

**PUTTING PROCESS INTO PRACTICE:
OPERATIONALISING PARTICIPATORY EXTENSION**

J. Hagmann with E. Chuma, K. Murwira and M. Connolly

Abstract

This paper aims to stimulate discussion on the operationalisation of learning process approaches to community development and rural extension. It attempts to systematise a participatory extension approach into process phases and steps, which allow extension agents to understand the process dynamics, while preventing a blueprint implementation. The systematisation, in combination with an intensive training learning process over one to two years, is seen as the foundation for the development of field staff. The cornerstones of this approach are social mobilisation which includes local organisational development, action planning, experiential learning through trying out new ideas and options and evaluation of the action by the people involved in the process. Innovation is seen as a product of social negotiation and the spreading of innovation as a product of good effective social organisation and communication at community level. Therefore the extension intervention is geared toward strengthening mechanisms for joint learning and sharing of experiences and communication among farmers and between farmers and outsiders. The immediate impact is a more efficient development and spreading of technologies, but secondary, non-agricultural impacts such as improved self-governance, are equally important.

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Acronyms

AEW	agricultural extension worker
AGRITEX	Department of Agricultural, Technical and Extension Services
CLP and D	community level planning and development
FSR/E	farming systems research and extension
GTZ	German Development Cooperation
IRDEP	Integrated Rural Development Programme
ITZ	Intermediate Technology Development Group, Zimbabwe
MoLA	Ministry of Lands and Agriculture
PEA	participatory extension approach
PRA	participatory rural appraisal
RRA	rapid rural appraisal
TFT	training for transformation
ToA	time plan of action
TPoT	transfer of technology model
VCW	village community worker
VET	Department of Veterinary Services
VIDCO	Village Development Committee
ZFU	Zimbabwe Farmers Union

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1 INTRODUCTION

Until recently, development in rural Africa consisted mainly of farmers and communities being told what to do, often by institutions which had not taken the time to understand their real needs. The results tended to be poor, because rural people did not have any sense of ownership of the ideas imposed on them. However, change now sweeping through the development movement is encouraging rural communities to become the prime movers themselves in efforts to improve their economic and social well-being.

Government and non-governmental institutions are increasingly recognising the need to move away from instructions and blueprint solutions, towards more participatory approaches which support communities in their capacity to set and fulfil their own development goals. At the heart of this change is the recognition that rural people themselves are the owners and shapers of their own development. These changes bring with them major challenges, not only for the communities themselves, but also for the institutions which advise and support them.

For agricultural extension agents, this means fundamental changes in the way they work. Rather than simply being agents for technologies imposed from outside, they need instead to become catalysts, helping communities achieve goals they have defined for themselves. This means learning to interact closely with social groups and communities, becoming better listeners and facilitators, and developing a responsive, two-way communication process between the community and rural service institutions.

Participatory tools and methods which enable the implementation of these ideas have become mainstream during the last decade. In practice, however, these tools are often still used in an ad hoc manner, often isolated from the general implementation context. In agricultural extension, this means that a PRA is often carried out resulting in nice diagrams and calendars, but the results are often not sufficiently linked to the implementation process, nor are the attitudes internalised with the implementation agents. The following statement of a Zambian extension worker sounds cynical, but reflects reality in many cases: *'the first two days in the week we do participatory extension and the rest of the week ordinary extension'*. NGOs often report great successes achieved through participation, but when asked how these successes were achieved, the

answer is: *'... we use PRA'*. The implementation process is rarely described systematically and is therefore not transparent. This causes problems when scaling up through larger organisations (Hagmann et al., 1998).

The task of training several thousands of extension agents in participatory approaches is a challenge which requires a clear process description and understanding. If field-level development agents are to be able to implement participatory approaches successfully, they require practical skills and methods. However, even more important is an in-depth conceptual understanding of learning processes, enabling them to adapt the methodology according to local needs. A systematisation and a harmonisation of different approaches is therefore the foundation for successful capacity building and operationalisation of participatory approaches.

This paper contributes to the discussion on participatory extension by providing an example of an attempt to systematise and describe a participatory extension approach (PEA) in practical language, from the perspective of an external implementer/facilitator of the process. It intends to stimulate discussion with regard to the way the process is described, as well as to the contents of the process itself. The challenge of such a systematisation lies in the fact that an implementation framework which is too rigid might be taken as a blueprint, whereas a rather vague compilation of tools might end up in an ineffective piecemeal approach. The approach described here has emerged from a process of community-based innovation development – it was developed in Zimbabwe together with farmers, extension workers and researchers (Hagmann et al., 1997; Moyo, 1996; ITZ, 1997)¹.

2 WHAT ARE PARTICIPATORY EXTENSION APPROACHES?

In our understanding, PEA is a way of improving the effectiveness of rural extension efforts by government agencies, NGOs and other organisations engaged in rural development. They have been successfully applied in Zimbabwe (Box 1) and many other countries in both South and North. If they are institutionalised in extension organisations, they can help to improve organisational performance at the interface between the service providers (the extensionists) and the clients (the farmers).

Characteristics of PEA

- Integration of community mobilisation for planning and action with rural development, agricultural extension and research.
- Based on equal partnerships between farmers, researchers and extension agents who can all learn from each other and contribute their knowledge and skills.
- Strengthening of rural people's problem-solving, planning and management abilities.
- Promotion of farmers' capacity to adapt and develop new and appropriate technologies/innovations (usually agricultural technologies and practices, but also social institutions, health, water and sanitation, and other rural development domains).
- Encourage farmers to learn through experimentation, building on their own knowledge and practices and blending them with new ideas. This takes place in a cycle of action and reflection which is called 'action learning'.
- They recognise that communities are not homogenous but consist of various social groups with conflicts and differences in interests, power and capabilities. The goal is to achieve equitable and sustainable development through the negotiation of interests among these groups and by providing space for the poor and marginalised in collective decision-making.

The role of the extension agent is to facilitate this process. Researchers also have a role – they assist farmers and extension agents in joint experimentation and learning processes and contribute their technical knowledge to find solutions to the problems identified by farmers: *'Participatory extension is like a school of trying, where you try out ideas and share your experience with others.'* (Description of PEA by a farmer from Zaka District, Zimbabwe).

Is PEA the same as PRA and other 'participatory' methodologies?

There are numerous concepts, approaches, methods and tools which are labelled 'participatory'. Often this leads to considerable confusion. To clarify what is meant by PEA, a distinction between 'approach', 'concept', 'method' and 'tool' is required.

Approaches are linked to certain values. This means that approaches describe how certain issues are dealt with and what 'perspectives' and 'values' prevail. Some examples include participatory approaches, gender approaches, systems approaches, holistic approaches, learning process approaches, etc. To operationalise these, one requires certain concepts. **Concepts provide the framework** within which certain goals are achieved. Two examples of broad concepts are rural extension and integrated rural development, both geared towards improvement of rural livelihoods. These concepts can be implemented with different approaches and

perspectives, e.g. participatory extension, top-down extension, gender-sensitive extension, farming systems extension, etc. Concepts are broad and can therefore be applied generally. However, concepts need to be translated to specific areas and situations. The 'translation' of concepts into an adapted, more practical and situation-specific framework is called a **strategy**. Strategies may differ depending on the situation. They are all implemented through the use of **methodologies and tools**. In extension, a brief selection of these methodologies and tools would include adult learning, group extension methods, farmer field schools, farmer-to-farmer extension, master farmer training, extension programme planning, diagnostic survey, demonstrations, PRA and rapid rural appraisal (RRA).

What then is PEA? PEA as developed and understood in Zimbabwe is an extension approach and concept which involves a transformation in the way extension agents interact with farmers. Community-based extension and joint learning is central to PEA. It integrates elements of participatory technology development (PTD) and social development approaches such as action learning and Training for Transformation which is based on Paolo Freire's pedagogy of liberation (Hope and Timmel, 1984). The PEA learning cycle and operational framework (see Figure 1 and Table 2) suggests a holistic and flexible strategy, with steps in which a variety of extension methodologies and tools (including PRA tools) are flexibly integrated into each step. For example, farmer-to-farmer extension or farmer field schools can be part of the PEA framework. In isolation these methodologies might only address a few farmers and may even be used in a top-down

Box 1 Some key results of PEA in Zimbabwe

- Community-owned self-help projects increased in number and quality through bottom-up planning, implementation, monitoring and evaluation even without provision of any external resources.
- Community organisation and representation improved: farmers and communities have developed more confidence to express themselves. The approaches were able actively to involve and mobilise the poor and marginalised people in the development process. The outreach of extension increased, as well as the membership of farmers' organisations.
- More than 20 innovative land husbandry technologies were developed with farmers in less than four years. As these technologies were developed by farmers with diverse levels of skills and resources, they match the heterogeneity of rural people.
- Rapid spread of technologies from farmer to farmer: in some areas up to 80 per cent of the households practised these technologies after three years.
- Farmers' needs and active demands have propelled change in agricultural extension. In the pilot areas, farmers actively determine the form of the extension programme together with the extension worker.
- The performance of extension workers and their job satisfaction has improved considerably. According to extension workers, this is due to harmonious relationships and shared responsibilities with farmers.

manner. Within the community-based PEA framework however, these methodologies can be more effective, as many more farmers are included. *In other words, PEA is far more than a participatory methodology.*

PEA is not the same as PRA! PRA offers many useful tools for participatory analysis and interaction with rural people. The PRA 'toolbox' is extremely valuable in practice, but is not an extension approach in itself. PRA is a toolbox whereas PEA is the vehicle. The toolbox is most useful if transported in the vehicle.

3 THE EVOLUTION OF PEA

The transfer of technology model

In Zimbabwe and in many other countries, the 'transfer of technology' (ToT) model has been the prevalent practice for developing and spreading innovations. It is based on the assumption that a transfer of technology and knowledge from scientists to farmers will trigger development. Applied to agriculture, this model assumes that farmers' problems can be solved by people and institutions who have 'modern' knowledge. Farmers have often been considered as the main constraint to development – as mis-managers of their resources – rather than the potential initiators of a solution. The role of the extension agent is to assist farmers in putting the ready-made technology into practice, despite the fact that they may not be appropriate (Box 2).

In terms of institutional arrangements and relationships, the ToT model creates a rigid hierarchy which discourages feedback of information. Researchers work independently of farmers and extension workers, resulting in a poor understanding of farmers and the opportunities and constraints they face. The ToT approach is fragmented, both institutionally and in terms of disciplines. Research concentrates on technology and researchers and extensionists are seen as technical agents. Social competence is not required as complex socio-organisational issues (e.g. land-use regulations, power structures, conflict resolution mechanisms) are neglected or reduced to a technical level. The extension workers' role is to demonstrate new technologies to innovative 'contact' (or 'master') farmers.

Box 2 Blueprints are inappropriate

Extension has normally promoted blanket recommendations for most agricultural technologies. However, the farmers' environment is highly diverse with patches of high and low fertility, different soil types, microclimate and other variables which influence the performance of technologies. The optimal management of such spatial diversity can only be achieved if farmers themselves are knowledgeable about appropriate technologies and capable of adapting to their conditions. Transferring blueprints does not help in managing environmental and social complexity, but farmer to farmer advice and learning by doing can be successful in enhancing their capability for adaptive management.

The underlying assumption of this approach is that once innovative farmers have adopted the new technologies, other 'laggards' (or 'follower') farmers will copy them, and the technology will spread to the majority of farmers. In practice, this assumption often proves invalid. In many cases, the 'laggards' are jealous of the more advanced farmers who are then victimised, rather than copied (Box 3). Knowledge may also be considered a strong basis of power. Information as well as innovations may therefore not necessarily be shared outside the elitist 'club' of close relatives and friends.

The results of this approach to innovation development and diffusion are well known and need not be described in detail. Poor adoption rates of technologies, poor performance of researchers' technologies under farmers' management, neglect of the major stumbling blocks for successful development – social, cultural, organisational and socio-political power issues at community level – and the neglect of local people's vast knowledge. Given its failure, there is an obvious need to re-think this system to develop more effective approaches.

Towards accepting development as a learning process

Efforts to improve the impact of research and extension have been ongoing since the 1970s. All have worked for greater involvement of farmers in the process. The meaning of farmer participation in rural development, however, still has some way to evolve.

On-farm research was one of the first efforts to improve the ToT approach. Trials were established to verify ready-made techniques on farmers' fields and to demonstrate technologies to farmers. Farmers provided their land to carry out the researchers' trials, and this was seen as farmer involvement. The technologies were still developed by the researchers and adoption rates did not increase.

The farming system perspective was an attempt to explain farmers' continued non-adoption of technologies. Farm-level constraints to adoption were identified and consequently input supply was improved – often fertiliser was provided free of charge

Box 3 Innovator farmers are sometimes afraid of the 'laggards'

In one area we worked with an innovative and good farmer. One day we discovered that he had padlocked a well on his farm. We thought that he locked his well so that nobody else could fetch water on his homestead, but out of curiosity we asked him. He explained that he locked his well because he was a good farmer. After some probing he explained that other farmers were shunning him because he is successful in using new technologies and that he now feels threatened that they will poison his well. Nobody except him uses the new technologies.

Research officer

to give farmers a taste of the benefits. Still there was little adoption of the technology packages, as the approach failed to address the diversity of farmers' socio-economic and institutional environments. Often it was difficult to buy the fertiliser nearby or the money had to be used for other purposes, such as school fees.

Participatory approaches emerged in the late 1980s as a response to continued failure. It was realised that most technologies developed by researchers alone were inappropriate for smallholder farmers. Farmer participatory research became the approach to adapt technologies to farmers' conditions and, by the 1990s, to develop technologies together with farmers. Farmers were by then seen as partners in research and extension, and the key players in the innovation process.

The major shift in orientation occurred when the enhancement of farmers' capacity to develop and diffuse new technologies and techniques themselves (farmer to farmer) became accepted as the foundation of agricultural development. The human resource development of farmers and their social units (communities) then became the main target. It also changed the roles of the insiders and the support of the outsiders substantially.

Such approaches might not always lead to complete success. What is more important, however, is the fact that the process is owned by the communities themselves. If the process leads to failure, the community will still have the energy and the initiative to re-try or modify innovations to suit their specific conditions. They will no longer wait for an outsider to develop an alternative (Box 4).

Some lessons learnt. Successful experiences with participatory extension approaches as seen in Zimbabwe have highlighted a number of lessons about effective innovation development and extension in community development:

Outsiders are unable to determine the 'best practices' for rural people. Farmers are the only people who can make effective decisions about how to manage their farms within the many environmental and social constraints they face. Even within a single field, conditions can be highly diverse in terms of soil types, slope, moisture content, etc. Whilst in large-scale, capital intensive farming these conditions can be evened out (for example by using fertiliser, or levelling a slope or an anthill), the smallholder farmer does not have the resources to do this. Instead he/she has to make maximum use of the diversity –for example by using depressions in the field for water harvesting or spreading fertile anthill material. Such patchy potential can not be exploited following blanket recommendations from outsiders.

There is also a multitude of social and cultural factors affecting how a farmer will choose to farm. For example, scientists and development agents measure land use potential by its physical and chemical properties. For farmers, traditional rights of access, spiritual attributes (e.g. the land as the home of the ancestors) or social implications of using land can have just as much influence on his or her farming decisions. It is an illusion that outsiders can ever understand the totality of factors which make local stakeholders behave as they do. Therefore, technology or innovations and knowledge in general can not be transferred wholesale from one area, organisation or culture to another. For successful technology development, farmers need to experiment with techniques and ideas, and adapt, evaluate and determine the practices most appropriate for their own situation. Their capacity to do this by themselves needs to be strengthened.

Building of farmers' management and problem solving capacity requires joint learning through practical fieldwork. Teaching of 'external' knowledge and technologies is insufficient if the knowledge is not directly applied and tried out by farmers themselves. Capacity can be gained by learning through experience, for example by farmers trying out and experimenting with old and new ideas and techniques themselves. Learning new ways of solving problems has to start with farmers' needs and priorities. This way, learning becomes an iterative process of action and reflection. Action learning (learning by doing, seeing, discovering and experimenting) encourages reflection and can increase farmers' analytical capacities. It can therefore increase their capacity for effective problem solving and for developing their own technical and social solutions. The action learning process is built on the

Box 4 Spreading of soil and water technologies in Chivi Ward 21, Zimbabwe

This approach was very successful in the development and spreading of soil and water conservation technologies in Masvingo Province, Masvingo. Some technologies, for example the modified *fanja-juu* (a soil and water conservation technology) in Zaka District, spread very quickly from farmer to farmer within only a few years. Together with researchers and extensionists, farmers developed more than 20 new technologies in Gutu, Zaka and Chivi Districts and became the main experts in extension. These technologies rapidly spread among farmers. The confidence and pride which developed out of this process encouraged whole communities to continue and take more control over their destiny.

TECHNIQUE	No. of farmers adopting technology		
	92/93	93/94	94/95
Cropped fields			
Tied ridges/Furrows	28	>100	>500
Infiltration pits	20	289	>800
Fanja-juu	0	4	n.d.
Mulching	2	3	n.d.
Intercropping	~50	>450	n.d.
Spreading of termitaria	78	>128	n.d.
Tillage implements	0	96	n.d.

existing knowledge of the farmers. Outside knowledge comes in as an additional option where needed. Ideally, the process leads to an innovative synthesis of both inside and outside knowledge. People can then identify themselves with the innovation as it is based on their own input and they have developed, tested and approved it to fit their specific situation. They will also be able to adapt it further in the future if their situation changes.

The spreading of innovations depends on the interaction between rural people and their social organisation. Innovations are essential for achieving changes in rural livelihoods. The incentive or pressure for change is a function of interwoven social, economical, cultural, political and ecological factors. Social and technical innovations are closely interlinked and cannot be dealt with in isolation. Neither technical nor social innovation on its own would make a substantial impact. One example of this is grazing schemes – unless the whole village agrees to certain rules and regulations and monitors them, the new grazing regime will not work. The experience showed that the spread of technical solutions also depends on social issues such leadership and cooperation in a community. Therefore, successful extension has to consider the social organisation and enhance farmers' organising capacities to facilitate the sharing of knowledge and skills among farmers and between researchers, extensionists and farmers.

The role of the extension worker needs to change from teacher to facilitator. In a conventional extension system, extension workers see themselves as teachers. PEA, on the other hand, requires a major shift in roles from teacher to facilitator. *Facilitation means providing the methodology for the process, facilitating communication and information flow, and providing the technical backup and options.* The extension worker supports the process without making unilateral decisions or dominating farmers. This implies that the extension worker is no longer

the main carrier of knowledge, but coordinates and organises knowledge acquisition from several sources. Another role of the extension worker is to train the community's own facilitators, so that after a time, facilitation is taken over by trained community leaders and the input of the extension worker is reduced to support functions. This process can be time consuming, but once it develops its own momentum the time requirement by the extension worker is reduced and effectiveness is increased.

In addition to process facilitation, the extension worker documents farmer knowledge and experience and produces simple guidelines and fact sheets with and for farmers. These are very important for more effectively spreading innovations and increasing the performance of agricultural extension through farmer experimentation and farmer-to-farmer extension. He/she assists farmers in their search for solutions by providing background knowledge and options and encouraging farmers to experiment with the options and ideas as described above.

The research agenda needs to be fuelled by farmers' needs. Through the process described above, farmers and extension workers develop a research agenda together. The role of the agricultural researcher is to take up the questions identified by farmers and extensionists and work from there. With the exception of some basic research, most studies can be carried out on-farm in an interactive way in order to find appropriate solutions to farmers' problems. Researchers can also host farmers on 'look and learn' tours which serve the dual purpose of demonstrating new technical options and obtaining input and ideas from the farmers. As it would be virtually impossible for researchers to facilitate the whole social mobilisation process, extension workers have a vital complementary role. Extension facilitates the general process and research can then support the experimentation and implementation process. The same applies to other resource persons who are not

Table 1 Comparison of 'transfer of technology' and 'participatory extension'

	TRANSFER OF TECHNOLOGY	PARTICIPATORY EXTENSION
Main objective	transfer of technology	empower farmers
Analysis of needs and priorities	outsiders	farmers facilitated by outsiders
Transferred by outsiders to farmers	precepts messages package of practices	principles methods basket of choices
The 'menu'	fixed	according to choice
Farmers behaviour	hear messages act on precepts adopt, adapt or reject package	use methods apply principles choose from basket and experiment
Outsiders' desired outcomes emphasise	widespread adoption of package	wider choices for farmers farmers' enhanced adaptability
Main mode of extension	extension worker to farmer	farmer to farmer
Roles of extension agent	teacher trainer	facilitator searcher for and provider of choice

Source: adapted from Chambers, 1993

in permanent contact with the communities (e.g. health workers, veterinary staff, forestry advisors, etc.) who are called in when their knowledge and advice is required by farmers.

The key elements described here contrast with the basic principles underlying the technology-transfer model. Shifting the focus from teaching to learning, from hierarchical, top-down to participatory bottom-up approaches, from centralised to decentralised decision-making will put institutions under pressure for change as well. Thus governmental and non-governmental organisations are important actors in the learning process.

Table 1 provides a summary of some main differences between the two approaches.

4 PEA PROCESS IN PRACTICE

How can the key factors for enhancing rural peoples' problem solving capacities described above be translated into the day-to-day work of the extension agent? How can existing extension work be improved through incorporation of these new elements? The systematisation of experiences has resulted in four major phases in the PEA process:

- Phase I Social mobilisation: Facilitating the communities' own analysis of their situation.
- Phase II Community-level action planning.

Phase III Implementation and farmer experimentation.

Phase IV Monitoring the process through sharing experiences, ideas and self-evaluation.

In each of the phases of the PEA process, several steps of interaction with the villagers are required to achieve the desired output. Figure 1 illustrates the steps taken in this process.

The different process phases and steps will be described in more detail in terms of contents and activities. It is purposely kept in a simple language as an example of how to describe the implementation process to field level staff.

Phase I: Social mobilisation

If development activities are ever to be 'owned' by a community, two key conditions need to be in place:

- real motivation and enthusiasm within the community; and
- effective community organisation(s) which can support the process and take it forward.

Without these, there is little chance that development activities will be sustained without continuous external support.

To motivate people for learning and action, key concerns must be identified and addressed by participants. Extension workers facilitate this analysis and prioritisation. This process harnesses natural

Figure 1

SEE FILE CALLED
HAG_FIGURE1

The PEA cycle with the four main phases. The self-evaluation at the end of the first cycle in the process leads to the next cycle which starts again with social mobilisation (e.g. new problems, shortcomings and issues which were identified in the process review and self-evaluation) and then deals with new activities arising out of the new problem situation. PEA is a continuous process of learning which does not end after two or three cycles.

energy and communities become motivated to commit themselves – which is a pre-condition for overcoming feelings of helplessness, powerlessness and apathy. The joint identification of needs, problems of different groups in the community (e.g. men/women, young/old, rich/poor) and their common vision of development forms the start of a PEA process.

It is important to understand that the community is not homogenous and that it consists of several institutions with different roles and responsibilities – which may have their own deficiencies. Identifying institutions which can take a lead in catalysing the development process within the community, and building the capacity of these institutions to develop action plans which respond to community priorities will be key to this process.

Entering the community and building trust

The first step for a new extension agent is to arrange an informal meeting with as many of the local leaders as possible. This should also apply to extension workers who have been working in the area for a long time already. The new approach and the steps involved (see the experiences described in Box 5) are explained and mutual roles are clarified.

The first meeting is an opportunity for the extension worker to find out about local institutions, and to seek partners and responsible representatives with whom to work. As every community is different, the extension worker needs to understand how a community functions before trying to introduce a process of transformation. Thus, after an informal meeting the extension worker should spend some days in the village learning about perceptions of the local institutions and about people's problems and needs. This allows him/her to develop a feel for the relationships within the community and to build trust (Box 5).

Box 5 Building trust in practice

The case of an extension worker who changed the approach after some years of working in the area:

When I started with PEA I had worked in the area already for five years. There were many conflicts between the different leaders and this often caused problems when I wanted to implement my programmes. Some leaders always rejected my suggestions no matter how good they were and then most of the other people did not participate either. So, when I held the first PEA meeting, I explained to the leaders that I want to try out a different approach now, which involves everyone in the community and that from now on they would make the decisions on what needs to be done. Initially they were suspicious when I explained that my role had changed from teacher to facilitator. After the initial suspicion in/about? this meeting, the leaders spoke very openly about what they thought should be done, and I was surprised how many new issues were raised which I did not know about, although I was sure I knew everything in my area. It was not easy during this meeting to challenge my former way of doing things, but it was surprising how positively people reacted to my suggestions. For a while they continued to ask me to make the decisions, to provide them with the solutions and to solve their conflicts, but with time they respected me even more than before because they realised I was now working with them.

Identifying and supporting effective organisations

It is clear that any action developed by local people should be organised and taken forward by their own institutions – either existing or newly formed organisations. However, experience has shown that new committees set up in a development process are often blocked by other community institutions who feel disadvantaged, and that they are rarely sustainable. Community organisation itself is a process of learning by doing, and an innovation within a community which increases self-organisational capacities.

Most communities have locally-constituted institutions and organisations (e.g. development councils, church groups, or farmers' clubs). These social units will be organised according to locally-negotiated rules and regulations. Understanding which institutions exist in a community and how they work is an important part of the initial stages of PEA. However, it is important that the extension worker helps people analyse their own institutions themselves and give them responsibility for coordinating action.

This can be done through facilitation of an 'institutional survey' in which community members themselves:

- identify the institutions operating within the community, whether formal, informal, modern or traditional;
- discuss and understand the role of these organisations in the community; their functions, strengths and weaknesses;
- identify the relationships between institutions, the conflicts and alliances and networks which determine how things work;
- identify human and material resources which could be used in the development process.

Different groups of people need to be interviewed informally – the leaders of the institutions, members and non-members of groups. It is important to understand how people feel about government and non-government institutions in the area. People only disclose information regarding their attitudes to traditional and elected leaders if there is trust. Indirect

Box 6 The institutional survey in Chivi

The institutional survey was carried out through interviews with three sets of people:

Institutional leaders were involved at the very early stages to help them reflect on their own institutions.

Ordinary members of the institutions were interviewed to bring out the issues as they saw them, especially where leadership was concerned.

Non-members are also important to understand why they had not become members.

Through this process, the farmers' groups and garden clubs were chosen to take forward the actions for a number of reasons:

- their focus was food-related, and food security was the key concern of the community;
- their activities did not conflict with traditional practices;
- the leadership was truly democratic and representative;
- women actively participated in decision-making.

Box 7 Feedback within the community

Some of us were really changed by what we learned. In the past we saw ourselves as leaders who could not be questioned. What we said was what we expected to be done. But of course it was followed badly and people were not happy ... that is why things were not moving. Now in our garden groups and farmers' clubs, people are working together in a new way.

Mr Madakupfuwa, Chivi

questions such as, 'what do you think other people think of your leaders?' allow for discretion. Perceptions of institutional functions, roles, strengths and weaknesses often differ greatly between leaders and the community (Box 6).

Feedback to the community

Whilst the findings of the institutional survey are very important for the extension worker, they are even more relevant for the villagers themselves as they provide an opportunity to raise awareness and reflect about community organisations. The results are fed back to the leaders and to community representatives during an informal feedback meeting in an anonymous, visualised manner. This may be the first time leaders have received open feedback from their communities. Extension workers remain neutral and simply present their research findings. In tense situations he/she can use less conflicting role plays for presentation. For example, he/she could ask some community members to play a certain situation and distribute roles and characters. This short drama is then presented and discussed in a community meeting in an impersonal way. Everyone will know who the characters are but insults or attacks will be avoided. This feedback is the starting point of a process of institutional/leadership development and creating accountability. The leaders are forced to accept the views of community members in a non-personalised way. At the end of the meeting, an initial selection of possible partner institutions is made, and discussions regarding how final selection should be made (after intensive needs analysis) occur (Box 7).

Up till now it has been mainly leaders and some community representatives who have attended meetings. A more general awareness within the community is required to enhance the process.

Raising awareness in the whole community

As a follow-up to the feedback meeting, extension workers help local leaders organise a workshop to which the whole community is invited. Poor households are pointedly invited, as experience shows that they have often been neglected in the past. The objectives of the workshop are:

- to motivate people to become involved in an action learning process to improve their livelihoods;
- to stimulate reflection on a number of issues, such as how people see 'development', how they solve their problems and organise themselves for achieving their goals;

Box 8 Training for transformation

All the surveys carried out in Chivi, Zaka and Gutu Districts revealed that the community needed analytical and planning skills. The institutional survey had also shown that local institutions needed to be strengthened and supported to make them vehicles for change. People within the community also identified a lack of cooperation as one of their most serious constraints. To try to resolve some of these problems, a series of TFT workshops were held. Village leaders, community members, agricultural extension workers and community workers were all involved, enabling them to reflect on their extension methodologies and their working relationships with the community.

Training for transformation helped me to see where I had gone wrong with the farmers – I was not starting from the basis that these are adults who know their own fields and their lives. I took myself as someone who knew everything about farming and my job was to teach them what needed to be done. Yet year after year we faced hunger and food shortages.

Extension worker

- to create space for the less powerful and poorer groups to express their needs.

If a community is to participate effectively, they have to conceptualise their own issues and develop their own ways of dealing with them. However, for this to happen there is often a need to first strengthen people's analytical and planning skills, and people's ability to cooperate with each other. For these reasons, 'training for transformation' (TFT) (Hope and Timmel, 1984) is a key methodology for this workshop. TFT is practical training for community development based on the 'pedagogy of liberation' which is a philosophy for empowerment through strengthening peoples' awareness. It was founded by Paulo Freire in Brazil, and focuses on leadership and cooperation and creates an atmosphere conducive for community-based learning processes. The structure of the five steps in the workshop solves problems through analysis and self-organisation for action and reflection. The main sessions comprise: exploring views on development (the vision), analysis of root causes of problems in the community, self organisation and leadership, improving leadership, openness, criticism and sharing.

The final session of the awareness workshop looks at finding practical solutions through experimentation. Therefore, people build their own knowledge through identifying and experimenting with a range of solutions, and through sharing their experiences with others. The guiding statement of training for transformation, *Nobody knows nothing and nobody knows everything*, is a key principle in this collective process.

By discussing leadership and self-organisation, visions and goals, and by providing tools for analysis, a longer process of analysis and learning is initiated. This contributes to the building of a common platform for negotiating development issues. The ideas, the awareness and the tools for problem solving developed in the workshop will be invaluable as the process of PEA continues. Training for transformation which was introduced into the villages through such community workshops stimulated major changes among farmers and extension workers (Box 8).

After the awareness workshop, people are given time to discuss the issues relevant to their community. Depending on their requirements this can take some weeks. During this time, extension workers follow up on needs and problem analysis with individuals in the community.

Identifying community needs

Before any actual work can be started, extension workers need to work with the community to identify, in detail, what their needs are and how they can be addressed. However, within many communities there are differences in wealth, status, and even perceptions of one another and their problems. Understanding of these differences is important to ensure that the poor are not further marginalised.

This can be done through a needs assessment to:

- identify the real needs of resource-poor and other people;
- identify what the community considers to be poverty and how this manifests itself;
- understand the perceptions of different categories of people and their priority needs.

Understanding differences in wealth. A wealth ranking should be the basis for a detailed needs assessment, as the priority needs for rich and poor households differ substantially. If only the needs of the rich are considered, most others will not identify with the goals, and will withdraw from the development process. This can easily happen if 'the community' is seen as a homogenous group of people. The initial wealth ranking also serves as a reference for the monitoring and evaluation of the project at a later stage.

Understanding needs. The next step in the process is to hold intensive discussions with individual families from different wealth ranks to understand their needs. This helps to ensure that members from all different categories are involved, with special emphasis on resource-poor individuals. In contrast to many conventional planning approaches, the poorest and most marginalised members of the community are given a chance to express themselves and benefit from development. A representative sample of, say, 10 per cent of the total number of households can be chosen for a door-to-door survey.

Phase II: Community-level action planning

Once individual household needs have been explored, a community-level meeting is needed to:

- feed back to the rest of the community the issues and needs identified in the survey;
- enable the community to prioritise needs;
- analyse with the whole community the underlying causes of the problems identified and to suggest possible solutions;

- identify possible local institutions to help take forward some of the solutions;
- draw up a schedule for the work to be done in addressing the identified needs;
- agree on criteria and indicators which enable the community to see whether their work towards the identified needs is really leading to an improved situation.

As collective decision-making and ownership of projects is essential for them to succeed, workshops such as this help create this sense of collective purpose.

Prioritising problems and needs

Once the outcome of the needs assessment survey is presented to the community, the issues raised are discussed in small groups according to gender, age or institutional membership (e.g. farmers' clubs). This allows marginalised community members to also express and rank their priorities. Small group results are fed back to the plenary where a consensus is negotiated. Consensus does not mean that only one problem or need can be addressed, but that there is a common agreement that each group can address their problems and needs with equal priority within the community vision so that all others have access to their experiences. Often problems identified here need to be analysed more deeply. The 'root cause' analysis demonstrated in the awareness workshop is applied again, and problem trees help to visualise the causes and effects and to clarify in more detail what the real underlying problems are.

Searching for solutions

Once the root causes of the priority problems are better known, it is easier for workshop participants to identify possible solutions. They are also asked to discuss possible constraints they would face with these solutions. If the community identifies solutions which require additional or new resources that are not available or accessible, these solutions have to be discarded. This procedure helps people to develop ideas based on available resources and skills and to avoid depending on assistance from external donors (Box 9).

Fresh solutions to problems need to be generated by blending suggestions from local people with ideas from outside. This breaks the cycle of 'more of the same' solutions. Often an active encouragement to 'break the usual pattern' is required in order to enhance creative thinking. Decisions on how solutions can be tested, and who will coordinate activities and take responsibility also need to be negotiated by the committed groups in a community.

The search for solutions should first focus on people's own knowledge. There is often much traditional knowledge that has been 'forgotten', e.g.

Box 9 Being realistic: Lessons from Chivi

One of the biggest problems identified by the community in Chivi was poor rainfall. In the search for solutions, some ideas were suggested which needed new or additional resources. These solutions were deemed expensive, and very few people could afford them. In some instances, conventional solutions like dams and contour ridging were discarded as the community did not have the necessary tools to carry out the work.

What do we do about these problems? ... If we say this is what can be done about it, who will do it? It will be us who will have to do it, so we needed to ask, can we do it? What are the problems that we will face? We were not just dreaming, we wanted to say this is what can be done.

Mr K Mavhuna, Chivi

traditional pesticides, health care, etc. If rediscovered, some of this knowledge could still be applicable. However, the search is not limited to existing local knowledge, but extends to knowledge that farmers have of practices elsewhere, or which extension workers know of that has been developed elsewhere – *Knowledge is like fire: you get it from your neighbour.*

Exposure or ‘look and learn’ tours to innovative farms, neighbouring communities or research stations can be planned to find more ideas. These allow farmers to see first hand how others have dealt successfully with problems they are facing. Such trips have to be planned by the community. They need to choose representatives to go, based on their ability to report back. Agreements on the procedure of a report to the whole community has to be reached so that everybody benefits from the tour and not only the ones who travelled (Box 10).

Mandating local institutions

Once some possible solutions have been selected, the community needs to take actions forward through local institutions. These institutions must be mandated to coordinate activities and to take responsibility. Without this important step, the responsibility for progress will remain with everybody, anybody and nobody, meaning that the extension worker will be left to make decisions and become the ‘driver’ and ‘owner’ of the process, rather than the community itself. There needs to be a consensus about which institution to choose for this responsibility, or institutions may block each other. This choice should be based on the institutional survey undertaken earlier. For example, if water shortages are one of the main problems, the institutional survey may have shown that farmers’ clubs bring in ideas and new technologies for crop production. Thus, farmers’ clubs may be put forward as the institution to take responsibility for implementation of the possible solutions, questioning whether it is strong enough, and what to do if it is not strong enough. If people feel that the suggested institution is weak, options on how to strengthen it need to be discussed – for instance, improving leadership through better communication, clarifying goals, implementation of criteria and/or requirements for leaders to follow, and

Box 10 New things are learned through travelling (Chiswa chiri murutsoka)

In order to find solutions to inadequate water, poor soil and lack of tools in Chivi, the community decided to visit other communities. Some farmers had never been outside Chivi, and they wanted to see what methods other people had devised to cope with the recent severe droughts. The groups selected people for each trip carefully to ensure equity in terms of gender, literacy, previous visits and a cross-section of leaders and non-leaders, and the visits exposed farmers to water conservation techniques. They were particularly impressed by the water conservation, water harvesting and moisture retention techniques practised by other farmers.

Following the visits, the report back sessions facilitated by the community, allowed community discussion of potential solutions rather than extension workers describing and trying to ‘sell’ different techniques. Once some of the techniques had been described, those which were best suited to their environment or could be adapted, and which ones were affordable were decided by consensus. On-site trials of these technologies then began – starting with the garden groups, though individual farmers were also keen to experiment with them.

Extension worker

choosing leaders accordingly if possible. A strong, motivating institution or organisation should involve all members in decision making and represent their interests well, dealing openly with conflicts if they occur (Box 11).

Accountability and commitment – the foundation for sustainable action in the development process – is ensured by encouraging group leaders and/or chairpersons to take responsibility for the necessary action in the group meeting.

Action planning

After clarifying possible solutions and institutional responsibilities, concrete actions need to be planned. This often takes place after the report back from the ‘look and learn’ tours. A good method of feedback is a field day (for the whole community) where all the ideas gained from the ‘look and learn’ tour are explained and demonstrated, if possible. The most promising options are chosen and agreed upon, and how and who should trial and implement them is decided. A time plan of action (TPoA) is developed by the community.

At this stage, the community should be able to clearly define the nature of support expected from extension workers. This should be clarified so that both sides are clear about their role in the joint learning cycle.

It is important to start on a small scale and not to try to tackle too many problems at the one time. Small steps and phases are needed in implementation so that the community be motivated by success and encourage further action.

Introducing competitions for the best ideas. To encourage farmers to become inventive in finding solutions to their problems, competitions for the best ideas are a highly regarded incentive in farming communities. Ideally these competitions are two-fold,

Box 11 Strengthening local institutions

In some of the farmer and garden clubs, low membership was said to be a result of poor leadership. Complaints that leaders did not feed back information they received in meetings with others, and that they even used their position for personal advantages were made. TFT workshops exposed people to different leadership styles and showed how positive criticism and openness can be. Long debates within groups analysed self-organisation while avoiding personal criticism. Conflicts arose and some groups elected new representatives according to their new criteria, others suggested leadership courses for their leaders. This process of institutional strengthening resulted in a ten-fold increase in the number of members and many of the clubs have become strong, representative bodies.

within villages and between neighbouring villages – those with the best ideas win the within village competition, while the community with the most innovators wins the inter-village competition. Individual innovators thus become more accepted by the community and ideas will be shared and spread much faster. Prizes can be sourced from contributions of villagers or from sponsors.

Criteria and indicators to measure the success.

The indicators and criteria of the activities success must be decided upon – How to know whether a certain innovation is performing well? What is considered a successful implementation? This is important for monitoring and evaluating activities and processes. Ultimately, it is the community who must feel that there is progress and they must be able to assess it, debate it and find out why it works out or why it fails (Box 12).

Phase III: Implementation and farmer experimentation

Whilst the potential solutions identified by the community can be a standardised technology (e.g. a Blair toilet), in most cases, potential solutions are not so clear – particularly where the implementation is mainly linked to the organisation of material and labour. New ideas have to be tried, adapted and improved to suit local conditions – e.g. alternative toilets which do not require expensive material such as cement, the use of natural pesticides instead of expensive chemicals, low-cost methods for animal health care, alternatives to labour-intensive conservation measures, or a social innovation, such as the testing of new by-laws for resource utilisation.

Learning through experimentation with new ideas

The implementation phase of PEA is also called farmer experimentation to underline the learning process involved. Farmers in Zimbabwe called this process *Kukuraya* or 'let's try'. Some farmers also called it the 'school of trying' and others called it 'try and share'.

It is the role of the extension agent to encourage farmers to experiment with ideas and techniques emanating from their own knowledge or from outside sources. This helps to re-value local knowledge, its combination with new techniques and a synthesis of

Box 12 Defining indicators of success locally

In Chivi, the community set down indicators and mechanisms for monitoring progress. Following discussions with community leaders, a sample of six garden groups and six farmers' clubs were selected to discuss the issue separately with facilitators. At each meeting, groups defined their objectives as a group and decided on indicators for each objective. The results from these 12 discussions were synthesised by the extension worker and presented to a larger community leadership meeting, where participants ranked these objectives in order of importance. Participants then identified indicators which could be used to measure the progress of each of the stated objectives. For example, one objective was cooperation, and the suggested indicators were the formation of more groups, helping each other with draught power, organising shows and fairs, etc.

Having set the objectives and indicators, the community then discussed how to monitor themselves and their work. Each club and group secretary was given the task of keeping a monthly record of all activities within their group, paying particular attention to these indicators.

the two, it encourages dialogue between the different knowledge systems. Experience has shown that the knowledge and understanding gained through the experimentation process strengthens farmers' confidence in their capacity and knowledge. This increases their ability to choose the best options and to develop and adapt solutions appropriate to their specific ecological, economic and socio-cultural circumstances.

During the implementation and experimentation process new questions and problems, not seen at the beginning, are likely to arise and become the community's 'action research agenda'. Ideally, if technical problems are involved, research agents should join in the process of joint learning, which may require some specific on-farm trials on certain issues which focus on more quantitative results to support the findings. If technical processes are not fully understood, farmers' ideas are taken to the research station for further research under controlled conditions. The research station can then act as a 'think-tank of options' for exposing farmers to many different ideas and potential technologies.

The trying out phase normally starts at the onset of the rainy season. For non-agricultural activities it can also be during the dry season. Farmers choose the options and ideas they think are most responsive to their individual problems and try them out. They are also actively encouraged to come up with their own ideas. Conducting simple comparisons between conventional practices and new techniques can be a powerful tool for learning. For example, in the case of water harvesting techniques or pest management, a simple paired design – where the new technique is placed along side the conventional one in the same field – has proven to be a very practical and simple way of comparing the performance of the two by farmers. If researchers or extension workers want to join the farmer in this type of experimentation, they can put in 'check plots' in pairs to measure yield and growth parameters in detail.

The simple paired design enables farmers to observe, compare and analyse by themselves. It helps them to understand factors which contribute to differences, which in turn enables them to improve on these factors in future. Farmers often try traditional practices which have been ignored for a long time, with sometimes positive results, where the traditional practices perform better than the modern practices. Often an integration of the two is needed.

Farmers share their experiences informally amongst each other. If the 'spirit of experimentation' is successfully created, this triggers a collective learning process. The extension worker keeps track of all new developments in the area and encourages farmers to share any new ideas. Learning through practical experience and experimentation, as well as information sharing, are critical to the success of participatory extension and necessary to encourage more widespread trying and testing of ideas and innovative practices.

Phase IV: Monitoring and evaluation

The fourth phase in the process of enhancing rural people's problem solving capacity consists of joint learning, by sharing ideas and experiences and by reflecting on the successes and failures of the action and the experiments carried out (self-evaluation). The informal sharing of experiences among certain neighbours described above is not sufficient to make the information available to everyone in the community. Therefore two more formal steps have to be built into the process:

- a 'mid-season evaluation' of agricultural innovations; and
- an evaluation of the process, leading to the planning for the coming season.

Mid-season evaluation of the experiments and new techniques

In the middle of the agricultural season before crops mature, farmers, with the help of extension staff, organise an evaluation of the field performance of the different ideas and techniques they have tried out. Before the general field visits, the judging of the 'competition for the best ideas' is carried out by a committee from the neighbouring community. The innovativeness of the idea should be an important criteria, as are the number of trials per farmer, trial management, quality of presentation, etc.

In the mid-season evaluation, all farmers in the community are invited to visit the fields to see the experiments and 'trials' – each farmer running interesting experiments presents his/her fields, ideas and findings to the group for discussion. The objectives are to:

- share knowledge among farmers;
- build confidence through presentations; and

- encourage more farmer to farmer extension.

For researchers and extensionists, farmers' evaluations are very important as they reveal knowledge and criteria, often not spoken about in extension meetings. In smaller communities this 'evaluation' can take one day, in bigger ones sometimes two days. If there is not enough time, only the best farmers in the competition are visited in the field.

After everyone has had a chance to look at the different techniques and present their experiments, farmers decide which techniques merit further research and/or promotion, using participatory ranking or scoring techniques. The technologies which farmers suggest need further research can be put forward for more formal on-farm trials, or fed back to the research station the following season, while those classified as ready for promotion can then be promoted to neighbouring areas. This can be done jointly by farmers, researchers and extension staff.

Process review, self-evaluation and planning

Ideally one or two months before the start of the following season, a feedback/review and planning workshop should be organised by the community. The timing depends mainly on the nature of the issues to be addressed. This workshop is to review the process, evaluating planned activities and the indicators for success suggested during the planning phase. This includes criteria like leadership, strengthening self-organisational capacities, as well as community participation – including the poor – in the development process. Issues agreed upon in the community awareness workshop are reviewed and evaluated.

The community discusses intensively how far they have gone on their road to progress. Failures are normal, but it is most important to discuss why certain activities have failed and others have succeeded. Successes and failures are assessed and analysed in view of the strengths and weaknesses for future action. This analysis normally leads to the next cycle which starts again with issues of social mobilisation – based on the outcome of the self evaluation, the villagers review their goals and objectives and develop an action plan for next season.

It must again be emphasised that these steps are not set in stone as the whole process can be lengthy and be very intensive. In some cases one might decide to skip a step because there were extensive discussions earlier in the process, the process review might show deficiencies in the problem analysis, which means that certain issues must be re-addressed in order to make a major step forward in the next cycle. Timing also needs to be flexible in order to accommodate the requirements of the different issues to be dealt with.

An operational framework for PEA

The description of the steps within the process helps to make the flow of the process transparent and to understand the activities involved. This description is very effective with field staff, and is supported by a training video and a trainers manual in training programmes.

For concrete implementation of the process, however, a more structured operational framework needs to be developed, in collaboration with the implementing staff, in order to increase the conceptual understanding of the PEA process. The procedure of developing the operational framework led to a better understanding of the function of participatory tools as the focus and the objective were in the foreground. Table 2 shows an example of the objectives and the salient questions, while the remaining two columns would be filled in step by step during training.

The core issues are questions which the external facilitator or extension agent needs to raise in the community's self analysis. They serve as guiding questions in the facilitation process.

How to link PEA with research?

The mid-season evaluation and process review serve to screen useful techniques and practices. Techniques and ideas which are performing well will be further disseminated within the community, in other areas and other communities – they enter the choice of options through the dissemination feedback loop. Techniques which are not convincing, or problems which could not be solved, are classified as issues which require further research. The questions arising in the screening process determine the role of research in the PEA process (Figure 2).

As mentioned before, research can provide technological options and serve as a back-up to the farmers' own experimentation process. Through the PEA process, farmers' problem analysis in terms of technological issues will reveal more clearly the need for research than conventional extension. Based on screening of farmers' experiments and insights, farmers, extension workers and researchers are able to draw up research questions together. Research can then be carried out on-farm, together with farmers selected by the community, or on the research station under more controlled conditions where necessary. As the research agenda addresses farmers' problems, results should feed back directly into farmers' learning processes, as knowledge or as technical options. This feedback loop ensures that research is relevant and contributes to farmers' problem solving. For

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researchers, this process offers the benefit of linking their work effectively with farmers, without having to initiate separate community development processes.

5 EXPERIENCES IN IMPLEMENTATION

Problems and how to overcome them

When a pilot group of extension workers was trained and began PEA implementation without donor support, a number of practical problems were faced. Many of the problems encountered were the challenges which PEA is geared to address. Problems such as dominance of certain individuals in the community, the absence of many poor farmers at meetings and donor syndrome are some of the underlying problems causing inefficiency in the present extension approach. As PEA tries to encourage active participation of all community members, these hidden issues are revealed. The pilot group members had many ideas and positive experiences on how to overcome these problems. Table 3 shows a selection of the problems and their recommendations on how to overcome them. Most of the major problems were related to social mobilisation, communication, leadership and cooperation. Training for transformation tools have a great role to play in solving these problems.

Table 2 Operational framework for PEA

PARTICIPATORY EXTENSION

PROCESS STEPS	OBJECTIVES	CORE ISSUES, SALIENT QUESTIONS	WITH WHOM	TOOLS
1 Entering the community	To familiarise facilitators with community To explore how the community functions To make yourself known and accepted To prepare ground for trust	Whom to contact first? Who are they (the community members)? How do they see their situation? Who are their (opinion) leaders? What are their livelihood and coping strategies? Are there important cultural issues or barriers to communication		
2 Identifying local organisations	To find out how the community is organised To identify structures/partners for future activities	What are the roles, tasks and responsibilities for local organisations/institutions Who is doing what? What is the potential for networking and cooperation? What are their strengths and weaknesses? Where do they derive their mandates from? How do they solve their problems and conflicts?		
3 Feedback to the community	To create transparency and build confidence/trust To initiate a platform for dialogue within the community and between partners	Are there differences in perception between the leaders and the community? Clarifying mutual roles and expectations How are the findings being interpreted by different people in the community? Shed light on hidden realities		
4 Raising awareness	To enable the community to have a common understanding of the existing situation To instil confidence in their own capacities to bring about change	What are the visions for the future? What are the obstacles to bringing about change? What is the potential of change for the better? How does gender imbalance affect decision making?		
5 Identifying problems and needs	To identify and mobilise people's own interests and common objectives To identify needs and problems which are within and out of their reach	Are participants talking of needs or wants? What are the root-causes of participants problems? How do needs differ according to different stakeholders? Whose problems count? Whose problems are they? What are the opportunities? What are the participants 'hidden agendas'? Who benefits from the problems?		
6 Prioritisation of problems and needs	To identify the priority needs of different social groups To identify crucial obstacles for goal achievement To create a platform for negotiating common needs	Whose needs are they? Are there any commonly felt needs? What are the different needs felt by different groups? Which needs are most pressing (e.g. in terms of time)? What is the best way of dealing with a variety of different needs? How can all relevant stakeholders be heard? (-> differentiation)		
7 Searching for solutions	To widen the range of possible solutions To look for alternative solutions/options To identify solutions for optimal resource use (e.g. rich/poor) To identify solutions that ensure optimal level of interaction	What solutions are offered by others elsewhere? What solutions are locally available? Who can assist in finding solutions? What solutions are within reach of local communities? What are the effects of potential solutions on the others (e.g. rich/poor)? Which assumptions are the solutions based on? Can the solutions solve the problems effectively? How can the usual pattern be broken? How should these options be made available (e.g. report back from visits, etc.)? Who should look for alternative options?		

8	<p>Mandating local organisations and institutions</p> <ul style="list-style-type: none"> To avoid duplication of work of local organisations To prepare the community for effective implementation of future activities To enable local organisations to recognise and play a role To empower local organisations and institutions through the community's mandate To ensure responsibility and accountability 	<p>Which organisations are most suitable and capable of implementing solutions? What are the roles and expectations of different local organisations and institutions? Which organisations or institutions should be encouraged and supported? Which organisations need to be strengthened? How can local organisations be strengthened to fulfil their mandate? What is the current and potential performance of local organisations? Which organisations should be linked? What kind of networking between organisations is required? Who opposes to the mandate?</p>
9	<p>Elaborating action plan</p> <ul style="list-style-type: none"> To provide guidance through the phase of implementation To serve as a management tool To create transparency and responsibility among actors involved To determine the support and nature of resources required 	<p>Who does what when, and at what level? How do we know that it works (indicators)? Which outcome do we aim at? Who will support the plan, who not? How is the budget allocated? Who provides which resources? When is feedback required, on what aspects of the process? Whom do we have to inform and involve?</p>
10	<p>Trying out new ideas</p> <ul style="list-style-type: none"> To enhance creativity, the knowledge base and capacity to innovate through experimentation To generate new options/solutions To encourage people to learn about technologies through experimentation To use and link the knowledge of all actors in developing solutions through a synthesis of traditional and 'modern' knowledge 	<p>How to reduce the fear of innovation/of failure? What are the risks involved in the experiments? What are the costs involved? What is the best way to encourage experimentation on ideas appropriate to participants' level of resources and skills? Who are the experiments relevant to, and practicable for? Do the experiments address important problems, if yes, whose problems? What support is required from outsiders? What is the best way of organising competitions for the best ideas and sharing knowledge?</p>
11	<p>Monitoring</p> <ul style="list-style-type: none"> To share ideas and provide feedback To assess the success of activities To fine tune or adjust action plans according to circumstances To review assumptions 	<p>Is the implementation going according to plan? Should the implementation plan be adjusted? Who is involved, who dropped out or is objecting the plans? Are the allocated resources sufficient? Are other support measures required to fulfil the tasks?</p>
12	<p>Process review and planning for next learning cycle</p> <ul style="list-style-type: none"> To review and evaluate the whole action learning process To learn the strengths and weaknesses of the experience To identify errors and ensure that they are corrected in future To analyse the lessons learnt To identify new areas which require action To address new problems which emerge out of the first learning cycle 	<p>Who should be involved in the process of evaluation, and how? Does the learning cycle address solutions (i.e. is the right thing being done)? Were the objectives met and were the activities efficient? Who should be involved in the process of evaluation? What are the achievements of the project? What can be done to improve the project? What ideas came out of the process of experimentation? Is there sufficient ownership and accountability? What lessons can we learn? Was initial problem analysis sufficient, or is more now known about the real issues? Are the solutions initially suggested sufficient, or are new ideas required? What other areas do we have to tackle?</p>

Implications of PEA for extension workers

Two years later, the members of the pilot group of extension workers evaluated their PEA experiences in terms of their own extension work. Among many other statements, they came to the following conclusions:

- the workload is initially high, but decreases after the first process cycle is completed;
- working relations with farmers have improved – friction and tensions are reduced;

- farmers' attitudes towards extension workers have changed;
 - extension workers' workload is reduced;
 - extension workers get more recognition due to an increased output;
 - community projects have increased sustainability;
- All the extension workers involved felt that their job satisfaction has increased through PEA. This was one of the factors which they considered highly motivating.

Table 3 Some problems and recommendations in PEA implementation

Major problems faced	How to overcome these problems?
<p>Dominance of leaders: leaders make solo decisions, dominate in meetings, do not attend meetings.</p>	<p>Organise leadership courses and TFT for traditional and modern leaders Try to understand leaders and convince them personally Carry out institutional surveys, stress the roles, qualities and styles of good leaders Use codes of good leadership in community meetings Ask community members individually and encourage them to speak about their concerns Arrive early at meetings, leave late and listen attentively what people discuss</p>
<p>Dominance of men over women: women do not attend the meetings, planning is done by men, but implementation by women.</p>	<p>Always invite the men and the women (the families) specifically to the meetings Form groups according to gender and age (e.g. in the needs assessment). Encourage women to contribute Do not use gender-biased words like 'chairman', and allow women chair meetings Involve women in development committees Use role plays on gender issues for sensitisation of all Allow women to become confident about themselves, let them present individually</p>
<p>Dominance of master farmers over ordinary farmers: master farmers resist the new approach as they are afraid of losing their privileges.</p>	<p>Introduce inter-community competitions which force information sharing Discuss what the role and behaviour of master farmers should be and how everyone could benefit from extension Use codes and role plays Hold practical field demonstrations for poor farmers and motivate them</p>
<p>Conflicts in communities: poor cooperation, jealousy and leadership problems.</p>	<p>Conduct awareness meetings with TFT Use of codes during workshops (entangling game, cooperation and development game etc.) Try to build trust among community members Use role plays in conflict situations Be neutral as facilitator Try to discuss conflicts openly in community meetings but in an impersonal way (e.g. through role plays) and also in personal discussions with the leaders Talk to the chief and other influential people</p>
<p>Donor syndrome versus self reliance: people expect hand-outs, low attendance of meetings if nothing is provided for free or there is no donor.</p>	<p>Break donor dependency by carrying out a good problem/needs analysis so that a project is 'owned' by the community Provide more training and fewer hand-outs Use codes of training for transformation (e.g. river code) Find out why people do not come to the meetings and discuss it openly Give responsibilities to people, empower them Always ask for community contributions to complement any outside assistance Invite leaders and key people in writing so that the messages are not incorrectly interpreted</p>
<p>Problem/needs assessment is skewed: problems may be mentioned to encourage donor participation – they may simply be exactly what the donors offered elsewhere. Shopping lists emerge, while the poor and their problems are often neglected.</p>	<p>Start with the goals that people wish to achieve Carry out a root cause analysis. Often problems are not correctly specified, e.g. lack of fertiliser rather than low soil fertility. This may increase the number of possible solutions Carry out wealth ranking and group people accordingly – the needs of the rich are often very different from the needs of the poor Emphasis that participants should analyse and plan on the basis of their own resources. Let them prioritise their problems with minimal external influence</p>
<p>No funds for exchange visits and look and learn tours: transport to research stations and innovative farmers is expensive.</p>	<p>Encourage contributions from community for transport Organise look and learn tours to nearby areas with related projects and innovative farmers Encourage the community to have cooperative project land to grow cash crops for fund raising Bring as many options as possible into the area (e.g. to various farmers, near area training centre; open a local experiment station) Enhance neighbour to neighbour sharing and learning</p>

Criteria for successful PEA implementation

After their two years of PEA experience, extension workers described the criteria which they would use to assess if PEA has been implemented successfully. An indication of what can be expected as PEA output follows:

- Farmer participation/involvement in extension activities: farmers participate fully (high level of participation of farmers in the whole ward), the number of farmers involved in decision making increases, farmers attendance at meetings and training sessions increases;
- Empowerment – increased farmer-articulation, confidence and decision making: services are actively demanded by farmers, farmers make their own decisions, farmers attitudes change;
- Implementation of community projects: the number of projects increases;
- Active farmer experimentation with ideas and innovations): the number of farmers' own experiments in the area increases, new farmer innovations are being developed;
- Process documentation: the learning experience and farmers' ideas/knowledge are well documented by extension workers, indigenous knowledge is documented and made available.

These (self-identified) indicators help to develop a framework for PEA impact evaluation. Impacts at various levels of stakeholders (farmers, communities, extension agents) need to be evaluated, as do different type of impacts – technology adoption is only one of them. Farmers' problem solving and adaptive management capacities are other impacts which have a strong qualitative basis. It is obvious that these require joint monitoring of insiders and facilitating outsiders in order to create a comprehensive assessment.

6 HOW TO BUILD THE CAPACITY TO IMPLEMENT PEA?

The framework described above requires a high degree of flexibility when implemented in practice. Participatory community development processes can not be implemented as a blueprint, nor can they be predicted in terms of output, as every community is different. Some steps in the process may take several months with one community but just one day in another, depending on the consensus which has to be negotiated. Solutions cannot be prescribed by outsiders even if the temptation is high.

The complexity of rural situations and the flexibility required for such processes are a challenge to the skills, capacity and identity of extension workers who are used to being technical agents, advising people on proven technologies. Unless the competence required to implement PEA can be developed by the extension workers themselves, PEA will not work. Therefore, the challenge is to develop capacity and

bring about the organisational change required to create a conducive environment and to internalise PEA in government agencies.

One of the major challenges facing extension agencies is how to make the transition from the old approaches to the new. How to re-orient extension with a vigorous emphasis on partnership, participation and sharing in the development effort? How to balance continuity of service provision with progressive, yet managed, transformation towards a very different approach? Re-orientation of extension staff on such a scale needs deliberate, intensive and focused opportunities for learning.

Such a learning process goes beyond training in participatory tools. The shift from teacher to facilitator involves new skills, different attitudes and behaviour which cannot change overnight. An iterative learning process for re-orientation and capacity development at field level was designed in Masvingo. It consists of five action learning phases in about 18 months (Box 13).

This capacity building process among extension workers was very successful in Masvingo, Zimbabwe. Pilot groups of extension workers were able to handle the process in a flexible way and even started to develop their own tools and methods to cope with

Box 13 Iterative PEA training process for operational extension staff

Phase 1 Two week training workshop on PEA in training centre.

- exposure to concepts (PEA, TFT);
- introduction, exposure and tools training for initial steps of the PEA cycle;
- create an operational framework (conceptual understanding of PEA);
- planning (individual action plan for one community to try out PEA);

Phase 2 Field implementation of action plan (approx. six months)

- if possible follow up and backstopping by trainers in the field;
- mutual learning support among AEWs, further exposure of local staff;

Phase 3 One week workshop – evaluation and re-planning (new action plan)

- sharing of field experiences during first action plan and
- learning from each other;
- joint work on how to overcome the major problems faced in the field;
- more training regarding tools and methods;
- second action plan formulation;

Phase 4 Field implementation of action plans (approx. six to nine months)

- peer to peer sharing and support;
- mutual learning support and follow-up by trainers;

Phase 5 One week workshop

- sharing of field experiences during second action plan and further learning;
- joint work on how to overcome the major problems faced in the field;
- review of the whole process experience and planning for future learning support;

(A detailed description of the training programme is available in the form of a trainers manual.)

certain conflict situations. Such experiences are very encouraging and lead to a real improvement of service provision in extension.

7 CONCLUSION

This approach to make the PEA process transparent and operational through a detailed description of some theoretical/conceptual consideration and practical description has shown great potential in Zimbabwe so far. However, there is still a danger that steps will be used as blueprints, which will lead to low effectiveness of PEA. A high quality training and coaching in the field as well as peer learning groups needs to be established to achieve quality implementation and ensure fully committed extension agents.

The experiences in Zimbabwe indicate the high potential contributions PEA can make to the improvement of livelihood systems in rural communities. Action and social learning is the foundation for a sustainable human development. Whether this vast potential can be mobilised effectively and country-wide depends on the people who are in favour of, and implement, such approaches. PEA is a flexible framework which challenges individuals' and communities' creativity and flexibility.

In terms of the scope of PEA, it is obvious that the approach to social mobilisation and local organisational development has potential far beyond agriculture. Issues like improved self-governance and improved decentralisation efforts (through better representation and accountability of local leaders) indicate that agricultural extension approaches such as PEA have more to offer than just the promotion of agricultural technologies. These new avenues need to be explored further.

Implementation of PEA through large extension organisations who often have top-down cultures of management remain a major challenge. Bottom-up approaches hardly match such hierarchical systems. Therefore the thrust towards PEA needs to be accompanied by institutional reform programmes. This makes it an even more difficult venture. In Zimbabwe, such an initiative is on-going and the early stages have been described in Hagmann et al. (1998).

In terms of the resource implications of PEA, the development of implementation capabilities through on-site and off-site training and learning as described above, requires a concentration of training resources over a period of two years. PEA implementation is resource neutral except for stationery and visualisation materials such as flipchart paper, etc. The major difference – the change in attitudes and behaviour of extension agents – is not costly, but requires a certain level of motivation, which not every agent has. Therefore, the impact will not necessarily be homogenous across different areas.

ENDNOTES

- 1 For more details see the training manual and video which shows the whole PEA process and is meant as an initial training tool for extension workers. Contact Jürgen Hagmann.

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