

5 How to assist farmers in their development?

5.1 Introduction

In this chapter we present three ways or processes of development: Participatory Technology Development (PTD), Endogenous Development (ED) as promoted by CECIK, the Centre for Cosmivision and Indigenous Knowledge, and Farmer to Farmer Extension. The first two, PTD and ED, are methods for sowing the seeds of sustainable development. But we can never reach all rural households in Northern Ghana using these two extension techniques. Therefore scaling up to the larger level should be done from farmer to farmer. That is why we also mention some basic principles of Farmer to Farmer Extension.

5.2 What is participation?

Other words for participation are: sharing, contribution, involvement, cooperation, co-partnership, membership, and attendance.

But participation can take place on very different levels. Look carefully at the next table and study the increasing levels of participation. In the last column we have tried to find examples of the particular level of participation that you will find in Ghana.

When you study the different levels of participation you will see that in level 1, manipulative participation, farmers or the target group are totally out of the decision making process. The same in level 2 and 3 although you see that in level 3 consults are taken. If there is an excellent consultant you may have some influence on the decisions, which are made. In level 4, the Food for Work participation farmers may decide about minor issues but not about the main issues. In level 5 the project owners just see it as functional to give people the power to decide but not about the main issues. The project owners are not really interested in the people but just in the aim of the project. If the project succeeds, they will get the status, not the people.

Levels 6 and especially 7 we see as levels of participation that belong to sustainable development. We realise that it is not an easy development process for both the target group as well as for the development worker to slowly or radically change from level 1 to level 7. It is a big change in attitude but we see it as a prerequisite to give the farmers the full power to decide about their own situation. All these ways of development are participatory processes. We start by offering some thoughts about participation since proper participation is a prerequisite of sustainable development.

5.3 Participatory technology development

In this paragraph we give you a method to guide farmer groups or communities through a participatory technology development process.

Introduction

In some agricultural disciplines such as crop breeding or irrigation, technology development is a well-known tool.

- The crop breeder studies the local varieties and decides that the yield capacity is too low. Based on farmers' experience and his own agronomic knowledge, he breeds a new sorghum or maize variety and gives it to the extension worker to be introduced to farmers.
- The agricultural mechanisation expert sees how farmers are suffering when they try to eradicate weeds in their crops. Since the traditional hoe has a short handle, you have to bend to remove the weeds. The mechanisation expert thinks that a long handle will reduce the back pain. He makes some drawings, goes to a blacksmith who makes the hoe with a long handle. Remember also Story 8, Bushfire in the community!

Table 2: Levels of increasing participation

	Level	Characteristics	Examples from Northern Ghana
1.	Manipulative participation	Participation is simply a pretence, with 'people's' representatives on official boards but who are unelected and have no power.	- any organisation with a dictator as director - an old type of extension worker
2.	Passive participation	People participate by being told what has been decided or has already happened. It involves unilateral announcements by an administration or project management without listening to people's responses. The information being shared belongs only to external professionals.	- NGOs who put farmers in the board just to get funds - in some cooperatives the manager decide about prices, the members are not involved - CRS school feeding programme
3.	Participation by consultation	People participate by being consulted or by answering questions. External agents define problems and information processes and so control analysis. Such a consultative process does not concede any share in decision making and professionals are under no obligation to take on board people's views.	- NGO that just builds a grain store or a KVIP without taking the people serious; white elephants! - some target groups agree just to please the leader or to avoid problems
4.	Participation for material incentives	People participate by contributing resources; for example, labour, in return for food, cash or other material incentives. Farmers may provide the fields and labour, but are involved in neither experimentation nor the process of learning. It is very common to see this called participation, yet people have no stake in prolonging techniques or practices when the incentives end.	- all food-for-work projects - attending a workshop just to become DSA - a normal boss-employer relationship
5.	Functional participation	Participation seen by external agencies as a means to achieve project goals, especially reduced costs. People may participate by forming groups to meet predetermined objectives related to the project. Such involvement may be interactive and involve shared decision making but tends to arise only after major decisions have already been made by external agents. At worst, local people may still only be cooperating to serve external goals.	- youth employment fund - many government projects such as livestock development project - most NGOs work along these lines
6.	Interactive participation	People participate in joint analysis, development of action plans and formation of strengthening of local institutions. Participation is seen as a right, not just the means to achieve goals. The process involves interdisciplinary methods that seek multiple perspectives and make use of systematic and structured learning processes. As groups take control over local decisions and determine how available resources are used, so they have a stake in maintaining structures or practices.	- a well functioning District Assembly - an old traditional village - Parent Teachers Association
7.	Self-mobilisation	People participate by taking decisions independently of external institutions to change systems. They develop contacts with external institutions for resources and technical advice they need, but retain control over how resources are used. Self-mobilisation can spread if governments and NGOs provide an enabling framework of support. Such self-initiated mobilisation may or may not challenge existing distribution of wealth and power.	- susu group credit schemes - construction of school buildings with thatch roofs by communities - youth groups who work rotationally on all farms of the members - some well functioning anti-bushfire squadrons installed by the community

Source: Pretty 1995

In both examples new technologies are an important step in agricultural development activities. In both examples it is also clear that the new technologies are the skills of an 'expert'. Farmers start to use the new weeding tool and variety, and maybe as a result of discussions with the expert, the tool will be adapted, improved or rejected.

These examples show how technical agricultural development, up to now, has been done.

That is the past. After reading this manual, we ask you to experiment with a participatory development process, taking into consideration the sustainable development aims of Chapter 3, all resources described in Chapter 4 and the social and cultural contexts, also described in Chapter 4. Try it!

What is participatory technology development?

It is strange that agricultural experts consider only parts of a farming system (a tool, a de-husker, a new maize variety, use of compost etc.) and never consider consciously a whole farming system. Farming households and especially landlords, when designing their farming system, take into account the household size, and the natural-, social- and spiritual resources. Developing a farming system is an indigenous skill applied by farmers to achieve certain aims. In Northern Ghana these aims do not include only food security. There are many other aims: households also farm to achieve cash

security, they try to save the environment for future generations and they farm to achieve cultural or spiritual aims. Agricultural development experts overlook especially the cultural or spiritual aims.

Participatory Technology Development (PTD) tries to enhance the development skills of farmers and of agricultural experts like extension workers and researchers. It is a mutual process between insiders (farmers) and outsiders, but the farmers play the key role. It is their farming system and they have to guide their own development process. Participatory Technology Development tries to design a farm consciously to achieve aims which are set by the farming households.

Participatory Technology Development is an approach that:

- takes the traditional setting (nature, techniques, social set-up and the traditional cosmovision) as starting point of development;
- combines the traditional knowledge, attitudes and practices with scientific knowledge, attitudes and practices;
- integrates several sustainable farming techniques to a self-supporting farming system;
- changes the attitude of farmers from 'package-receivers' to 'independent farm developers' and
- changes experts and fieldworkers from 'message-deliverers to development-partners'.

The six steps of Participatory Technology Development

- Step 1: Getting Started and Building Trust
- Step 2: Problem Identification and Looking for Things to Try
- Step 3: Organising for Development Action
- Step 4: Trying out
- Step 5: Sharing Results (including Monitoring and Evaluation)
- Step 6: Sustaining the Results

Is the problem solved?

If yes -> select the next key-problem and continue with Step 2.

If no -> go back to Step 2 and select another possible solution for the problem and continue with Step 3

In Chapter 7 you will find some participatory training techniques (paragraph 7.5) that will help you in problem identification (Step 2) and some organic farming techniques (paragraph 7.4), also as part of Step 2: 'Things to Try'.

The six steps are a cyclic process. Once the first problem is solved, the next one can be solved. Start with small feasible problems first and then try to tackle larger problems. This will build confidence in the farmer and in you as outsider. Working with these steps, hopefully you can solve more and larger problems and turn the downward vicious cycle of food-insecurity leading to weak and poor households leading to lower food production leading to larger food insecurity into positive development cycle of improving food security, more cash and more unity in the community.

Remember always that you are the facilitator and that you have to respect rural farmers' worldview and way of life. They should decide on all six steps. They also determine the speed of the process. Annex 6 provides a detailed description of all six steps.

5.4 Endogenous Development

CECIK is a partner organisation in the Compas network: COMPARing and Supporting endogenous development. CECIK has carried out field experiments with endogenous development in the area of Bongo, Northern Ghana. This is a rural area caught up in a vicious cycle of poverty. It is a socio-culturally rich environment, with strong value systems, traditional leadership structures and systems, spiritual values. The communities are poor, but 'proud in their poverty'.

The methodologies developed by CECIK take into account the worldview of the people in these communities, as well as the way they want to combine traditional with modern practices in agricul-

ture, natural resource management and several income-generating activities. CECIK has established partnerships with local universities (University for Development Studies in Bolgatanga).

Methodology of CECIK for supporting endogenous development (ED)

First community entry:

- We go only on invitation.
- Project members alone, not with government. It is more a social occasion.
- Preparation of the 'self' of project staff, through reflection, prayer and intuition: what do I have to offer at personal level, to the community and to my country?
- At the same time preparation by the 'community', through consultation of the ancestors, reflection, intuition.
- When community members and project staff agree that energies are positive, the programme can start.

Community planning and envisioning:

- Together with government officials & universities:
- Start with whole community;
- Joint analysis of six local resources to see how much potential is available:
 1. Natural resources (for example: natural environment, crops, animals)
 2. Human resources (for example: local knowledge, the learning methods)
 3. Economic/financial resources (for example: credit, market, saving methods)
 4. Produced resources (for example: roads, schools)
 5. Social resources (family structures, solidarity structures, leadership)
 6. Cultural resources: all elements related to the local culture, including spiritual resources (which cannot be identified separately, as they underlie all resources mentioned before)
- Select and start working in thematic activities: group formation within the community according to thematic interests;
- Community Institutional Mapping (CIM) of traditional leadership structures and community expert structures related to each of the thematic areas;
- Baseline data collection for each thematic activity.

Action research within thematic areas:

- Planning of each thematic area using the participatory methodologies, and including role of local institutions in these plans and responsibilities;
- Topical research input from university on specific themes;
- Joint management of plans (between community traditional leaders and field staff);
- Validation sessions (between community experts and NGO, participation of university);
- During community festivals the outcome of action research are presented and discussed.

Evaluation and (re)planning:

- Discussions of evaluation findings;
- Walks, visits, cross-visits;
- Sacrifices and other ritual performances for some of the activities.

Some questions about CECIK put to the director, Dr. David Millar:

- 1 What do you mean by 'pride in their poverty'? The local perception of poverty does not primarily look at the dress or the number of meals per day. The main criteria for well-being include: how many women you have, how many children, and how many people look up to you within the community.
- 2 What about discriminatory issues within the groups, such as against women? Participation does not mean that it is only the community that knows. One of our responsibilities is to provide information about a controversial aspect – not tell them that, for example, 'the way you treat your women is not right'. So provide them with information through posters, or a radio programme about other ways of doing these things, so reflection can start. It takes time, this way. But now the practices can be discussed. If they remain hidden, they cannot be challenged.
- 3 What themes do you focus on? This includes livestock, tree planting, rehabilitation of sacred lands, experiments with controlling striga in crops, etc.
- 4 Remark by David: If you perceive that spirituality does not exist in your area, you have to look closer; also look for the traditional leadership structure.
- 5 Do you suggest we have to perform rituals ourselves? We do not perform them. Only if it is important in the area that you are included in a ritual, can you participate.

- 6 You only focus on the whole system? We start with the whole community and the whole system. Then according to interest in a specific theme, groups are formed to work on that. In our area, for example, livestock work is limited due to the belief in the ‘evil eye’. Therefore we can only work through family groups with livestock, instead of community groups. But that is ok.
- 7 Do you have superstition in your area? Yes, and this is part of our reality. We have to respect it and be empathetic; we have to develop tolerance of other realities.
- 8 Is religion the same as spirituality? Religion is different from spirituality. Spirituality is the innermost expression of ourselves – while religion is just one of those expressions, but does not include all the others.

5.5 Farmer to Farmer Extension

Sowing the seeds of sustainable development through PTD or the CECIK ED method is in fact not the most difficult part of starting sustainable development. A more challenging question is: How do we reach all rural households? How do we reach all souls and soils in Northern Ghana? As development workers, we can never reach all farming households in a development project. It is clear: the scaling up should be done from farmer to farmer; or from woman to woman; from community to community. The case study about David Sandow in Chapter 6 describes how Farmer to Farmer (FtF) extension takes place.

Only when sustainable development becomes a movement, a grassroots development, a development in which the seeds of the few PTD and ED-trainings can germinate, flower and multiply, will Northern Ghana be able to develop and achieve reach all five forms of security.

In Latin America there has been a lot of experience with FtF extension. FtF is more than a wide-flung, loosely related collection of NGO projects. It is not simply a horizontal methodology for learning or technology transfer from one to the other. It is a social movement based on the belief that farmers are capable of developing their own agriculture (see Leisa Magazine, October 2001). The FtF movement ‘walks’ on the legs of ‘innovation and solidarity’ by experimenting on small, local scales and by widely sharing knowledge, creativity, experience and wisdom, from farmer to farmer.

The movement ‘works’ with the two hands of ‘production and protection’. By focusing on overcoming limiting factors to production and on strengthening the environmental capacity (more organic matter in the soil, more trees, less erosion, stop bush burning etc.), farmers first reduce external inputs and then substitute internal for external inputs. To the extent possible, they gradually eliminate inputs altogether by redesigning the farm system to rely primarily on sustainable and renewable techniques. When the environment is protected, the production capacity of the farms will increase automatically.

Basic principles of Farmer to Farmer extension

The basic principles of FtF are:

- Start small, go slowly;
- Small-scale experimentation to overcome limiting factors and stabilise ecological functions;
- Multiplier effect; one farmer should inform his household, his relatives, his friends. When all farmers who have participated in a project do this, there will be a large multiplier effect;
- Limit introduction of technology; only simple techniques to start with, like composting, later on more difficult techniques like contour ploughing;
- Train others in FtF extension;
- Reduction, substitution, redesign: 3-phase conversion to sustainability: first replace part of your chemical fertilizer use by compost, secondly replace all chemicals by compost, thirdly re-organise your whole farming system.

The movement ‘sees’ with the shared visions of farmer-led sustainable agriculture. In its ‘heart’, members of the movement are motivated by deeply-held beliefs in their divine worldview, in family-structures, in nature and community.

Experience over the years in Latin America has resulted in a number of activities and methodological/ organisational lessons. First is the centrality of rural culture. Farmers learn from each other by sharing wisdom, creativity and knowledge, not just information and techniques. Rather than simply transferring technologies, farmers first and foremost ‘make culture’ - sharing that leads to action builds a culture of sustainable agriculture. Technology transfer is actually just one (and not always the primary) component of this cultural matrix.

Part of farmers’ enthusiasm for developing agriculture comes from the sense that they are actually contributing to and shaping society. This subjective, but very powerful motivational force has been nurtured through cross visits, meetings like Farmer Days and full participation of farmers in all kinds of training and workshops.

Some suggestions on how to stimulate Farmer to Farmer extension in Northern Ghana:

- 1 Farmer Field Schools: this involves locating sites which are considered poor and degraded, and strategically located along a busy roadside or close to a market, and practising different (soil) improvement practices. This approach works with farmer groups, which are expected to rehabilitate collectively a piece of degraded land. This way, ideas gained about the improved practices and their resultant effects (for instance as expressed in yields obtained) help to spread information about these practices. This is also an example of how participatory innovations can be developed.
- 2 Farmer Days as are organised by MoFA. Besides being an occasion when prizes are given to the best farmers, these days could also be used to stimulate farmers to show the public innovations they have made themselves.
- 3 NGOs should stimulate successful farmers who are participating in projects on sustainable agriculture to distribute their knowledge and experience to members of their own social network (like Mr Sandow, in Case 1, Chapter 6).
- 4 Lead an exemplary life. Traditionally Ghanaian adults and children learn by copying their parents



Figure 12: Stone bunding: Stone bunding is an endogenous technique in some parts of Northern Ghana. In other parts is not indigenous. Farmers who are familiar with the technique can easily motivate other farmers to apply this technique in their fields.