

Community gene banks in Andhra Pradesh, India

GENERAL INFORMATION	
<i>Sources of information of the practice</i>	Sustainet, Sustainable Agriculture Information Networks, cooperative project of the German Council for Sustainable Development. Result of the workshop entitled Evaluation of project experiences through local partners (self-evaluation) and assessment of each project's Scaling-up potential , held in India
<i>Relevant contacts</i>	Project Secretariat, GTZ, Dag-Hammarskjöld-Weg 1-5, Postfach 5180 D, 65726 Eschborn, Germany Deccan Development Society Email: dds rural@sancharnet.in
<i>Useful links</i>	Sustainet www.sustainet.org Deccan Development Society http://www.ddsindia.com/www/default.asp
INFORMATION ABOUT THE PROGRAMME OR PROJECT PROMOTING THE PRACTICE (IF APPLICABLE)	
<i>Programme or project</i>	Community Gene Fund project
<i>Time frame</i>	-
<i>Donor</i>	Government of Germany
<i>Implementer of the programme or project</i>	<u>Local NGO</u> : Deccan Development Society (DDS)
LOCATION OF THE PRACTICE	
<i>Region</i>	Asia
<i>Country</i>	India
<i>Province, Districts, Villages</i>	Deccan region of Zaheerabad mandal in the state of Andhra Pradesh
<i>Climatic zone</i>	From moist semi-arid to sub-humid
<i>Other descriptive information</i>	-
INFORMATION ABOUT THE PRACTICE	
<i>Practice category</i>	Access to natural resources
<i>Practice type</i>	Institutional practice for natural resource management Institutional practice for accessing resources Institutional practice for empowering rural people
<i>Sector</i>	Agriculture
<i>Institutions fostering the practice</i>	<u>Local NGO</u> : Deccan Development Society (DDS)
<i>Beneficiaries of the practice</i>	Small and large farmers from the neighborhood
<i>Users of the practice</i>	Small and marginal farmers belonging to the lowest caste of Indian society
<i>Natural resource used or accessed (if applicable)</i>	Seed varieties
BRIEF DESCRIPTION OF THE PRACTICE	
<i>Background/problem statement</i>	Many rural villages in the state of Andhra Pradesh are poor and practice subsistence agriculture. Conditions of Pyalayaram village are particularly bad as the inhabitants have been surviving on the government welfare program for over 15 years. Poverty and food insecurity have been caused by prolonged drought and loss of traditional varieties of seeds. As a result, when there is a small amount of rainfall, there are no seeds for farmers to plant since they cannot afford the high price of hybrid seeds. Moreover, these seeds are often unreliable, have a low germination rate, require large amounts of water, and chemical inputs such as fertilizers and pesticides, which the poor Pyalayarans cannot afford.

	<p>Under the government relief programme, rice and wheat were the only foods provided for consumption. This has resulted in serious malnutrition of the local inhabitants, particularly in children, women and elderly peoples. Most men have migrated in search of employment opportunities, significantly increasing the workloads of women, their children and the elderly. The above conditions were compounded by a long spell of serious drought between 1994 and 2000, due to lack of access to drought resistant seed varieties.</p>
<p><i>Approach followed</i></p>	<p>Under these grave situations, 34 women farmers of Pyalayaram approached Deccan Development Society (DDS) to help them grow their own food, instead of relying on government handouts, which has created a culture of dependency. DDS, which has considerable experience in the issue of sustainable agriculture in the area, cooperated with Pyalaram community members to establish community gene banks and to insure a steady supply of quality seeds. The main aim was to preserve a variety of crops, especially traditional ones, and to restore marginal lands to cultivation.</p> <p>To start the process, DDS brought all the affected and interested women into a cohesive group called Sangham, a voluntary village level association. The main aim of forming and strengthening the Sangham was to empower the small farmers to develop and maintain their own network of seed groups both within and outside their village. DDS believed that a well-maintained seed bank would not only effectively increase the availability of and access to seed but would also ensure revival of the diversity of crops and varieties resulting in food and nutritional security. The following steps were therefore undertaken: 1) traditional seed keepers who had good knowledge of traditional seeds and storage methods were identified in the village, 2) a series of participatory exercises were conducted in order to define the availability of seed varieties in the village, 3) DDS provided the seeds which were not available in the villages to the Sangham groups to be repaid double during the harvest time,.</p> <p>Drought resistant crops such as millets, sorghum, beans, bajra, jowar, cowpea, grams, cereals and other local varieties were collected. In addition to being resistant to drought, these varieties have other important values because they can be used for cultivating appropriate crop mixtures that minimize the risk of total failure in case of disease. They are also essential for their significant nutritional value that contributes to meeting the food and nutrition requirements for both human and animal consumption. These varieties are also used in traditional and cultural rituals as for example in the Dasara and Endlagatte Punnami festivals that are held in the Deccan region and celebrate the diversity of seed. Farmers used locally available resources like earthen pots, gunny bags and wooden baskets smeared with cattle dung and red earth, wood ash and neem leaves to keep the seeds dry and protect them from pest and insect infestation. Seeds were dried in the sun to ensure that the moisture content was completely removed. At any given time, the farmers stored about fifteen to twenty variety of seeds but the village seed keeper stored up to seventy to eighty seed varieties. Seed can be stored up to 2-3 years but must be turned and exposed to sunlight every 5-6 months if they are not used.</p> <p>As the result of the practice, some 34 families rehabilitated up to 55 acres of marginal fallow land ,where food crops were grown and nutrition significantly improved. The adoption of mixed farming helped to maintain the fertility of the soil and increased crop productivity. DDS replicated similar experiences in some 75 villages and more than 65 community gene funds were established.</p>
<p><i>Innovative elements</i></p>	<p>DDS did not introduce new seed selection, propagation and storage techniques; it solely relied on long sustained knowledge of indigenous seed collators.</p>

<i>Impacts on natural resource base</i>	<u>Actual:</u> Vast fallow lands were brought under active cultivation. Mixed cropping was adopted, leading to increased crop productivity and improved soil biological and physical properties. The fodder crisis was halted.
<i>Impacts on livelihood of the practice users</i>	<u>Actual:</u> Food and nutritional needs of the families were adequately met. An increased food basket was created. The distress of migration was reduced. Womens' groups demonstrated that even the poorest farmers, once organized and empowered with a minimum of outside support, can conserve their environment and feed themselves and their dependants. The communities have been transformed from seed borrowers to seed lenders, and acquired social pride among the neighboring villages.
<i>Other impacts</i>	<u>Actual:</u> Traditional and cultural rituals were brought back as a result of reintroduction of seed varieties
<i>General success factors</i>	<ul style="list-style-type: none"> • Women did not perceive seed keeping as a new activity as it has a long tradition. • Traditional seed keepers had good knowledge of selecting healthy and viable seeds, they knew which seeds are free from wrinkles and free from fungus and had evolved seed selection and storage methods over millennia. • The case also emphasis the fact that, when an agricultural practice is in line with traditional activities and respects their customs and traditions it is well accepted by the community with its spontaneous replication by the other members of the society.
<i>Technology success factors</i>	-
<i>Institutional success factors</i>	Access to inputs and resources Ownership by end users
<i>Problems remaining to be resolved</i>	<p>The biggest challenge is to influence the government to valorize and give support for traditional crops that have the potential to make the villages self reliant and food secure instead of depending on government welfare.</p> <p>Bring about a change in the mindset of the younger generation, who are driven by modern agricultural practices, to value and promote traditional agricultural practices. Persuade farmers to desist from farming commercial crops with high risks.</p> <p>Counter the aggressive media advertisement on new crops and varieties encouraging farmers to go non-organic.</p> <p>Provide adequate markets for local varieties.</p>
<i>Keywords</i>	Access to resources, agriculture, biodiversity, crop production, crops, dry farming, empowerment, endangered species, food production, genetic resources, germplasm, germplasm conservation, indigenous knowledge, mixed cropping, natural resource conservation, natural resource management, plant resources, resource conservation, resource management, seed, storage, women.