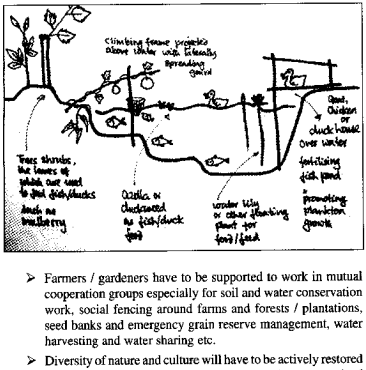

- Farmers / gardeners have to be supported to work in mutual cooperation groups especially for soil and water conservation work, social fencing around farms and forests / plantations, seed banks and emergency grain reserve management, water harvesting and water sharing etc.
- Diversity of nature and culture will have to be actively restored and celebrated. Many plants, insects, birds etc that are perceived to be weeds and pests and therefore problems will have to be turned around and studied as possibilities / potentials. Based on these and on underutilised crop residues, animal wastes and by products, non timber forest produce etc, a wide range of micro enterprises can be started to strengthen livelihood options (both through vertical and horizontal expansion.)

Commonly managed seed collections, gram reserves (mostly paddy), revolving funds, small irrigation systems have also been tried with but not in very large scale. Same is true for food and NTFP processing / marketing.

Barriers for scaling up of diversified farming systems

- Those who live close to their land are more likely to succeed. In floodplains, people often live far from their farmlands. Lands are often fragmented.
- Large numbers of farmers are share-croppers and cannot redesign / reshape their farms, even if loans are made available.
- Credit for land shaping, tree planting, integrating small indigenous birds/animals/fish etc are usually not available, especially to small holders. Credit from institutional sources is almost always linked to high-external input bases, high return, high-risk ventures and in most situation insurance is not available or is linked only to commercial crops.
- Unless farmers in the neighbourhood cooperate, it is very difficult for few farmers to change cropping pattern and integrate animals / birds/ fish etc., as they are vulnerable to pollution, poaching etc.

To promote diversified integrated farming, ecological techniques need to be combined with social engineering and backed up by reliable information and training / advisory services, along with credit / insurance and processing / marketing support. Farmers' organisations and civil society organisations concerned about food and livelihood security need to cooperate and collaborate towards this future.

Based on three decades of working experience with diverse communities as trainer / advisor / designer in many parts of India, South Asia and South east Asia in diverse agro-climatic regions and agro-ecosystems, got involved in combining various principles and techniques of diversified farming systems. If we combine the principles and techniques / technologies of traditional home gardens / agro forestry, hill and dryland mixed farming, rice based lowland farming etc., along with modern knowledge and techniques of soil and water conservation, use of biological fertilisers and botanical pest control agents, biogas and producer gas generation, raising of multipurpose trees and shrubs in agro forests, live fences, food forests etc., both food insecurity and poverty can be drastically reduced.

The editors or author may be contacted for few more illustrations of options.

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Highlights of some ideas tried successfully are as follows:

	High rainfall regions	Low rainfall regions
Home gardens	- Raised beds or deep ditches system. - Floating nurseries and herb gardens. - Multi storey living fences and orchards. - Small multi-utility ditches / ponds	- Roofwater collection, trickle irrigation (subsoil) - Climbing frame with live poles - Drought tolerant trees and shrubs for supplementary feeds (birds and animals) - Strategic food reserves (roots, tubers, edible leaves etc)
Small farms / crop fields	- Rice / duck / Fish farming with azolla - Vermicompost using aquatic weeds and biogas slurris - No till potato with deep mulch (mainly in coastal zones) - Relay cropping of legumes, oilseeds, spices and herbs etc.	- Multi step, water harvesting ponds with trees, shrubs on bunds. - Rainfed, row-intercrops of cereals, legumes oilseeds. - Raising vegetables, legumes on field bunds during monsoon - Mushroom culture in winter
Common lands	- Multi species / multilevel good forests (community lands and leased private land) Vegetable growing by groups of women and children	- Community managed multi utility woodlots on roadside, canal bank, pond bank etc - Biodiversity plantation in waste lands, graveyards, cremation grounds etc