilities⁷.

In the past, in order to make it through lean times, people routinely had to migrate to find seasonal work. The wages

were often not enough on which to survive, and people had to borrow money from moneylenders. They then had to work on the moneylenders' land at key times of the agricultural season, and no longer had time to invest in their own land. As this went on, they essentially became bonded labourers. No longer having to migrate due to the Community Grain Fund has freed people to invest in their own land, slowly breaking the cycle of indebtedness. In many villages where there is a sangham and a Community Grain Fund, moneylenders have closed up shop, and bonded labour has stopped. Over time, some villages have become largely self-sufficient, growing enough grain for everyone to get through the lean season without having to face hunger or migrate for work. The sanghams of Medak district have developed their own successful community-based food security strategy.

Similar community-based food security work is being undertaken elsewhere in India, in the state of Maharashtra. Some of the state's ethnic groups, among other marginalized people, face chronic seasonal hunger. In Raigad District, less than 100 kilometers from the metropolis of Mumbai, pressure on land has increased, and ethnic groups, many of whom have historically relied on the forests for food, medicine, fodder and fuel, have been repeatedly forced to borrow grain and money to survive. Attached to these loans are myriad forms of exploitation including rape, bonded labour, exorbitant interest rates, work on demand, forced removal to work sites and more. Seeing the need for alternatives, local NGO Academy of Development Sciences (ADS) began working with communities to promote a Village Grain Bank model. In this model, villagers are given an interest-free rice or millet loan which they repay in grain over four years to refund their share of the initial capital lent by ADS, plus an additional 25% per year which will remain with their own self-managed Village Grain Fund. By the end of four years, the Village Grain Bank has refunded the initial grain lent by ADS, becoming self-reliant, and the ADS capital can rotate to another village. The farmers continue to deposit grain with their own Village Grain Fund, against which they can borrow in the future. Over time, the grain stocks in each village have grown significantly and are sufficient to meet all local demand for rice and/or millet. After meeting their own needs, villagers are able to sell surplus and deposit funds in a community grain fund, which is then available for interest-free loans to fund expenses such as marriages, livestock purchase and house building.

While the Village Grain Banks were intended to address seasonal food scarcity and reliance on moneylenders, other

advantages are apparent. Not only are villagers enjoying community-based food security, people's bargaining power for day wages has increased as a result of more land being under cultivation, benefiting all labourers. Moneylenders and the practice of bonded labour have been eliminated in many Village Grain Bank areas⁸ and increased community mobilization has led to better cooperation on issues of common concern. Villagers regularly unite, for example, to lobby for electricity, roads, clean water and schools. Thus, community managed grain banks that operate on a foundation of agricultural biodiversity, combined with local availability of uncultivated food sources, have proven to be effective and positive examples of local solutions for food security and rural development.

What can policy-makers and development organizations do to support community-based food security?

Support food security programming that is built on a foundation of genuine local ownership and local control.

Successful community-based food security systems are based on local ownership, including local land ownership, and local control. In the examples above, community members themselves plan, manage and undertake all stages of food production, storage, distribution and other aspects of community grain management. What to grow, where to grow it, how to grow it, how much grain to place in the community grain bank, who should access this grain and at what cost, are all decisions made by the community itself, in transparent public processes. In addition to the imperative of local control, international processes and structures also significantly impact global and local food security. Policy makers must closely examine Canada's role in international trade and investment agreements and the extent to which these may undermine local food security⁹. In addition, "agro-export" models which favour export over production for local markets and skew land ownership patterns, must be urgently and critically re-evaluated in a food security context.

Support food security through the local production of culturally appropriate and nutritious food. A reliance on traditional crops ensures that culturally appropriate species, with broad social and cultural benefits, form the foundation of community food security. Many traditional crops, such as sorghum and millet, are more nutritious than introduced varieties, such as rice. In addition, traditional crops have adapted over time to local micro-climates and can thrive without irrigation or chemical fertilizers, pesticides or herbicides, reducing costs as well as environmental and health risks. An increase in traditional

crop production often leads to more locally available food at affordable prices, as well as food with higher nutritional content. Traditional crops offer not only diversity on the field but also diverse securities: food, nutrition, fodder, fuel, livelihood and environmental.

Develop an understanding of the importance of uncultivated foods in rural food security. Biodiversity-based agriculture allows for a multitude of local, freely available, highly nutritious uncultivated foods, such as green leafy vegetables, roots, tubers and small wild animals such as fish and crab. In Bangladesh, uncultivated foods have been demonstrated to "constitute nearly 40% of the [general] diet in communities where local biodiversity has been conserved", and "amongst the very poor, landless members of these communities, dependence on uncultivated sources of food and fodder is nearly 100%"¹⁰. Understanding and protecting uncultivated food sources is critical to ensuring global food security, particularly for the most vulnerable.

Ensure that the key role of women in agriculture remains central to food security programs. In many parts of the world, women have historically been seed keepers as well as the holders of knowledge related to inter-cropping and the use of uncultivated foods and medicines. This knowledge has been passed on through generations, serving as the foundation of traditional food production. With the onset of industrial agriculture, women's knowledge has been marginalized through an increased reliance on purchased seeds and a reduction in uncultivated food sources. Successful community-based food security systems draw on and strengthen women's vast knowledge to ensure sustainable, biodiverse food production into the future.

Develop a critical analysis of the role of agricultural biotechnology in food security. The impact of agricultural biotechnology on local food security would be, and in some cases already has been, extremely negative¹¹. Around the world, farmers, producers groups, civil society, consumer groups and members of the general public are calling for a moratorium on the use of genetically-engineered (GE) crops until various long-term studies have been performed. Issues such as the impact of drift contamination, environmental and human exposure, the development of ultra-resistant "super-weeds", increases in agricultural chemical usage, and increased seed cost, among others, are cause for concern and must be closely examined as soon as possible. Additional concerns are that an agricultural system that promotes GE crops transfers the foundation of local food security, the control of the seed supply, from the hands of farmers – largely women farmers – to the monopoly control of large corporations. As well,

multiple studies have shown that GE crops have significantly contaminated non-GE fields¹². This could have devastating effects on food security through a disruption of traditional crop production, as well as a considerable reduction in the availability of uncultivated foods¹³. Agricultural biotechnology is contrary to the principles of biodiversity-based agriculture and local food security.

Protect biodiversity-based agriculture as the foundation for community-based food security systems. Long-term sustainable food security is strengthened when biodiversity-based ecological agriculture is practiced, regenerating rather than eroding natural resources and soil quality. The use of locally adapted traditional seeds that thrive in micro-climates, combined with manure and compost available within the biodiversity-based food production system, eliminates the need for irrigation – often a scarce and hugely divisive resource – and other costly off-farm inputs. Biodiversity-based agriculture also ensures a supply of uncultivated food, medicine, fuel and fodder, key elements for healthy rural livelihoods.

Conclusion

As underlined by the South Asia Network on Food, Ecology and Culture, “[t]he policy challenge is to defend the food sources of rural communities by defending the principle of local and ecological food production, and governance of the social relations of food by the food-producing communities themselves”¹⁴. In order to build sustainable community-based food security systems, food requirements need to be looked at within the wider picture of how food production systems fit into community management and community development processes. Locally owned, community-driven biodiversity-based agriculture, with women recognized as central actors, has been demonstrated to form a solid basis for genuine food security and rural development.

Endnotes

- ¹ Despite India’s unprecedented growth as measured by indicators such as GDP, over 350 million people (35% of the population) are food insecure. World Food Programme, http://www.wfp.org/country_brief/index.asp?region=5.
- ² Pearl millet, finger millet and sorghum all contain more protein, minerals, calcium and iron than polished white rice. *Betting on Biodiversity*, Vandana Shiva, Research Foundation for Science, Technology and Ecology (RFSTE), New Delhi, 1998.
- ³ *Uncultivated Foods and the Poor*, Deccan Development Society, India, <http://www.ddsindia.com/unculti.htm>.
- ⁴ *Uncultivated Food: The Missing Link in Livelihood and Poverty Programs*, F. Mazhar, P.V. Satheesh, D. Buckles and F. Akhter, 2002, South Asia Network on Food, Ecology and Culture (SANFEC), Policy Brief #1, Dhaka.
- ⁵ *India’s Agrarian Suicides*, Vandana Shiva, 2004, Delhi, India, <http://www.navdanya.org/news/200704.php>.
- ⁶ *Food Security for Dryland Communities*, P.V. Satheesh, India, http://www.ddsindia.com/foodsec_dryland.htm.
- ⁷ In each village where there is a Community Grain Fund, nearly 8,000 person days of employment have been generated each year. *How to Make PDS Work for the Poor*, P.V. Satheesh, 1998, India, <http://www.ddsindia.com/howtopds.htm>.
- ⁸ *Village-Level Grain Banks: a Decentralized Approach Towards Self-reliance in Food Security*, Rajeev Khedkar, Academy of Development Sciences, Pune, India.
- ⁹ For further information on the relationship between Canada’s international trade and investment policy and food security, please refer to documents produced by the Canadian Food Security Policy Group, <http://www.ccic.ca/e/003/food.shtml>.
- ¹⁰ *Uncultivated Food: The Missing Link in Livelihood and Poverty Programs*, Mazhar, F., P.V. Satheesh, Buckles, D and Akhter, F., 2002, South Asia Network on Food, Ecology and Culture (SANFEC), Policy Brief #1, Dhaka.
- ¹¹ *Genetically-modified crops: a decade of failure [1994-2004]*, Friends of the Earth International, 2004, <http://www.foei.org/publications/link/gmo/index.html>.
- ¹² *GMO Contamination Around the World*, 2nd edition. Friends of the Earth International, <http://www.foei.org/publications/gmo/index.html>. *Nine Mexican States Found to be GM Contaminated*, ETC group, 2003, <http://www.etcgroup.org/article.asp?newsid=410>.
- ¹³ This point has been echoed by the United Nations Environment Programme, Global Environment Outlook report (GEO-3). “GEO-3 warns of the possibility that modified genes might be spread accidentally amongst species outside the laboratory, and could pose a real danger to the biodiversity that is fundamental to humanity’s food security”, *U.N. Agency Urges Caution on Transgenics*, Diego Cevallos, 2004, Inter Press Service.
- ¹⁴ *Uncultivated Food: The Missing Link in Livelihood and Poverty Programs*, Mazhar, F., P.V. Satheesh, Buckles, D and Akhter, F., 2002, South Asia Network on Food, Ecology and Culture (SANFEC), Policy Brief #1, Dhaka.

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