



India

Population: 1.129 billion people

Agricultural population: 62% of the economically active population

Proportion of undernourished children in the population: 46% of children under the age of three

Share of women in the agricultural labour force: 50%

Government spending on agriculture: 250 billion Rupees (CAD\$ 6.1 billion)

ODA for agriculture (2003): \$417.1 million
% of total ODA to agriculture (2003): 11.9

Socio-economic welfare ranking: 128 out of 177
(2007-08 UNDP Human Development Report)

 **Inter Pares**

WORKING FOR CHANGE...AMONG EQUALS
OEUVRER POUR LE CHANGEMENT...ENTRE ÉGAUX

Organization: Inter Pares

Deccan Development Society: Alternative Public Distribution System

This case study highlights the work of women farmers from the Deccan plateau region in south-central India. In this example of resilient agriculture the role of women and their indigenous knowledge is key. The mostly dalit caste (“untouchables”) women have come together in village organizations (sanghams) and, using their own detailed knowledge of local crops and soil, have established ecologically diverse farming systems that are able to resist variations in climate and markets. Through the establishment of the sanghams and regional encounters, they have created mechanisms for sharing knowledge and responding to the needs of their members in times of difficulty. The system not only preserves biodiversity, it enhances it.

Country context: India – a country of small farmers

Almost 60% of the Indian population depends on agriculture for their livelihood and farming occupies 43% of the land area of the country. The vast majority are small farmers. Overall production has increased during the past fifty years and thanks to government food reserve programs the days of widespread famines were ended. The Medak District is a semi-arid region of the state of Andhra Pradesh in India and is considered one of the poorest parts of the country. Agriculture is rain fed and traditionally production has been of dry-land crops such as millets and a variety of pulses. The Deccan region is prone to serious droughts and considered to be part of India’s “hunger belt”. In 2001-02 the state suffered a severe drought and authorities appealed for emergency food from the country’s national reserves. The cash crop in the region, heavily promoted by government and agro-industry, is genetically modified cotton. The region is also infamous as having one of the highest incidences of farmer suicides in the country, usually due to their inability to deal with overwhelming debts.

The background paper for these case studies, “Pathways to Resilience: Smallholder Farmers and the Future of Agriculture” is available online at www.ccic.ca/e/003/food.shtml.



Raipally Susheelamma in her field.

Historically, farmers in the region did not have enough productive land and were unable to grow enough food to meet their minimum needs throughout the year. Through land reform, some families had been granted land, but only land that was degraded. Production from these poor quality soils was very poor—between 65 and 110 kgs of sorghum per hectare. As a result of such low yields, farmers were forced to seek paid work off the farm where they experienced very serious exploitation.

Building Resilience: Collective Action, Women First, and Biological Diversity

The program of the Deccan Development Society (DDS) has been carried out in collaboration with over 4,000 women farmers in 75 villages, and over the past fifteen years has allowed them to develop a system that responds to these social and climatic challenges.

Resilient small-scale agricultural systems build trust by providing opportunities for collective action and community decision-making.

In the communities of Medak District, DDS accompanied women to organize themselves into sanghams, or village-level women's groups. Collectively, the women

decided to deep plough their land, manure it and grow food for themselves but this required an investment of money that they did not have, and no financial institution offered loans to small farmers. With the assistance of DDS, the women lobbied the government to change their policy and loans were made available, allowing them to improve the degraded lands. Women worked collectively to upgrade this land through a one-time deep plowing, bunding, trenching and the application of manure. The loans permitted the purchase of manure and during the first two years 50,000 tonnes were applied to approximately 1,230 hectares. Loans were repaid at market rates over five years in the form of grain to village committees who store it and manage what have become known as the Community Grain Funds (CGF). The establishment of these funds required a one-time expenditure on the part of the government after which the CGF have operated independently.

Grain from the CGF is sold at subsidized prices to the poorest and most vulnerable in the village. The amount that people can purchase was established according to need as determined by the villagers themselves in a participatory process. The money earned from sales is deposited in an interest-bearing bank account and is used to fund loans to bring additional land into cultivation. During the first two years of the program, in thirty villages, the sanghams improved 1,230 hectares of marginal fallow land using this process, resulting in an additional 800,000 kg of grains per year. Today each hectare yields 330 to 440 kg of sorghum, 110 kgs of pigeon pea, 110 kg of assorted pulses and enough fodder for two head of cattle. A typical farm grows between 8 and 10 crops in a season and uses many varieties of each crop depending on the climatic conditions. To date, 4,000 women from 75 villages have improved over 4,500 hectares of degraded lands.

Resilient small-scale agricultural systems value and strengthen the crucial role of women in sustaining small-scale agricultural systems.

“Laxmamma is an amazing farmer. She knows every different type of soil in this region and exactly what kinds of crops are the best adapted to grow on each, when and how to plant them. We have learned so much from her,” observes the Secretary of the Deccan Development Society (DDS), an Inter Pares counterpart in southern India.



Women of DDS in their field.



The Biodiversity Caravan spreads the message to villages across the region.



Nagaram Manikama with seed bank collection.



Women of DDS bringing seeds to the Biodiversity Festival.



Laxamma in her field.

In the sangham villages, women are the seed keepers and exchangers. Previously, poor and Dalit women went begging to the rich families for seeds. They are now the people to whom the rest of the community comes to ask for seed varieties they have lost. The women of the sanghams preserve, lend, borrow and exchange all of the seeds of the various crops they use in their fields.

With the assistance of DDS, an annual Biodiversity Caravan serves to take a message of the importance of biodiversity to dozens of villages across the state and women are able to share their knowledge of different varieties with farmers in other regions.

Resilient small scale agricultural systems build on the diversity of local agro-ecosystems and contribute to biological diversity.

Resilient small-scale agricultural systems maintain heterogeneity in terms of genetic resources to allow local ecosystems to absorb shocks and adapt to change. The women did not plant newly developed high-yield seeds but rather the same varieties that farmers in the region

The women of the sanghams preserve, lend, borrow and exchange all of the seeds of the various crops they use in their fields.

have adapted over several centuries to flourish in these highly variable rain-fed conditions, without the need for irrigation, chemical fertilizers or pesticides. Through the program, women have come to value their own detailed knowledge of the diversity of crop varieties and their adaptations to different soil and climactic conditions.

Raipally Susheelamma is a 35 year old single-mother from Raipally village in Medak District of Andra Pradesh. She has a one hectare farm with degraded red soil which is less than 30 cm deep yet she grows an average of 22 crops each year to sustain her family, including four varieties of sorghum, four of pigeonpea, several varieties of millet as well as niger, sesame and cowpeas. The variety of crops means that she always has something that grows well no matter what happens to the weather. “I came to know from the Sangham that if we use many crops, our health and our children’s health will be good; because even if a few crops fail we would still have others to stay well-nourished.”

Raipally is completely independent of external inputs. She saves and uses all of her own seed. “If we possess



Women returning from their farms. Photos on pages 2 - 3; Anna Paskal: Photo above; CFGB

seeds in our hands we feel secure. If we grow them in our own lands we will be much more secure and very sure of their sprouting.” She prepares her own animal manure and enriches it with material from her worm-compost. The diversity of crops on the farm and the well-maintained soil health results in very limited pest problems.

The women know that climate change will affect their agriculture but they feel prepared. Over generations they have developed seeds that are already adapted to a huge diversity of conditions and, Laxamma adds, “We are happy to share them with others.” Using inter-cropping and crop rotation, the women grow the staple grains as well as pulses, vegetables, fruit and medicinal plants. It is a system that not only preserves biodiversity but in fact enhances it.

By not using herbicides the women allow for the growth of “uncultivated foods” such as plant greens and tubers, many of which are a rich nutritional

source of iron, Vitamin A and other important nutrients. Many studies have demonstrated the crucial importance of uncultivated foods to sustain people through poor harvests and food shortages.¹

Conclusions

People in the villages where DDS is active have a good food supply, their nutrition has improved, the soil is more fertile and yields have increased. The improvements were not a result of biotechnology or chemical fertilizers. They are the result of supporting farmers in regaining control of their own agriculture, and on a local scale, achieving food sovereignty. This is a system where local farmers cooperate, take joint decisions, work collectively and take collective actions. They control their land, their seeds and what and when they plant.

¹See for example: Food Sovereignty and Uncultivated Biodiversity in South Asia. Farhad Mazhar, Daniel Buckles, P.V. Sathesh and Farida Akhter. International Development Research Centre, 2007.