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ENVIRONMENT-INDIA: Women Farmers Ready to Beat Climate Change

By Keya Acharya

ZAHEERABAD, Andhra Pradesh, Mar 17 (IPS) - A collective of 5,000 women spread across 75 villages in this arid, interior part of southern India is now offering a chemical-free, non-irrigated, organic agriculture as one method of combating global warming.

Agriculture accounts for 28 percent of Indian greenhouse gas emissions, mainly methane emission from paddy fields and cattle and nitrous oxides from fertilisers. The 2007 report by the United Nations Intergovernmental Panel on Climate Change (IPCC) says India's rainfall pattern will be changing disproportionately, with intense rain occurring over fewer days, leading directly to confusion in the agricultural scenario.

Decreased rain in December, January and February implies lesser storage and greater water stress, says the report, while more frequent and prolonged droughts are predicted.

The report cites, as example of impacts, that a 0.5 degrees Celsius rise in temperature will reduce wheat production in India by 0.45 tonnes per hectare.

Research at the School of Environmental Sciences in New Delhi projects crop losses of 10-40 percent by 2100 despite the beneficial effects of higher carbon dioxide on growth, with the dynamics of pests and diseases significantly altered.

Adaptation is both necessary and unavoidable, says the IPCC.

In Zaheerabad, dalit (broken) women forming the lowest rung of India's stratified society, now demonstrate adaptation to climate change by following a system of interspersing crops that do not need extra water, chemical inputs or pesticides for production.

The women grow as many as 19 types of indigenous crops to an acre, on arid, degraded lands that they have been regenerated with help from an organisation called the Deccan Development Society (DDS).

DDS, working in this area of India for the last 25 years, has helped these women acquire land through government schemes for 'dalits', and form 'sanghas' or local self-help groups that convene regularly and decide their own courses.

The women plant mostly in October-November, calling up the family's help for 7 days for weeding and 15-20 days for harvesting. Farmyard manure is applied once in two or three years depending on soil conditions.

In Bidakanne village, 50 year-old Samamma, standing in her field, points out the various crops, all without water and chemical inputs, growing in between the rows of sunflowers: linseed, green pea, chick pea, various types of millets, wheat, safflower and legumes.

The sunflower leaves attract pests and its soil depletion is compensated by the legumes which are nitrogen-fixing.

"In my type of cropping, one absorbs and one gives to the soil, while I get all my food requirements of oils, cereals and vegetable greens," says Samamma.

Samamma's under-one-acre plot produces, amongst other crops, 150 kg of red 'horsegram', 200 kg of millets and 50 kilos of linseed. She keeps 50 kg of grains and 30 kg of gram and sells the rest in the open market.

The 5,000 women in 75 villages are now in various stages of adopting this method of agriculture.

"In the climate change framework, this system of dryland agriculture has the resilience to withstand all the fallouts of elevated temperatures", says P.V. Satheesh, the director of DDS.

Multiple stresses from global warming in India and the Asian continent are foreseen in water scarcity, groundwater salinity, food insecurity and hunger, loss of livelihoods and problems in downstream agriculture that depend on glacial melts.

The women now run a uniquely evolved system of 'crop financing' and food-distribution that they have mapped out themselves.



Dalit women in Zaheerabad intersperse crops and use farmyard manure with good results.

Credit:Keya Acharya/IPS

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Subscription to the Sangha is by a fistful of grain. Those borrowing grains from this community grain bank then pay back five times the borrowed amount in grain.

The collected grains are then sifted for good seed and the rest is either sold in the open market, sold to members in crisis at low rates, or distributed to poor families in the village.

"I check the earheads of grain for good seed", says 55 year old Akkama, seed bank manager in Hulugera village. "It's a system handed down to me from my ancestors." The women have stored over 50 different varieties of seeds from local cereals such as millets, wheat, red gram, linseed and sorghum.

The money collected from open market sales every year is deposited in regular banks and the interest earned from them is used to finance loans for members who again complete the cycle by paying back their loan in grain over five years.

DDS has now involved the women in a monitored system of organic produce that is certified by the global Participatory Guarantee Scheme (PGS)'s Organic India Council.

The method is a system of third party certification by organic growers themselves, initiated in India in 2006 by the Food and Agriculture Organisation (FAO) and the Indian ministry of agriculture in consultation with farmers and NGOs.

PGS groups are a worldwide phenomenon, operating in countries like the United States, New Zealand, Brazil and France. New initiatives are coming up in Vietnam and South and East Africa.

In Zaheerabad, the organically certified staples and grains are packed and labeled with the PGS certification, taken by a mobile van to be sold in retail to consumers in Hyderabad city 150 kms. Satheesh says the women are swamped with orders.

And yet, these women have come from the poorest rungs of society. Narsamma, 55, says she worked as a labourer 25 years ago, earning a pittance.

She heard about DDS's self-help group in a neighbouring village and approached the organisation for help.

She has now provided education for five children, two of whom work in NGOs, built a new house and bought cattle and land with DDS and government-support.

" Now, when landlords come to me for borrowing seed, now I can laugh," says the feisty woman who has traveled to London, Peru, Sri Lanka and Bangladesh, talking to local farmers about the ecologically sound agriculture practiced by the women of Zaheerabad.

(END/2009)

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