

Chapter 6

SUPPORTING LOCAL INITIATIVES

Introduction

How can local problems be resolved by building on traditional concepts and practices? How to deal with cultural and spiritual concepts in research and development? How can traditional practices be improved? Can traditional practices be strengthened with modern scientific insights? How to experiment and innovate to create new solutions? How can traditional markets be strengthened? How can market opportunities be used for local products? How can promising solutions be spread to other potential users? The various cases in this chapter, and in several other chapters of this book, may provide answers or at least entry-points for discussion on these issues.

Case 6-1

Action research on grain storage in Nepal

Grain storage interventions often fail

In Nepal, post-harvest losses are serious and threaten food security. Generally, reducing these is seen as a technical activity. Much of the research focuses on technology development, with little understanding of the socio-cultural system. Farmers' values, beliefs, spirituality and cosmovision are not considered. Farmers therefore often reject technology introduced by extension workers or development programmes. The latter ignore the fact that farmers do follow their own strategies to prevent storage losses, strategies that merit further understanding before improvements can be considered.

Social and spiritual dimensions of indigenous grain storage

Local storage strategies include important social and spiritual components. The numerous rules, rituals and festivities reflect farmers' awe of nature and their gratitude for food. The idea that grain itself contains supernatural qualities is common, and most farmers speak of *saha*, the 'grain soul' or 'corn spirit'. *Saha* must be acquired through ritual. It is only found in grain produced on one's own land. Sufficient *saha* acts as a multiplying and replenishing force in the storeroom. *Saha* is capable of leaving the commodity, and, once lost, even a large amount of grain will be finished within a short period.

One of the most common *saha*-conserving practices is called *dumo*, whereby some handfuls of grain are kept in the container, sacred, even during times of acute food deficit. When only a

small amount remains, the farmer assumes that the grain soul is now dwelling in this last stock in higher concentration. If this were consumed, the grain soul would have no place to dwell and would thus disappear.

Many of the storage-related rituals and practices do not seem to have a direct effect on crop storability. A few, however, seem to conflict with scientific recommendations. The small amount of grain remaining in the *dumo* container may be heavily infested and present a potential source of infestation. The privacy surrounding storage management implies that grain storage and the means of controlling stored products are rarely discussed. Storing the harvested grain hidden on the upper floor prevents outsiders from inspecting technologies and practices. Most of the beliefs of farmers have an internal logic, however. In all cases, we acknowledged and respected local systems and beliefs as an important and implicit part of farmers' reality and incorporated these in our action research.

Initiating participatory action research

This information about the farmers' perceptions of grain losses and their knowledge of storage pest management were collected during a survey in the first year of our programme.

Communities visited could then decide whether they wanted to participate in a Participatory Action Research activity to improve grain storage. Interest was shown by a group of 15 women farmers in Gobardiha.

Experimenting as a way of learning is not new to the women. Farmers in Gobardiha experiment, but with great caution, particularly when it comes to seed storage. If it fails, they may not have quality seed the following season. Therefore, it is important that farmers decide how much risk to take, even though this might conflict with the paradigm of scientific research. Thus, to supplement the farmers' experiments with scientifically sound data, we conducted a set of on-farm experiments ourselves in the same village. The setting up of farmer-controlled and scientist-controlled experiments in the same location facilitated information exchange and motivated the participants.

Agreeing jointly on what to try

The participants' initial discussion on how to improve the local storage system reflected their concern for household food security. They rejected ideas that (i) were entirely new and incomprehensible (e.g. mixing chaff with grain), (ii) involved monetary costs (e.g. recycled oil containers, incorporating metal sheets, pottery), (iii) required collaboration with others (organising material from the market), and (iv) required equipment or time on a regular basis (e.g. temperature monitoring). They accepted ideas (i) they were familiar with (e.g. mixing botanicals), (ii) that were based on local practices (sand, smoking, plastering, incorporating foreign materials in bin wall), (iii) that allowed independence, and (iv) promised immediate results so that they could justify their actions to the family. High labour costs were not a reason for rejection (e.g. for sieving grain that was mixed with sand).

The experiments

The decision was thus made to undertake 12 experiments, two of which are described here.

The first experiment involved testing the efficacy of using sand to protect grain from pest infestation. In the farmers' experiment they stored grain between two 10 cm layers of sand. The scientists stored grain in three ways: between two layers of sand, mixed with sand, and stored without sand. At the end of the storage period, pests were virtually absent in the grain stored between layers of sand. Untreated seed and seed mixed with sand was highly infested. Storing between sand layers turned out to be an abandoned traditional practice. Only one participant experimented with sand in the first year, but in the second year, the use of sand for pest control was re-adopted by almost all participants and many other villagers.

Another experiment was concerned with checking grain during storage. During the first year of on-farm experiments the participating women farmers had been told that the traditional clay-bins used for wheat storage should be opened and checked after 140 days of storage, at the end of the rainy season. Drying the wheat at this time would preserve the seed until the end of the storage period. However, although the farmers could visualise this scientific finding when it was



Woman proudly showing a 'bin with a view', which allows insects in stored grains to be detected.

explained to them, they did not follow the recommendation, due to their belief that opening the vessels is harmful, as the air entering triggers pest infestation and spoilage. Thus, most of the bins remained sealed for the entire storage period. The challenge then was how to monitor the saved grains without opening the bin. The answer was simple, yet required close collaboration between scientists and farmers: with a window. A piece of glass inserted at the foot of the bin allowed monitoring from outside. Once insects were detected, the farmers did not hesitate to remove the grain for sun-drying. If no insect activity was observed, opening was unnecessary. This 'improved bin with a view' was highly successful. Windows are now also incorporated in larger vessels containing food grain.

Lessons learned

This work with the women farmers showed that they are well aware of storage losses and able to acquire and use skills for setting up and analysing experiments. Given some guidance, they are able to solve storage-related problems and to improve their storage systems. A few points should be kept in mind:

Science and common sense: As farmers need the benefit more than they need proof, it is incomprehensible to them that a part of the grain remains untreated as control. Hence, about

half of the participants decided to make the control vessels very small to minimise the expected loss of untreated seed.

Flexibility: Storage activities are not planned, but are often performed when the opportunity arises. Times, varieties, structures and practices are highly individual so that group work needs to be complemented by individual visits and guidance.

Data gaps: The time span between setting up and analysing experiments is long. Consequently, there is a high chance of missing some relevant data, rendering the database unsuitable for scientific purposes.

Individual and group work: Group work is indispensable for motivating and encouraging the participants and for exchanging information. But farmers did not agree to conduct experiments together or to use methods that made them dependent on others.

The need for scientific experiments: If scientific data is required, scientist-controlled experiments need to complement farmer experiments.

Reliable technology disseminates itself: Reliable, acceptable and affordable technologies spread without any external initiative, as in the case of storing grain between sand layers.

Source: Astrid Björnsen Gurung

Case 6-2 Addressing saving problems of women in India

Introduction

The Indian non-government organisation IDEA (Integrated Development through Environmental Awakening) has worked among the tribes of the Eastern Ghats in India for more than two decades. In its participatory approach to development it builds on local values, customs, practices, resources and institutions. The women's savings programme, as narrated below by two members of the women's group, is a good example of how the understanding and integration of cultural and spiritual realities has helped to strengthen development efforts.

Experiences of a women's group

"We, the women's groups, have tried to address our problem related to the loss of our savings. Hitherto, when we tried to keep some small savings in our house, they were mostly taken away by the male members. Our hard-earned money used to disappear! That is why women's savings programmes have failed in many villages. In 2002, all the women's groups came together to review and analyse this situation. Members of the Naik Gotna (the network of tribal leaders) were also present at the meeting. We sought their help and advice on how to solve this problem of women's savings going missing.

"A suggestion came from the Poojari (priests) and Dhisari (local healer): 'Keep your savings in front of your Ghoror Nisani (ancestral spirits in the house). Your money will be safe, since it is a

very serious taboo to touch any belonging of the ancestral spirits. So your money will not be touched by anyone in the house.'

"But then the question arose: how can we then touch the monthly savings kept in front of our Ghoror Nisani to be able to use them? Then another Poojari, by the name of

Anandarao, solved this problem by saying 'When we break a coconut to the god we leave one piece with the god and take the rest for our own consumption. Similarly, when

you are in need of your savings in front of a god, you can leave some token amount, like 50 paise or 1 rupee, and take the rest of the

money to the bank or use it to meet your emergency needs.'

"This seemed very sensible to us. We decided to do an experiment with women from 12 villages. IDEA provided us with savings pots, and training. We started this programme on an experimental basis, which we named Nisani Donn (money of the divine beings and women). After celebrating a ritual to worship our village goddess Sanku Devath, all our women's group members, men and children gathered for the launch of the programme. Since then we have kept our savings pots in front of our Ghoror Nisani located either in the centre or in the corner of the house."

Results

"When we started in 2001 the average monthly saving of each member of the groups was around 20 rupees, but by the end of the month the women were usually finally left with less than 10% of these savings. After the first month of the experiment, the savings had reached more than 35 rupees per woman, and nobody had touched it. Within months, the saving programme started accelerating. In the second year, ten more villages joined in this experiment, and the savings had gone up to an average of 43 rupees per woman every month. In this way the modern concept of a savings programme was combined with our own customs and beliefs. No male members or children ever tried to touch this money again!"

Case 6-3

A mango competition in India

Introduction

Traditional Indian food is highly diversified; an ordinary lunch consists of many vegetables, grains and herbs. There are many dishes and any one particular dish can be prepared in many



Women preparing botanical pesticides according to a traditional formula in a training and experimentation programme.

Source: Muvvala Muthai and Madala Yeeramma

During a mango competition organised by KPP the mango varieties are judged by local criteria like flavour, shape and sap content.



different ways. Pickle is an indispensable side-dish in traditional Indian food. There are many kinds, including tender mango pickle, lime pickle and vegetable pickle. Pickle made from the tender mango is famous for its taste in southern India. Besides being used for food and timber, the tender mango tree is also used in specific rituals. Leaves are tied around the house and in front of doors. People believe that this will protect the house from the pollutants in the atmosphere. The tender leaves of mango and jack fruit are also used in *Kalasa*, a sacred copper pot filled with water. The mango leaves energise the *Thirtha* or holy water in the *Kalasa*. Five tender leaves of mango and jackfruit are placed with their petiole immersed in the water. A coconut is placed above these leaves and worshipped.

Krishi Prayoga Pariwara (KPP), a farmers' organisation, works in the Shimoga district in Karnataka the Western Ghats, where the flora and fauna are rich and diverse. The main crops are the areca nut, paddy and coconut. There are medicinal herbs, shrubs, trees, vines and fruit yielding trees like mango and jackfruit. One of the main goals of KPP is to link organic agriculture and health with the local environment.

Two elements surprised KPP about the use of tender mango, which led to further study in 1999. First, a large number of varieties of tender mango were found in the vegetable market in Sagara, the main town of one of the taluks (an administrative unit) in Shimoga district. They differed in size, shape, flavour and juice content. This made KPP wonder about the mango varieties in the region and the quality criteria used by the local population. Second, local sellers harvested the tender mangoes by cutting down the big branches. The mangoes were then transported by lorry to big cities such as Shimoga, Bangalore and Chennai to be processed as industrial pickle. Why were farmers involved in such unhealthy harvesting practices?

Another finding was that employment and income from processing the mangoes takes place in the cities and not in the small villages. Moreover, due to industrial pickling, the technology and know-how of local pickle preparation was being lost. The younger generation is not interested in learning about it because they can buy pickle on the market. Social relations are also affected: the younger generation no longer interacts with the older generation in the process of pickle making. People have lost the habit of offering a gift of homemade pickle when visiting friends or relatives. Even during community gatherings industrial pickle is now commonly used.

KPP organised a competition to find answers to the following questions. To what extent are villagers involved with the tender mango crop? Why are these tender mangoes being exported out of the region? How many pickle industries are flourishing? What is the state of the local technology of pickle preparation today? What is the effect of the presence of industrial pickle on the market?

Steps in the tender mango competition

- Preparing a small group of local people to conduct the survey.
- The team and KPP workers developed a questionnaire to collect information on the varieties of mango trees. Questions included the local name, the age of the tree, its fruiting pattern, yield and propagation.
- The local team conducted the survey and collected mango tree varieties.
- The mango tree varieties were judged by two farmers and two housewives experienced in pickle preparation and tender mango selection. They judged according to eight local criteria: size, shape, flavour, texture, stalk length and girth, sap content, thickness of skin and seed. During the competition nearly 100 entries were exhibited in different classes, including raw tender mango, tender mango in brine and ready-made pickle.
- Long, well-flavoured tender mangoes with high sap content and a thin skin are more in demand on the market. Generally the villagers prefer tender mangoes from their own locality. Tender mangoes with 70 to 80 per cent of the desired qualities are in particular demand. Only a few varieties meet this standard and most varieties fall below the 50 per cent line. Nearly ten varieties of high quality were selected during the competition.

Some reactions

Nearly 150 local people, the KPP team and officials of the Government Forest Department attended the ceremony. Local leaders and writers were also present. There were many questions and comments from the participants regarding the status and future of tender mango. KPP staff felt that this was just the beginning. After this programme, local government departments in agriculture, horticulture and forestry showed interest in conserving some of the noted varieties. The forestry department has distributed more than 100,000 grafted seedlings of these varieties. Farmer members of KPP have also conserved their local varieties of tender mango. Staff from the University of Agricultural Sciences in Dharwad have conducted a few research studies on the tender mango varieties.

*Source: A.S. Anand,
V.K. Aruna Kumara,
KPP*

Case 6-4

Local concepts and the design of joint experiments in Ghana

The need for local concepts

The Empathic Learning and Action framework makes explicit and addresses two different perceptions of the local reality: those of the rural people and those of outsiders who want to work with a rural community. These two can fruitfully interact if joint learning processes are created whereby rural people's knowledge and those of outsiders interact. This can take the shape of joint experimentation. Cecik, a Ghanaian NGO, has struggled to try and help design such experimentation in a way that makes sense to the villagers. How can we prevent, or make

Village meeting in Bongo. Project staff, farmers and earthpriests exchange views.



relevant, formal concepts such as experimental design, objective of the activity, and criteria for assessment? Cecik has found the 'footpath analogy' very effective. The approach has been used to address a number of issues including food crop concerns and efforts to combat the weed striga. The example here shows how it has been used in the design of vetiver grass production in the village of Kalbeo in northern Ghana.

Getting started

Cecik realises that entering the village from the perspective of the local cosmovision influences the effect and outcome of the project activities. In this particular community, basket weaving is a tradition that has been passed down from generation to generation. The entire community (elders, younger men and women, youth and even children) all weave, and the heritage is reflected in local folklore.

Cecik had already been working in Kalbeo for two years when the women of the community raised the issue of the need for grass to weave hats and baskets, a major year-round income earning activity for them. The income is most important during the dry season when there are no farming activities taking place.

The women raised the issue during a discussion on the on-going tree-planting programme that focused on the regeneration of sacred groves and shrines, and traditionally protected lands; general natural regeneration; tree planning in woodlots and fruit tree planting as an economic activity. The issue of grass therefore fitted well within the Cecik environmental rehabilitation programme.

Looking for things to try

The members of the community and CECIK field staff analysed the current situation of lack of grass for weaving. One of the problems was that people had to travel to southern Ghana to buy grass. Alternatively, they bought it at the local market, but at exorbitant prices. Together we discussed the causes and effects, and actions that they might be able to undertake to mitigate the situation. We also discussed how other organisations had dealt with similar problems and compared these with the situation in Kalbeo. The discussion led to ideas about 'things that could be tried' in order to increase productivity and ultimately improve women's livelihoods in particular. The discussion centred on issues of production, processing and marketing of woven products.

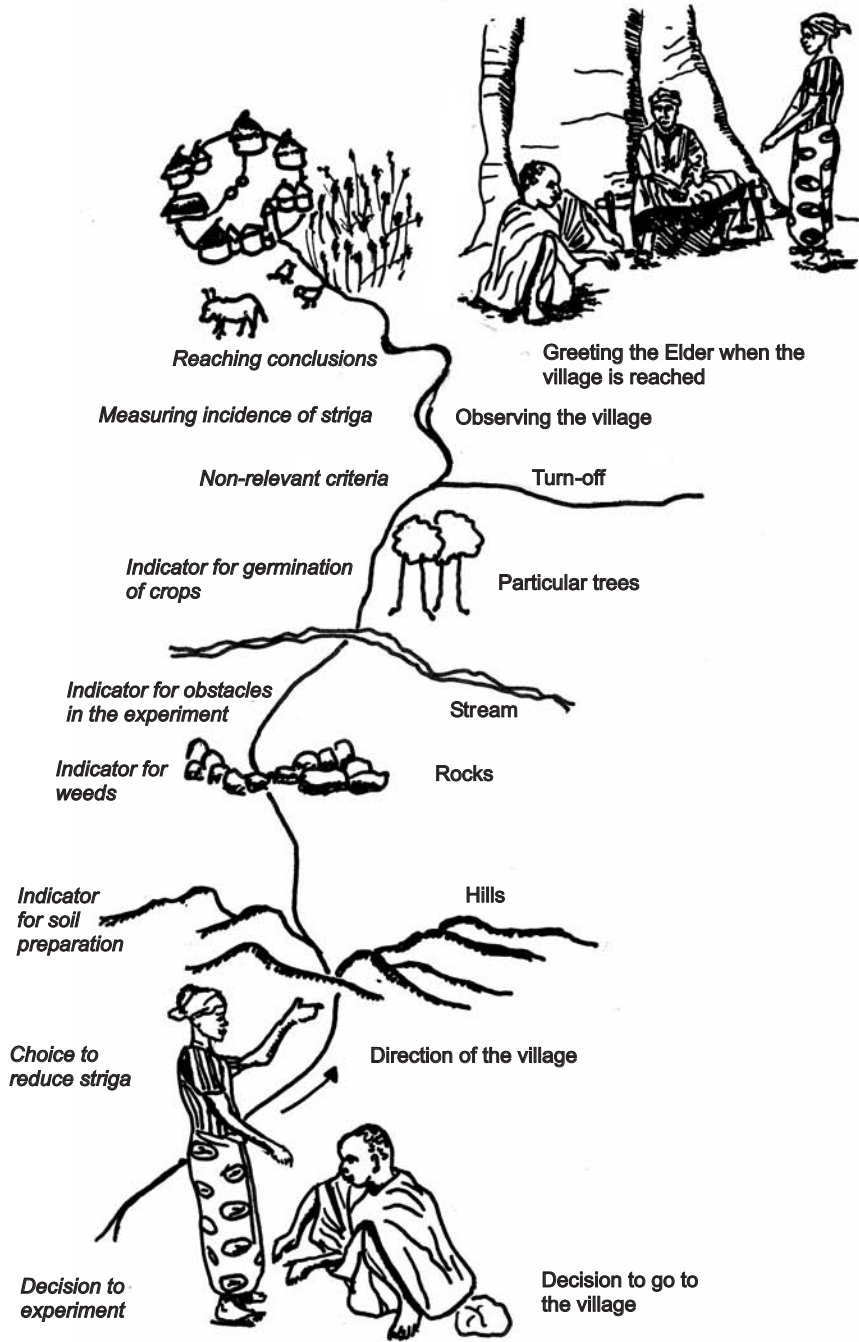


Figure 1: The analogy between farmer's experimental design and the footpath to the village

Footpath analysis

After we had analysed together with the farmers the possibilities for cultivating vetiver grass locally, we realised that they had better ideas than the project staff. An experiment to try these ideas out seemed to be called for. This is where the footpath analogy came in.

The footpath analysis is a methodology based on the analogy between a footpath and the design of an experiment (Figure 1). Among rural communities in northern Ghana, the footpath has great socio-cultural significance. In the local Dagaare language it is called *sor-le*. A path brings both strangers and locals into the community, and takes them out again. It brings evil and it brings good. To guide a stranger into their communities, people describe the entry path in detail, indicating every significant feature or landmark. CECIK thought that by asking the farmers to describe the path from the town to their community, and then asking them to equate this with how they investigate a new idea, it might arrive at ways to get farmers to lead the designing of the experiments.

Drawing the footpath

We formed three separate groups of ten people and asked them to describe in detail—on the ground—how to get from the town to their village. We asked them to include as many details of the landscape as they possibly could. Obstacles like streams, rocks, bushes, bends in the path and trees were identified. Also easy parts, like gentle slopes, clear areas, hard ground and straight stretches of road were pointed out using objects on the ground.

The three designs were brought together and the next challenge was to combine them into one. We noted the similarities, differences and complementarities. The discussions became intense, and there was plenty of fun and mockery when inaccuracies and omissions were discovered. At this point, Cecik staff facilitated the process of obtaining relevant outcomes: starting point, ending point, the choices and judgements that a stranger has to make in order to reach the village.

Designing the experiment

Using this exercise as an entry point, we then challenged the different groups to redraw their first paths, but now included the critical features of the intended vetiver experiment. It was easier this time to follow the same process with a new idea, and an intricate research path started to emerge. From their work, it was possible to make a preliminary list of investigation criteria, such as indicators for choice, critical stages for data collection and some issues of sustainability.

Along the footpath, the decision to go to the village stood for 'determining the experimental objective'. In the vetiver experiment, the objective was to rejuvenate the environment and also to provide grass for weaving. The direction of the village stood for the 'direction to be taken with

the vetiver grass production'. After considering various methods for undertaking action, the farmers decided on two things:

- To start a revolving loan scheme, which they could use to buy grass from southern Ghana, and stockpile it for use.
- Cultivate a piece of land to plant vetiver grass. They had not done this before and were not sure whether the grass, when transplanted, would grow in their area. They decided that they required Service Provider support from the department of Forestry and Agriculture to do the experiment.

Taking the analogy further

The analogy of the footpath and the experimental design was also used to highlight other possible outcomes. Narrow or broad paths, and bare or grassy paths, were symbolic of the rate of progress; streams or other obstacles stood for the obstacles encountered in the experiment. The farms and livestock that appear when nearing human settlements were equated with the criteria used for judging whether the desired outcome was being achieved.

The distribution of crop fields, grazing lands and fallow represented the layout of the experiment. The analogy here was whether the experimental plot was located near the village or in the bush, on the hill or in the valley, on an old farm plot or a new one. Reaching or missing the village symbolised whether or not the experiment outcomes had been achieved.

The progress indicators

The community also used the footpath analogy to further identify progress indicators. Landmarks such as particular trees, rocks and hills became analogies for indicators such as land preparation, transplanting the grass, competition with weeds. The farmers also defined the indicators to monitor the performance, including the grass population before and after the experiment, and the time needed before harvesting. In this way we were able to highlight how soon the crop matured, what happened during the seasonal moisture stress period, and the size, colour and height of the grass.

The farmers decided to evaluate the harvest in terms of harvesting time, quantity and quality of the harvest, suitability for weaving, and savings resulting from not having to buy.

Outcome

The loan scheme has been started and is running, and has provided large quantities of grass from outside the village for weaving this year. The vetiver grass has been planted but not yet harvested. Farmers realise that they can cultivate vetiver themselves and now put energy into protecting the crop from wildfire and livestock damage. A neighbouring community has seen what has been going on, and is interested. If Cecik goes into the second village it will also use the *sor le* approach.

Our lessons

It must be said that the final outcome of working with the footpath analysis is not a uniform procedure for designing experiments, but a rich heterogeneity of designs with detailed modifications. Such an outcome is problematic for our conventional concept of uniformity and up-scaling of experiments. It leads, though, to two major things: on the one hand it strengthens the farmers' capacity to experiment. The footpath analogy has motivated the communities to experiment within their own cultural context and, in this way, has moved participation a step forward. On the other hand, Cecik has built up institutional capacity, enabling it to go beyond conventional experimentation with farmers, and even beyond NGO experimentation. It has provided us with new ideas about 'the process of farmer experimentation'. In our quest for endogenous development this process can be adapted and the basic principles be replicated beyond the villages of Northern Ghana.

Source: Cecik

Case 6-5

Sirigu Women's Organization of Pottery and Art in Ghana

The village of Sirigu

The village of Sirigu is located in the Upper East Region in Ghana and inhabited by subsistence farmers. It is well known for its traditional architecture, pottery and wall designs. The traditional wall decorations are particularly impressive, a unique expression of the cultural identity of Sirigu. Natural and local materials are used to make the black, red and white paint. Women do the decorations to make the home beautiful and to make their husbands and themselves feel happy. It used to be a social activity, not meant to generate any income. Visitors would come, however, and take photos, but there was no real acknowledgement of the work that the women had done to make the wall decorations.

In Sirigu, income generation activities tend to be organised at an individual level, especially pottery and basket weaving. People come from all the villages nearby for the pottery made in Sirigu; it is the main way of earning money.

Many women are involved in pottery making: it is traditionally women's work. Marketing of the pottery is complicated, however.

Middlemen and women were buying pottery from Sirigu to exchange it for food items or for money. Women would take pottery to the market, and at the end of the day they would sell their pots at a much lower price than they were worth. An additional complication is that in the local culture women cannot get a



A woman from the Sirigu Women's Organization of Pottery and Art (SWOPA) painting traditional designs on canvas.

loan facility, as they do not have property: in the local dowry system a woman and her children belong to the husband. The pottery is hers, however. A woman can take it to the market, and the money earned this way is hers.

Starting SWOPA

The idea to form SWOPA, the Sirigu Women's Organization for Pottery and Art, grew in the village when Melanie Kasise retired to her village after working for many years in education and with the local radio. Being the first woman from the village to be educated and make a career, she had a lot of prestige among the villagers and many saw her as a role model for local women seeking to become independent. Discussing the pottery marketing problems with her aunt, it seemed that the best way forward would be to set up a local organisation to try and get a better price. Initially a group of about 54 women was formed, mostly older women who were not nursing any children.

Melanie Kasise relates what happened

'In 1997 we got in touch with the National Board for Small Scale Industries and invited someone to speak about starting up a project. A young lady came and gave a workshop for four days, especially on 'how to cost the pots'. We went through the whole process of making the pots and came to the conclusion that the price we used to ask for them was far too low. As a result we started to increase the price, and to our surprise people still came to buy. After this meeting we also registered SWOPA as an organisation and chose our executives. Getting loan facilities is easy now, because we are members of an identifiable group.'

Expanding activities

The initial experiences in commercialising pottery were not very positive. Pottery is a heavy and breakable product, transport is difficult and the prices are relatively low. Therefore, the idea was put forward to diversify production and to include tourist development and painting. At the time, the traditional wall painting was gradually losing people's interest. It involves a lot of work, whereas the labour burden of women was increasing, because more men were migrating away from the village. This traditional art expression was attracting tourists, but in a way that did not lead to income or other benefits for the people. As no one in the village had experience in tourism, a team of expatriate and local experts was asked to make a feasibility study on the potential for activities in this field. SWOPA was able to mobilise the support of a group of expatriate friends of Sirigu, who had lived in the area. They also assisted in raising funds. The study team concluded that the traditional art did have a good potential for tourism, provided that some basic facilities were created. They also concluded that the traditional art, applied on walls, could possibly be applied on canvas. This would allow the villagers to commercialise their art, through selling their paintings. To realise this, an initial grant was needed and subsequently used to build the physical infrastructure and to train local people in tourism,

commercialisation and management. The business plan indicated that in the course of 4 to 6 years the group would become economically independent and would be able to raise income for a substantial number of women.

SWOPA subsequently established a tourist centre and the village now attracts increasing numbers of visitors who enjoy the traditional architecture and wall designs. Visitors can stay in a guesthouse built in the traditional style. An art shop exhibits and sells the pottery and paintings. Tourist guides have been trained to show visitors the cultural and natural beauties of the village. SWOPA presently employs five persons for tourist services, sales and support of the production.

Though the women are very gifted in using the traditional colours and symbols, and in shaping their craftswomanship and artistic skills, they are continuously improving through training so that they can be successful in painting on canvas. Painting walls is a group activity in which there is a division of labour: some make designs; others plaster, fill in colours, and yet others make music or prepare food. Making paintings on canvas is an individual activity that requires different techniques and skills. It also raised questions about the symbolism used in the paintings, the kinds of colours used, the development of individual styles and their relationship to the traditional style. Training was provided by expatriate and local art teachers. Capacity-building support was also necessary in other areas new to the women such as organisation of exhibitions and even developing a website (www.swopa.org).

Traditions continue to inspire development

In search of inspiration, the Sirigu women artists decided to do research on the history of their own village. Lucy Akanboyuure, the director of SWOPA, set out a strategy to get information on the foundation of the village and on art history. She identified the *tendana* (the land priest) and the experienced musicians as the true bearers of history. The artists visited the elders. The *tendana* informed the women about the history of the land, while the musicians related the story of the village through the history of their instruments. Thus the women unravelled the story of the foundation of their village. One of the drums, the *longná*, plays a crucial role in the story of the foundation of Sirigu. The women thus discovered that not only their musical tradition is centuries old, but also their own arts of pottery and mural decoration. This was an absolute eye-opener to the artists. It made them feel proud of their village and of their own history. The new information was immediately transferred into very innovative art designs on canvas.

Results

The group has grown now to almost 150 members. The paintings and pottery of Sirigu are now sold not only in the village but also in both the district and national capital art galleries. SWOPA has also taken part in art exhibitions in the Netherlands and the US. The individual artists get a fair share of the sales. Since 2002 SWOPA has received several national awards for

its outstanding tourist services and quality art work. Sirigu women have painted a wall decoration in the traditional style in a restaurant in Bolgatanga, as well as in the swimming area in the Golden Tulip hotel in Accra. This first class hotel has also asked SWOPA women to produce 50 paintings for the hotel rooms. With the additional income from tourist services and the sales of art, the women can spend more money on food, health and the education of their children. But it also strengthens the position of the women in the household and society. The contribution of women in decision making in the households has improved and the percentage of girls in primary and secondary education has increased.

SWOPA did receive important support from Ghanaian and foreign organisations. One important form of support has been funding: the grant for making initial investments in infrastructure and training. But capacity-building support has also been important: training in various technical areas but also business development support. Moral support was experienced from the appreciation of outsiders of the value of the traditional culture and art. They helped to draw attention to the women's potential for creating income and strengthening their cultural identity. Identifying niches in tourism and art is difficult for local people, as they have no previous experience in this. Developing these as income earning activities required a very intensive dialogue between expatriates, local experts and the villagers, while ensuring that local people remained the owner of the process. Forms of tourism were developed in which visitors are really received in the traditional way, art styles were developed that were in line with the traditional style, but also allowed innovations and individual developments. While outside support was highly appreciated, the women of SWOPA have continued to work towards independence in both management and finance.

Source: SWOPA

Case 6-6

The real sheep of the Tzotzil in Mexico

Women shepherdesses

The Tzotzil Indians are of Mayan origin and live in the central highland region of Chiapas in southern Mexico. Over the centuries Tzotzil shepherdesses have gathered a rich empirical knowledge about their sheep. This knowledge has formed the basis of a combined effort between Tzotzil women and the Institute of Indigenous Studies at the University of Chiapas. Together, they have worked on the genetic improvement of the local breed of sheep, the 'real sheep', on the basis of the shepherdesses' own criteria and needs.

More than 200,000 Tzotzil Indians live in scattered communities all over the Chiapas highlands, an isolated mountainous area approximately 2,200 m above sea level. The Tzotzil are very different from the rest of the Mexicans: they speak their own language, live in isolated pockets and dress in traditional garments made from sheep's wool. Small-scale agriculture plays a central role in their society. The women are responsible for the family for a large part of the year, when male members of the family travel to the temperate areas to grow maize on

Tzotzil shepherdesses selecting sheep of the local Chiapas breed on basis of their wool quality criteria. They are at the farm of the Institute of Indigenous Studies, University of Chiapas.



rented land. They take care of domestic animals, mostly sheep and poultry. The flocks are small, usually fewer than ten sheep, but this is sufficient to make up over a third of the family income, which is earned by selling the animals themselves, the wool, woollen garments and handicrafts, and manure for fertiliser. Shepherding is done exclusively by the women and they develop a special relationship with every single one of their sheep.

Sheep improvement fails

In the highlands of Chiapas there are many sheep, and of course extension workers came who thought that it would be easy to increase the production of wool in this area. They introduced exotic Rambouillet sheep that produce several kilos of fine wool every year to slowly replace the native sheep that scarcely produce one kilo in the same time span. Unfortunately, the exotic animals did not adapt to the mountainous climate, could not thrive on the poor forage or fight off parasitic illnesses without a commercial food supplement. Even worse was that the women could not process the 'bad quality' wool of these animals, because it was too short, too thin and broke easily during the hand weaving processes. The short, thin, white wool, which is considered good quality wool by industrial standards, is exactly the opposite of what the Tzotzil women require.

The animals were also very different from the indigenous breed, physically and in their character traits: they were bigger and they did not know how to obey. The women named them 'Mexican sheep' as they considered them foreign, unlike their own breed, the 'real sheep'. The Tzotzil shepherdesses soon forgot about these Mexican sheep. The technicians, however, insisted and made repeated attempts with different exotic breeds, but always ended up with the same result.

Reasons for failure: ignoring local realities

In these attempts to bring in foreign breeds the field workers communicated mainly with the men in the Tzotzil communities. The men speak Spanish and work collectively. What the outsiders did not take into account was that, among the Tzotzil people, only the women are responsible for the sheep and that taking care of them is not done collectively. An added difficulty is that the women speak only Tzotzil, their native language.

Moreover, the technicians had very little interest in the local traditions and in the characteristics of the local breed of sheep, the ones that the Tzotzil women call 'real sheep'. Nor were they aware that these sheep are part of the family, like 'ritual children', each with their own

name. As a result they did not understand why the sheep were reprimanded if they didn't take good care of their offspring, or why the rams for breeding were selected not only on their wool quality, but also on their character, especially on being obedient to the shepherdess and gentle with the lambs.

Understanding local knowledge

Anthropologists and veterinarians from the Institute for Indigenous Studies of the University of Chiapas (UNACH) started an investigation into the traditional sheep-keeping strategies of the Tzotzil communities. The first studies confirmed that traditional animal husbandry made sense, and was based on very useful empirical knowledge. The shepherdesses were not only able to keep the animals alive in the adverse environment, but could also make them breed and produce reasonable quantities of wool. Subsequently, traditional sheep breeding systems were studied in more detail. The methodology of this study was radically new: it took the knowledge of the Tzotzil women as the point of departure, thus accepting their expertise in the husbandry of sheep.

Women's own criteria for breeding

The interaction with the women as shepherdesses and weavers has led to a deepened understanding of their criteria for good wool-producing animals. Not only the colour and the cleanliness of the fleece, but also the size of the animal, the length of the locks, the volume of the clipped wool and its suitability for textile processing are taken into account. The women also brought up the importance of respecting the feelings and soul of the sheep (see Box), which they consider crucial for conserving health and production. This proved to be the key to the programme of genetic improvement: understanding that elements related to traditions and culture are as important as aspects related to the animals and their wool.

Participatory breeding

For the past ten years staff of the institute and Tzotzil shepherdesses have worked hand in hand in a participatory programme for the genetic improvement of the Chiapas sheep. Sheep selected by the women on their own criteria have been taken to the farm of the University of Chiapas to be evaluated for their characteristics related to wool production. The women return to the university farm every six months, usually the week before shearing their sheep. This participatory breeding has resulted in a process of mutual learning. The researchers have learned to look for more specific details related to wool quality. The women, on the other hand have come to realise that even though the people in charge of the improvement programme speak Spanish, are mainly men and are not shepherds, they still feel affection for the animals. They write the names of the sheep, in numbered form and hang it as at a pendant around the

The importance of respecting the soul of the sheep

On the university farm, the women were in charge of selecting the best animals in terms of wool and character. In an attempt to speed up the selection of the animals, several groups of women were asked to help identify the sheep that produced bad quality wool, so as to eliminate them from the flock. The women entered the yards, checked the animals and said: 'The sheep are all fine, they all produce good wool.' This was very confusing, because there were sheep in the yards that were clearly below the standards of quality that the women themselves had established.

During the break, the university staff asked the Tzotzil interpreter what was going on and she finally explained. 'The women cannot do what you ask. Animals have a soul and feelings, and if they were to hear that the shepherdesses are criticising them or the wool they produce, or the young that they give birth to, their hearts would fill with sadness and they would fall ill and die.'

After some deliberation, the women were asked to choose the three best animals in the yard, their registration numbers were taken down and the animals were moved to a different yard. Then the next best three were chosen and so on until all the sheep had been evaluated. In this way, the quality of the sheep was evaluated without hurting the feelings of the animals.

necks of the animals; they treat the animals with respect and care, even if there are many in the flock.

One part of the combined efforts concentrates on 'translating' the local empirical system of classifying wool quality into a more quantitative system, which has resulted in a more precise selection process of the Chiapas sheep. The quality of the wool is measured by the length in centimetres, the 'volume' of the wool in kilograms and the 'textile aptitude', which is the relation between coarse fibres and fine fibres of locks from different parts of the body.

Improved sheep accepted as 'real sheep'

Through the collaborative selection and breeding of the sheep on the farm of the institute, it has been possible to return rams of the 'improved Chiapas sheep', to the communities. Their return is planned carefully with the Tzotzil women. As a result, the animals that leave the university farm have adapted fast to the life of the family flocks, learning just as fast to recognise and obey their shepherdesses. The women are happy in their hearts, because they consider these animals to be 'real sheep' that produce long and thick good quality wool, and have lambs that are just as lovely.

The experience with the 'real sheep' of the Tzotzil shepherdesses teaches us that reality is complex. We can no longer ignore the experiences and the cosmovision of the people who live in the communities, and it is time to adapt what is being taught at all institutes of higher education.

Source: Tona Gomez, Hilda Castro and Raul Perezgrovas, The Institute for Indigenous Studies, Universidad Autónoma de Chiapas

Case 6-7

Strengthening local markets in Bolivia

Introduction

The Seventh Friday Fair takes place on the seventh Friday after Easter, in the town of Sipe Sipe, Bolivia. Sipe Sipe is a small town of approximately 2,000 inhabitants, located at an altitude of 2,500 metres.

Early in the morning, several hundred farmers from the 35 villages in the surrounding area start to gather together. Farmers from the highlands bring various varieties of potatoes and of other local tubers, like *oca* and *papalisa*. Farmers from the valleys bring local varieties of corn. The colourful fair visually reflects local biodiversity but underneath this there is the indigenous solidarity, forming a strong basis for development efforts.



Local markets and fairs reflect abundant diversity from different agricultural ecosystems. Besides monetary exchange, indigenous forms of solidarity and exchange form the basis of local marketing strategies at these fairs.

The traditional market process

At the early stages of the market, products from the highlands are shown to the people from the valleys, who arrive from neighbouring communities. Then the *cambiacuy*, the informal exchange, begins which uses verbal agreements between acquaintances, relatives and friends. The *cambiacuy* is the most important form of exchange and is based on affinity rather than on direct gains: a large basket of *papalisa* for a measure of corn, or a *chimpu* or bag of potatoes for the same amount of good quality maize.

Initially the exchange is mainly of tubers and corn, but at a certain hour the diversity of exchanged products is extended to include fruits, vegetables, baskets and clay pots. Around noon, the fair starts to take on a different character, as transactions with money are now included. A second economic logic enters the fair. Merchants arrive from nearby towns. The farming families from the highlands and the valleys also begin to exhibit their products for sale and carry out some necessary purchases.

Finally, by mid-afternoon, the families begin the *ch'alla*, or blessing, of the products that have been exchanged, to ask that the next year may provide enough food for all participating families. The participants assess the results of the fair in terms of products sold or products obtained, but also in terms of friendship, possible new spiritual familial ties, and future marriages.

Understanding the importance of local fairs

Agruco, a university based centre in Cochabamba, has been present during these fairs for many years and has used this presence to study their role and relevance. These fairs were found to be of strategic importance for urban and rural societies, especially in times of crisis, when cash flows are restricted. They show how in the local calendars, agrarian production is strongly interlinked with the celebration of rituals and fairs. Communities' food security and other needs are secured without the exclusive presence of money. They also show evidence of the joy of sharing life based on the principle of reciprocity. Farmers not only simply search for the materials needed to cover their protein, carbohydrate, vitamin and mineral requirements but also look for the vital energy, which the farmers call *ispalla*, the 'food for the spirit, the mind and the body'.

Strengthening the fairs

The Seventh Friday Fair, like other indigenous fairs and festivities in Bolivia, has been losing ground over the last decades due to the influence of religious sects and increased consumption of agro-industrial foods, such as sugar, rice and noodles. These factors have also led to a reduced production of Andean crops. To counter this trend Agruco joined farming families in several rural communities in the highlands of Sipe Sipe to initiate a project to strengthen the Seventh Friday Fair.

The most important components of the project were the following:

- Joint reflection took place between the communities and Agruco on the importance of maintaining links of reciprocity between peasants from different ecosystems; the importance of non-monetary strategies to obtain agricultural products and the relevance for cultural identity of preserving fairs and festivals of Andean origin.
- Families were assisted in selecting tubers for exchange; incentives were provided for producing the tubers in the form of community seed funds, and where necessary there was collaboration to ensure transport of the tubers to the fair.
- A survey was made of the opportunities and limitations of the fair, and the results were published within the community with the aim of reaching the young people in particular.

After the project had been implemented, changes were noted: peasants from the altiplano communities became much more actively involved, and this in turn led to an increase in the participation of peasants from the valleys. Agruco first confined its participation in the fairs to observation for about ten years, and in the last five years has been more active, as described above.

The process of strengthening the fairs has been broadened to include the active participation of the municipality of Sipe-Sipe. This project aims to stimulate fairs and festivities like the Seventh Friday Fair, to increase the access to Andean foods, strengthen indigenous

cultural identity, and to educate the urban and rural population about Andean cultural practices. The involvement of the municipality was a new project that was aimed at placing the organisation of the market in the hands of the local government. This meant locating the fair in the main square in the centre of the village of Sipe Sipe, getting the fair included in the village's calendar of festivals, and organising jointly with Agruco open conferences on the economic, social and ritual connotations of reciprocity. The participation of the local government of the Sipe Sipe municipality has been a positive experience for getting the fair revitalised and institutionalised. Before the involvement of the municipality the event had been a marginal affair primarily attended by urban dwellers in the community.

Ways forward

The support to the festivities and fairs allows for reflection between Agruco and new generations of farmers, in search of effective approaches to endogenous development. The participation of students in the rural fairs and festivities (through Agruco) contributes towards their university education where course content is based on local contexts. But, most importantly, the support given to these indigenous activities shows new ways to reactivate the production of Andean crops and support indigenous forms of solidarity. These may well be viable alternatives to some of the problems that the Bolivian rural population faces.

Source: Freddy Delgado, Dora Ponce, Agruco

Reflections on supporting local initiatives

Dealing with cultural and spiritual concepts in research and development

Many cases, especially in Chapter 4, illustrate that the local reality of people comprises social, natural and spiritual dimensions. Acknowledging and respecting local systems and beliefs can be a way to build sufficient trust between the population and the development agent so that it is possible to work together, also on sensitive issues such as beliefs and spiritual practices. As it can be difficult for outsiders with a different cultural background to understand local concepts and the sensitive issues involved (for example respecting the soul of sheep, Case 6-6), it is important that the population takes the lead in indigenous action research. Supporting documentation, exchange and assessment of traditional practices is very important (see Chapter 5) for rural communities to regain trust in their effectiveness and to enhance their renewed use. Adaptation, improvement and innovation of these practices is a next step in the process of revitalisation.

Experimentation for innovation

Experimentation in which the population and development agents work closely together to create solutions for local problems is now increasingly accepted. Members of the community decide on the design of the process, the choice of what to test and how, and the criteria for evaluating the results. Most of the Compas partners work with this kind of approach and have

designed several methods for facilitating the learning and action process. The footpath analogy developed by Cecik in Ghana (Case 6-4) is one of these approaches. PICADS – developed by AGRUCO in Bolivia (Case 4-4) – is another. In some of the cases (2-8, 4-4, 6-1, 6-4, 6-6) the experimentation process is highlighted. Case 6-1 shows what type of ideas for experimenting with better seed storage were acceptable to the women involved: ideas they were familiar with (e.g. mixing botanicals), that were based on local practices (sand, smoking, plastering), that allowed independence, and promised immediate results. All these ideas were compatible with the spiritual practices around seed storage.

Building on the traditional economy

Strengthening the local economy is an important objective of experimentation. For this it is important to look first at the traditional economic strategies and how these might be improved. Most traditional economies necessarily depended on what could be produced or exchanged locally for subsistence use within the community. Some economies in geographically more favourable positions specialised more in trade. Hence most traditional economies were local economies which mainly depended on the locally available natural, human and spiritual resources. In addition, the specific biophysical characteristics of their region moulded these economies in co-evolution with the local culture of which they were an integrated part. The traditional economy was shaped to reproduce the human community and its territory (land, soil, plants and animals) and to communicate and pay respect to the divine world through rituals, offers and dwelling places. Hence it provided for the natural, social and spiritual needs of the community. Traditional cultures and their economies were centred on interaction with the divine world: their god or gods, Mother Earth (Pacha Mama) or their ancestors. Spiritual protection, social reciprocity and solidarity, complementarity, local varieties and breeds and other strategies to increase resilience were very important for survival of the community. People respected nature and cooperated with it in a more or less sustainable way, whether by way of hunting, collecting, pastoralism, shifting cultivation or sedentary integrated agriculture. Local markets and fairs played an important role in the exchange of products between people with specialised skills or localities. Money often had a limited role in local barter processes, but was important in regional and national trade. Barter and trade were often combined as separate strategies.

Currently, most economies have been integrated at least partly in the national, international and global market. Many economies however, especially those in areas with difficult ecological conditions or far away from main markets and those of conservative cultures, are still quite traditional. Subsistence, barter and market strategies are followed in different, complementary combinations. Revitalising and improving traditional agriculture (Chapter 2, Learning Form 10, Cases, 6-6, 8-2) and traditional health practices (Cases 3-1, 4-1), among others, help to strengthen the local economy. Supporting traditional markets and fairs, as Agruco is doing in Bolivia (Case 6-7), can also be important.

Principles and examples of enhancing local economies

Make best use of local resources

- Plug the leaks by using local renewable rather than externally sourced resources.
- Build resilience and spread risks, among others by diversifying the production system.
- Recycle financial resources within the system of producing / buying local goods and services.
- Add value to local produce before it is exported.
- Connect people and institutions to build trust, new linkages and more exchange.

Exchange with other economies

- Make use of external opportunities to attract external resources, especially money, information, skills, and new technologies.

Strengthening the local economy

Local economies can be compared with a leaking bucket. Goods and services are produced, exchanged and used within the local economy, but also sold to the outside for money. Money is also used to buy goods and services from inside or outside the local economy. Money from other sources (government, projects, transfers, etc.) flows in and money in the form of taxes flows out. In this way local economies interact with the national and the global economy.

To create economic growth it is often recommended that the local economy be opened up and that investments are made in export-oriented production. If the local economy succeeds in producing competitively, money starts to flow into the local economy and becomes available for further use and accumulation of capital assets. In practice, however, many local economies do not succeed in creating a positive trade balance with the national and global economy. Money and other (natural, human, social) capital assets are depleted and the local economy stagnates (NEF, 2002). To prevent weak local economies from becoming drained of their assets, they need to be localised by plugging their leaks, enhancing internal exchanges and making the best of available resources first. To do so, Pretty (1998) recommends the principles presented in the box below. Several of the cases (e.g. 6.5 and 6.6) in this book present examples of such strategies.

Make best use of local resources

As external inputs and market opportunities often were not available, traditional economies depended on best use of local resources to satisfy the local needs in such a way that the natural capital did not get lost. Especially in marginal economic conditions, it is therefore important to start from revitalising the local traditional agriculture, health care and other natural resource use practices before introducing modern practices. But as conditions and needs have changed, adaptation and innovation of the traditional practices may be needed. For this, where affordable and acceptable, scientific knowledge may complement the local or traditional knowledge.

Exchange with other economies

Traditional products can be made attractive for urbanised and foreign consumers as well. By adapting them to the demands of potential consumers and by commercialising, it is often possible to raise the value of traditional products such as herbal medicines, local food specialties, organic agricultural products, handicrafts and art. Eco-cultural tourism may be a way to harvest additional income as well, although local culture may be put at risk. In this way it is possible to strengthen the local economy in new ways. However, commercialisation of local products and services should not be at the cost of food security, social solidarity or ecological sustainability.

Finding balances

These alternative approaches to local economies should seek a better balance between optimal functioning of the local production system (in the economic, ecological and social senses) and opening up to the national and global market; in other words, between localisation and globalisation—a process in which the community protects its own resources but does not fence itself off from the global world completely. Instead it connects to the global economy in such a way that local qualities (such as food self-sufficiency, cultural identity, ecological sustainability, biodiversity) and values (such as respect for the spiritual world, social reciprocity and solidarity) remain, or become the point of reference. The process of 'localisation' implies a process in which the rules of interaction between the local and the global are increasingly controlled by the local actors (see for example Case 8-7, where olive farming cooperatives have created local selling points).

Challenges

A central challenge remains the reconciliation of practices recommended by development agents based on western-scientific understanding with local practices based on traditional understanding. The case from Nepal (6-1), for example, presents the practical concerns and questions that development workers had about local grain storage practices, which have a strong religious dimension. The mismatch often caused the introduction of so-called improved practices to fail. It was only after understanding the social-religious dimensions that an effective dialogue was established to develop locally effective and acceptable solutions.

The cases included in this chapter are still experimental and small scale. Their impact is not only economic, but also social, cultural and ecological. Results may therefore not always be easy to measure. Nevertheless, these experiences may be very useful to convince development workers, researchers and policy makers to look in a different way at local development. The challenge now is to design strategies for local action which can be implemented on a large scale and with relatively little effort. Chapters 7 and 8 on strengthening local institutions and creating an enabling environment are important in this respect.