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Learning Together Through Participatory Extension

A Guide to an Approach Developed in Zimbabwe

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Front cover Photo: Farmer to farmer sharing of experiences in land management based on farmers' own experiments with a variety of ideas and techniques

Back cover Photo: Action learning cycle of participatory extension

Learning Together Through Participatory Extension

A Guide to an Approach Developed in Zimbabwe

> **„ In top-down extension we use only one brain (the extensionists'), farmers brains remain dormant. In participatory extension we use all brains together. “**

(Extension worker's description of the difference between top-down and participatory extension)

Department of Agricultural, Technical and Extension Services (AGRITEX)
in co-operation with
Integrated Rural Development Programme (GTZ/IRDEP) and
Intermediate Technology Development Group, Zimbabwe (ITZ)

Harare 1998

Abbreviations and Acronyms

AEW	Agricultural Extension Worker
AGRITEX	Department of Agricultural, Technical and Extension Services
ARDA	Agricultural and Rural Development Authority
CLP&D	Community Level Planning and Development
FSR/E	Farming Systems Research and Extension
Govt.	Government
GTZ	German Development Cooperation
IRDEP	Integrated Rural Development Programme
ITZ / ITDG	Intermediate Technology Development Group, Zimbabwe
KUTURAYA	Expression for PEA as used by farmers in Gutu, Zaka and Chivi Districts
MF	Master Farmer
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
ToT	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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The Department of Technical and Extension Services (AGRITEX) in the Ministry of Lands and Agriculture (MoLA) in Zimbabwe co-operated, facilitated and supported the initial testing and field development of Participatory Extension Approaches (PEAs) from 1991 - 1998 in Masvingo Province. This publication summarises the essence of these efforts with regard to participatory extension. The designing and writing of this publication by Dr. J. Hagmann with support from M Connolly as well as the valuable comments on the manuscript by E. Chuma, S. Dreyer, M. Haku-tangwi, K Marovanidze, Dr. E. Moyo, K. Murwira and G. Tshododo, the editing and proof reading by F. Hinchcliffe and the graphics & layout by J. Dreier are sincerely acknowledged. Without all these contributions, the booklet would have missed important aspects.

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- Intermediate Technology Development Group Zimbabwe (ITZ)

Contents

Foreword

In the late eighties AGRITEX was approached by two organisations (GTZ and ITDG) which wished to field-test new ideas and approaches based on the principle of promoting stronger participation by farmers in planning and implementing agricultural extension and research programmes in the rural areas of Masvingo Province.

What started out as small-scale projects promoting greater involvement and participation by rural communities at Ward levels, soon began to attract wider attention from farmers, their organisations and donor / development agencies. This was because these projects demonstrated how fresh approaches, that sought to involve farmers fully as equal partners in generating and testing new ideas, technologies and practices, led to more dynamic development, commitment and results at community level. Farmers were encouraged to take initiative and engage with extension workers in much more equal and dynamic ways in analysing their problems and trying out and implementing solutions appropriate to their families' needs and local resource endowments.

What emerged after six years of working closely with rural communities was a different way of interacting with and gaining the commitment and confidence of farmers. The key element throughout the process was participation - the fostering of involvement, self and group responsibility and finally ownership of extension development efforts at village levels.

Key lessons emerged for extension workers and their managers in their quest to be more effective at village level. Extension workers and farmers explored how to learn together. What resulted were efforts and actions in farmers' fields which were owned and determined by farmers themselves; with extension workers as facilitators, not teachers, and farmers accepted as partners and practitioners with considerable wisdom and know-how about their environment.

It is said that organisations that are prepared to learn and change are effective organisations. The projects implemented in Chivi, Zaka and Gutu Districts in the nineties brought out many learning opportunities for all those who work with farmers. We in AGRITEX recognised the merits of participatory extension approaches (PEA) and have sought since 1996 to identify and adopt the best ways of harnessing them for all our staff.

One of the key challenges is how to move towards the development of PEA capabilities at all levels. Training in PEA involves a deep and significant shift in both the philosophy and paradigms of traditional extension practices. Mindsets and attitudes have to change to enhance the new approach. Thus, in-depth and sustained development of PEA know-how among existing extension staff cadres demands significant resources and time.

Central to success, however, is the development and dissemination of high quality information on what these approaches mean and how they can be applied in practical extension situations. Based on the experiences in Masvingo Province we piloted PEA training for 23 field staff over 18 months in 1996 / 1997 and from that prepared a comprehensive training manual to train all our staff in PEA. The idea is to train multipliers in each District who can subsequently impart and develop skills more widely among colleagues.

This guide provides very comprehensive information on PEA, including its origins and development, and is intended as a reference for extension managers and field practitioners alike, in any discipline and many organisations. AGRITEX is particularly grateful to the advisory staff of the Integrated Rural Development Programme (IRDEP), Masvingo Province for their unstinting efforts and co-operation in producing this guide and supporting its wide dissemination to our field staff.

We hope that this guide will be widely used by all our staff and other organisations interested in PEA.

E.T. Danda

Deputy Director (Technical)

AGRITEX, Zimbabwe

July 1998

1 Introduction

Until recently, development in rural Africa mainly consisted 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 feel ownership of the ideas imposed on them. However, winds of change now sweeping through the development movement are encouraging rural communities themselves to become the prime movers in efforts to improve their economic and social well-being.

Agricultutral extension services link research workers and policy makers with farmers. All too often extension services have been structured and operated on the assumption that farmers are largely passive, that they are illiterate and therefore ignorant, and that they are unable to innovate or to integrate new cropping and livestock practices into their established agricultural systems' (CTA 1997)

Government and non-governmental institutions are increasingly recognising the need to move away from instructions and blueprint solutions, towards more participatory approaches which involve communities directly in setting and fulfilling 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 winds of change 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 being mere agents for concepts or technologies imposed from outside, they need instead to become catalysts, helping communities achieve the 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.

This booklet is an introduction to this approach, known as the PEA[1] (Participatory Extension Approach). It has emerged from a process of community development which evolved step by step in Zimbabwe together with farmers, extension workers and researchers. The booklet is complemented by a training video which shows the whole PEA process and is meant as an initial training tool for extension workers. A training manual which has been developed along these lines is also available.

[1] The Zimbabwean PEA concept is a synthesis of several experiences with participatory approaches in Masvingo Province. It derived mainly from the 'KUTURAYA' approach of the AGRITEX/GTZ Conservation Tillage Project and the ITDG Chivi Food Security Project which both focused on community-based participatory research, innovation development and extension, and the Community-level Planning and Development (CLP&D) project of the ARDA/GTZ IRDEP programme. CLP&D focused on community action planning. These and other initiatives in close co-operation with the Department of Agricultural, Technical and Extension Services (AGRITEX) tried successfully to improve on existing approaches to community development, research and extension.

2 What are Participatory Extension Approaches?

Participatory extension approaches are 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 and many other countries in the South and the 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:

- they integrate community mobilisation for planning and action with rural development, agricultural extension and research;
- they are based on an equal partnership between farmers, researchers and extension agents who can all learn from each other and contribute their knowledge and skills
- they aim to strengthen rural people's problem-solving, planning and management abilities;
- they promote farmers' capacity to adapt and develop new and appropriate technologies / innovations (usually these are agricultural technologies and practices, but they can also be in social institutions, in health, water and sanitation, and other rural development domains);
- they encourage smallholder 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 the joint experimentation and learning process and contribute their knowledge of technical options 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)

2.1 Is PEA not 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 in Zimbabwe, one has to distinguish between 'approach', 'concept', 'method' and 'tool'.

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 approaches one requires certain concepts. Concepts provide the framework within which certain goals are achieved. Two examples of such broad concepts are rural extension and integrated rural development, both geared towards improvement of the livelihoods of rural people. 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 rather general and therefore can be applied generally. However, concepts need to be translated to specific areas and situations. This 'translation' of concepts into adapted, more practical and situation-specific frameworks 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, tools of PRA (Participatory Rural Appraisal) and RRA (Rapid Rural Appraisal).

What then is PEA in Zimbabwe? PEA as developed and understood in Zimbabwe is an extension approach and concept which involves the 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), social development approaches like action learning and 'Training for Transformation'. The PEA learning cycle and operational framework (see Figure 3 and Table 4) suggest a holistic and flexible strategy with process 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 even be used in a top-down manner, but within the community-based PEA framework 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 very useful tools for participatory analysis and interaction with rural people. This PRA 'toolbox' is extremely valuable in practice, but in itself is not an extension approach. PRA is a toolbox whereas PEA is the 'vehicle'. The toolbox is most useful if it helps to make the vehicle function whereas 'driving in the toolbox' might not help to achieve the goal.

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 better. 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' own organisations
- more than 20 innovative land husbandry technologies were developed with farmers in under four years. As these technologies were developed by farmers with diverse levels of skills and resources, they match the heterogeneity of rural people
- spreading of technologies from farmer to farmer: in some areas up to 80% 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 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

Similar positive experiences with participatory approaches were gained in other programmes outside the Masvingo pilot areas. Just to name one example, the success of the CAMPFIRE programme on community-based wildlife management is well known beyond the borders of Zimbabwe. The core elements of participation and community-based project implementation are shared in both PEA and CAMPFIRE.

3 Some History: The Evolution of PEA

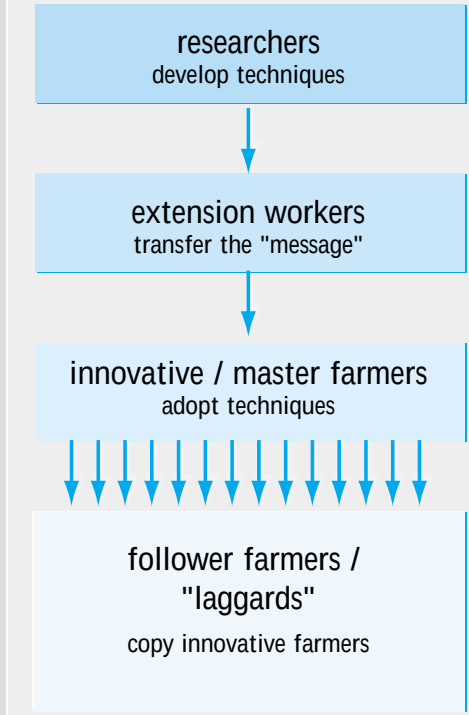
3.1 The Transfer of Technology Model

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 this 'modern' knowledge. Farmers have often been considered as the main constraint to development, as ‘mismanagers’ of their resources, rather than the potential initiators of a solution.

Through this approach it has been the researcher's task to identify, analyse and solve farmers' technical problems. Solutions have normally been developed at research stations. The results have then been transferred as messages to farmers via the extension worker, who is the link between researchers and farmers. His or her role has been to assist farmers in putting the ready-made technology into practice (Figure 1).

Figure 1:

Conventional model of innovation development & extension



Farmers may have been persuaded through incentives or forced by authoritarian extension workers to adopt new practices or innovations (new ways of doing things). Extension workers as well as farmers have thus been passive recipients of technological recipes in a top-down flow of information. These technologies have often only addressed the symptoms of a problem rather than the root cause of it. Often they have failed to address farmers' needs and constraints which are interlinked with the social set-up and its implications (see the box below).

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 to adapt them 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.

Socio-cultural barriers in adoption of researchers' technologies

In Zaka an extension worker once tried to introduce a long-handled hoe, which reduces the stress of bending down and increases work rates. In the first demonstration male and female farmers agreed that it was a good tool, yet nobody used it. Farmers stressed that they prefer to bend down because otherwise they would be considered lazy by others, which is very negative in the value system of those farmers.

This top-down model (Figure 1) creates a rigid hierarchy which discourages the feed-back 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 transfer 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 teach and demonstrate to innovative 'contact' or 'master' farmers how to use new technologies. Once innovative farmers have adopted the new technologies, it is assumed that other 'laggards' or 'follower' farmers will copy them and the technology will diffuse to the majority of farmers. In practice, this assumption often proves invalid. As observed in Zimbabwe and in many other countries, in most cases, the 'laggards' are jealous of the more advanced people who are then victimised, rather than copied. Knowledge may also be considered a strong basis

of power. Information as well as innovations may thus not necessarily be shared outside the elitist 'club', close relatives and best friends.

Innovator farmers are sometimes afraid of the 'laggards'

In Chiweshe we worked with a very innovative and good farmer. One day we discovered that he had put a padlock on a well which was 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 all these new technologies and that he now feels threatened that they will poison his well. Nobody except him uses the new technologies...

(Research officer)

The results of this approach to innovation development and diffusion are well known:

- the adoption rates of technologies remain low in most cases, except in cases where these technologies were implemented with coercion (like contour ridges during the colonial era). In this case, however, the effectiveness of these technologies often remained low and the success was not sustainable.
- the performance of researchers' technologies is often disappointing under farmers' management. Farmers are then blamed for incorrect implementation. Often, however, these technologies were not appropriate for the different levels of farmers.
- social, cultural, organisational and power issues at community level are neglected, although experience shows that most often they are the major stumbling block for successful development.
- local people's vast knowledge is not recognised or valued. This discourages rural people and reduces the contribution to their own development as they feel inferior.

Given its failure, there was an obvious need to re-think this system to develop more effective approaches.

3.2 Seeing Development as a Learning Process

Since the 1970s, efforts have been made to improve the impact of research and extension. All have strived for the greater involvement of farmers in the process. The understanding of farmer participation in rural development, however, still had some way to evolve (see Table 1).

Period	Explanation of farmers' non-adoption	Solution	Key extension activity	Socio-economic research focus	Predominant research methods
1950s 1960s	Ignorance	Extension	Teaching	Understanding the diffusion and adoption of technology	Questionnaire surveys
1970s 1980s	Farm-level constraints	Remove constraints	Supplying inputs	Understanding farming systems	Constraints analysis; farming systems research
1990s	Technology does not fit	Change of process	Facilitating farmer participation	Enhancing farmers' competence. Understanding and changing professional behaviour	Participatory research by and with farmers

Table 1: Changes in research and extension between 1950-2000 (adapted from Chambers 1993)

3.2.1 On-farm trials

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

3.2.2 Farming system perspective

In an attempt to explain farmers' continued non-adoption of technologies, the 'farming systems' perspective was developed. This identified farm-level constraints to adoption (see Table 1). As a result, input supply was improved and often fertiliser was given out free 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 fertili-

ser nearby or the money simply had to be used for other priorities, such as school fees. Thus farmers only irregularly used fertiliser in some years on some fields, for example when their children brought it from town as a gift.

3.2.3 The participatory approach emerges

In the late 1980s, 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 now seen as partners in research and extension, and the key players in the innovation process. This led to an understanding that the main key to agricultural development is to enhance farmers' capacities to develop and diffuse new technologies and techniques themselves from farmer to farmer (see Figure 2).

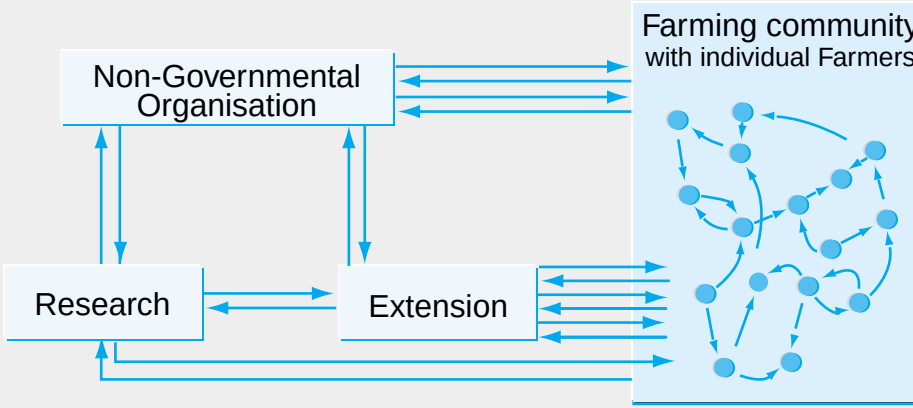


Figure 2: The PEA concept of a learning process and exchange of knowledge among the stakeholders in rural areas (adapted from Röling 1994)

This approach was very successful in the development and spreading of soil and water conservation technologies in Masvingo. Some technologies, for example the modified fanja-juu (a soil and water conservation technology) in Zaka District, spread from farmer to farmer like a veldfire within only few years. Together with research and extension, 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 (see Table 2).

Technique	Adopted as options by no of farmers		
Cropped fields	1992/93	1993/94	1994/95
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.

Table 2: Spreading of soil and water technologies in Chivi Ward 21

The confidence and pride which developed out of this process encouraged whole communities to continue and take more control over their destiny.

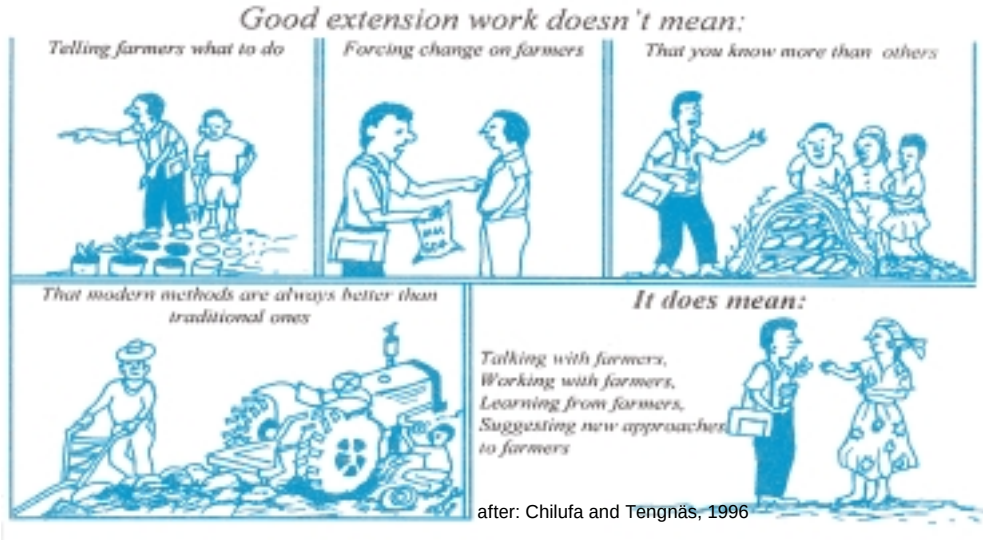
This approach might not always lead to 100% success. What is more important, however, is the fact that the process is owned by the communities themselves. If the process leads to failure, the community will still have the energy and the initiative to re-try or modify innovations to suit their specific conditions. The community would take the initiative and no longer wait for an outsider to develop an alternative.

3.2.4 Some lessons learnt

The successful experiences with participatory approaches in Masvingo and in many other areas in Zimbabwe and other countries have highlighted a number of lessons about effective innovation development and extension in community development:

Outsiders are rarely able 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 and so on. Whilst in large-scale, capital intensive farming these conditions can be evened out (for example by using lots of 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 the 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 the 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 innovation development, the farmers themselves need to try out and experiment with techniques and ideas, adapt, evaluate and determine the practices most appropriate for their own situation. Their capacity to do this by themselves needs to be strengthened.



after: Chilufa and Tengnäs, 1996

Building of farmers' management and problem solving capacity requires joint learning by doing in the field. 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 themselves trying out and experimenting with old and new ideas and techniques. 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 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.

'Sharing of experiences from farmer to farmer is highly effective for joint learning'

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 can not be dealt with in isolation. Neither the technical nor the 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 follows them up, the new grazing regime will not work. The experience also showed that the spread of technical solutions also depends on social issues like leadership and co-operation in a community. Therefore, successful extension has to consider the social organisation and enhance farmers' self-organising capacities to facilitate the sharing of knowledge and skills among farmers and between researchers, extensionists and farmers.

The role of the extension worker changes from a teacher to a 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 wor-

ker supports the process without making unilateral decisions and dominating farmers. This implies that the extension worker is no longer the main carrier of a message and knowledge, but co-ordinates and organises the knowledge acquisition from several sources. Another role of the extension worker is to train the community's own facilitators. This means that after a certain time the facilitation role will be taken over by trained community leaders. The input of the extension worker decreases with time to support functions. Initially this process can be time consuming, but once it develops its own momentum the time requirement by the extension worker is reduced and effectiveness increased.

Besides the process facilitation, the extension worker documents farmer knowledge and experience and produces simple guidelines and fact sheets with and, most important, for, farmers. These are very important for a more effective spreading of innovations and to increase 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 these options and ideas as described above.

The research agenda is fuelled by farmers' needs. Through the process described above, farmers and extension workers together develop a research agenda. The role of the agricultural researcher is to then take up these questions identified by farmers and the extension worker, and work from there. Except for some basic research, most

Farmers evaluate researchers' trials and bring in their needs into the research agenda

research can be carried out on-farm in an interactive way in order to find applicable solutions to farmers' problems. Researchers can also host farmers on 'look and learn' tours and show them new technical options they are working on and get ideas from farmers as well. As it would be almost impossible for researchers to facilitate the whole social mobilisation process themselves, the extension worker has a vital complementary role. Extension facilitates the general process, and research can then support the experimentation and implementation process (see Figure 8). The same applies to other resource persons who are not 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 3 provides a summary of some main differences between the two approaches:

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

Table 3: Comparison of ‘Transfer of Technology’ and participatory extension adapted from Chambers (1993)

4 PEA Process in Practice

So 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 the existing extension work be improved through incorporation of these new elements? There are four major phases in the PEA process. These are:

Phase A:	**Social mobilisation: facilitating the communities' own analysis of their situation**
Phase B:	**Community-level action planning**
Phase C:	**Implementation and trying out / farmer experimentation**
Phase D:	**Monitoring the process through sharing experiences ideas and self-evaluation**

In each of these phases of the PEA process several steps of interaction with the villagers are required to achieve the desired output. Figure 3 illustrates the steps taken in this process. Each step will now be described in more detail. The video complementary to this booklet shows how these activities are taking place in Zimbabwe.

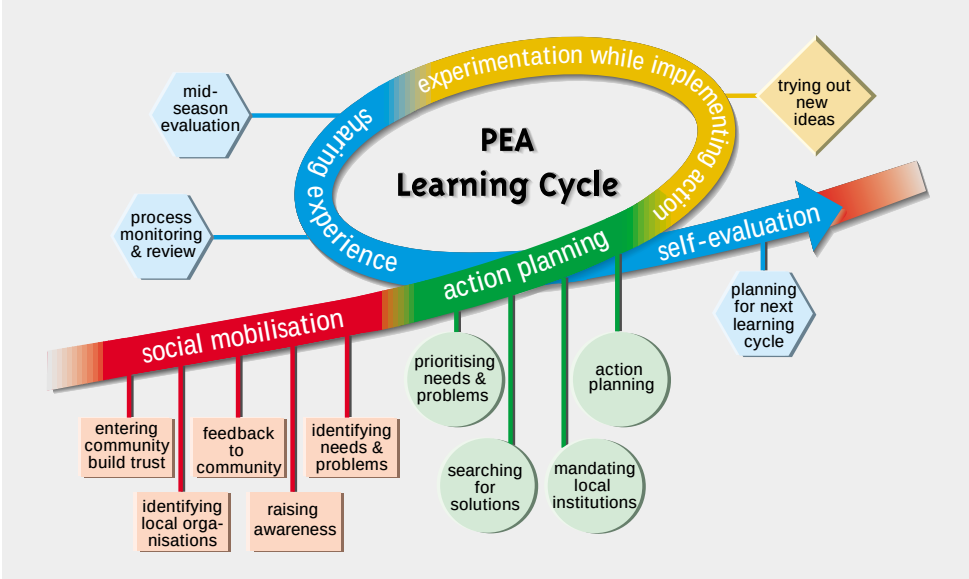


Figure 3: The PEA cycle with the four main phases. PEA is a continuous process of learning which does not end after two or three cycles.

4.1 Phase A: Preparing the Community: Social Mobilisation

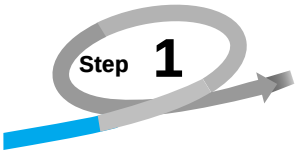
If development activities are ever to be 'owned' by a community, two key conditions need first to be in place:

- 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. Creating this 'social mobilisation' is thus a key initial activity.

To motivate people for learning and action, one has to identify and address their key concerns. Only people themselves can effectively identify, clarify and prioritise these issues and formulate their needs. The extension worker facilitates people's own analysis. This process harnesses their natural energy and they become motivated to commit themselves, which is a pre-condition for overcoming feelings of helplessness, powerlessness and apathy and for initiating action. The joint identification of people's 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 also important to understand that the community is not homogenous and that it consists of several institutions with different roles and responsibilities. These institutions may have their own deficiencies as well. 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. They need to explain to the leaders the new approach and the steps involved (see the experiences described in the box on the next page).

In this first information meeting the extension worker explains the PEA approach to the local leaders and motivates them to participate in a joint learning process. It is important for the extension worker to be clear about what he/she can and cannot offer. It must be explained that he/she can only support people's projects and his/her role and contribution needs to be defined and agreed upon together. Therefore he/she

first has to understand how the leaders see the problems, limitations, the visions and the goals they want to achieve.

This first meeting is also an opportunity for the extension worker to find out about local institutions, and to seek partners and responsible representatives within the communities with which to work. Every community is different. The extension worker needs to understand how a community functions before trying to introduce a process of transformation. Therefore, after the informal meeting the extension worker spends some days in the village learning about people's perceptions of the local institutions and about their problems and needs. This allows him/her to develop a feel for the relationships within the community and to build trust.

Building trust in practice

The case of an extension worker who was new in the area

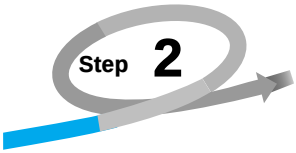
"In the initial meeting, some people were suspicious. There were a number of outspoken people. Rather than have a long discussion with them in front of everyone, we decided to hear what their reservations were and try to overcome their resistance. A week was spent visiting some of these outspoken people. During these discussions we learned that most of them were unhappy because of past experience of 'outsiders' coming into the community, doing what they wanted to do, then going away, leaving the community feeling abused without any tangible results. We explained that this was precisely why we wanted to work with the community in a different way: identifying problems with them, devising solutions and simply helping them to help themselves. This approach helped. At the next meeting, these community spokepersons spoke out in support of our ideas".

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 5 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 my role change from teacher to facilitator. After the first suspicion in this meeting the leaders spoke very openly what they think should be done and I was surprised how many new issues were raised of which I did not know 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 on their side."

(Extension worker)



Identifying and supporting effective local organisations

It is clear that any action developed by local people should be organised and taken forward by their own institutions. These can be existing institutions, or newly formed organisations if no existing institution is in charge. However, experience has shown that new committees set up in a development process are rarely sustainable and are often blocked by other community institutions who feel disadvantaged. Strengthening community organisation in 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. a development council, a church group, or a farmers' club). These social units are 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 co-ordinating 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 these 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, the members and the non-members of the groups. The extension worker asks open questions like: 'Which institutions are important in the village?; what are their roles and functions and mandates in the community?; What are their activities?; What are their strengths and their weaknesses?; How could they improve the execution of

their tasks?'. This allows the extension worker to be exposed to the many different views held about these institutions, creating a truer picture of the organisational and leadership situation in the village and indicating which institutions have the support of the community and could become partners.

It is important to understand how people feel about their institutions and also government institutions in the area. What attitudes do the people have about their traditional and elected leaders? People only disclose such information if there is trust. Indirect questions like: 'what do you think other people think of your leaders...' allow for some discretion. These attitudes are important, because the development process is closely related to the relationship between leaders and their community. Perceptions of institutional functions, roles, strengths and weaknesses often differ greatly between leaders and the community (see Box).

The institutional survey in Chivi

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

1) Institutional leaders: involved at the very early stages to help them reflect on their own institutions
2) Ordinary members of the institutions: to bring out the issues as they saw them, especially where leadership was concerned;
3) Non-members: to find out why they were not members and to hear some objective opinions about the institutions

Through this process, the community chose farmers' groups and garden clubs 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
- They were not biased towards one ethnic group

In addition to informal interviews and discussions, more innovative methods can be used in the institutional survey. For example, small groups organised according to gender, age, wealth etc. can create visual diagrams which reflect their perceptions of the relationship between institutions and the people they serve (see Figure 4)

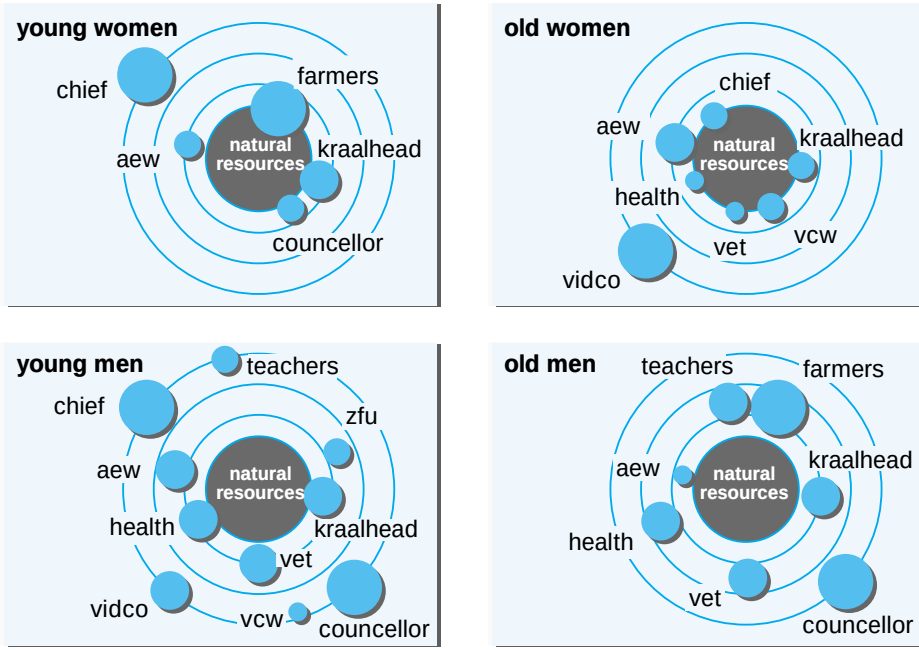
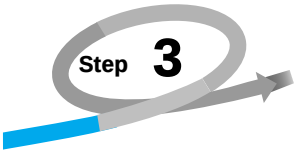


Figure 4: Institutional diagram on the role of institutions in natural resource conservation in Zaka ('Venn diagram)

These circles represent institutions. The community members rate the importance of each institution by the size of the circle and the distance it lies from the centre of the chart. The larger the circle the more important, the further away the circle, the less contact the institution has with the community or other institutions. With overlapping circles the link between institutions is shown.

In this example, key institutions responsible for natural resource conservation were analysed by old men, young men, old women and young women. Opinions about who should be responsible differed considerably between the groups. The diagrams were then presented to the whole community who discovere the different perceptions and then discussed these issues in order to come to a common understanding on who should do what. The visual diagram can help to bring out and clarify perceptions.



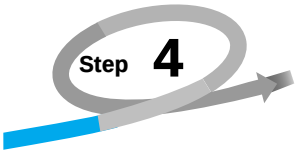
Feedback to the community

Whilst the findings of the institutional survey are very important for the extension worker to know with whom he/she is dealing, 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. Sometimes, this might be the first time leaders get open feedback from their communities. The extension worker remains neutral and just presents the findings of his research. 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 an attack or insult will be avoided. This feedback is the starting point of a process of institutional/leadership development and creating accountability. The leadership is forced to accept the views of community members in a non-personalised way.

> ***"Some of us were really changed by what we learned. In the past we saw ourselves as leaders who could not be asked a question. What we said is what we expected to be done. But of course it was just 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***

At the end of the meeting the group makes an initial selection of possible institutions to work with. They also discuss how to organise the whole community to make a final selection after the intensive needs analysis (see below).

Up till now it has mainly been the leaders and some community representatives who have attended the meetings. So the next step is to raise more general awareness of the process within the wider community.



Raising awareness in the whole community

As a follow-up to the feedback meeting the extension worker helps local leaders organise a workshop to which the whole community is invited. Poor households are specifically 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.
- 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 first to strengthen people's analytical and planning skills. Many communities have become disempowered and demoralised by development programmes taking a top-down approach. Similarly, strengthening people's ability to co-operate with each other will be crucial. For these reasons, Training for Transformation (TFT) is a key methodology for this workshop. Training for Transformation is a practical training for community development. It is based on the 'Pedagogy of Liberation' which is a philosophy for empowerment through strengthening peoples' awareness. It was founded by Paolo Freire in Brazil. TFT focuses on leadership and co-operation and creates an atmosphere conducive for a community-based learning process.

Annex 1 describes Training for Transformation in more detail, and gives an example of the steps taken and some of the tools and picture codes used in a typical workshop. The structure of the five sessions in the workshop follows a 'way to solve problems' through analysis and self-organisation for action and reflection:

Session 1:	Exploring views on development (The vision)
Session 2:	Analysis of root causes of problems in the community
Session 3:	Self organisation and leadership
Session 4:	Improving leadership
Session 5:	Openness, criticism and sharing

The final session of the awareness workshop looks at finding practical solutions through experimentation, or 'Kuturaya', as the farmers call it. It is emphasised that the best solutions are always the ones which one has tried out oneself. Therefore, people

are to build upon their own knowledge through identifying and trying a range of solutions to their problems, 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 talking about leadership, self-organisation, about the 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 (see box).

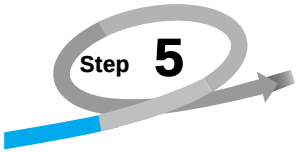
Training for Transformation

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 that lack of co-operation was one of their most serious constraints. To try to resolve some of these problems, a series of TFT workshops were held. Village leaders and community members as well as agricultural extension workers and community workers were involved. This enabled 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 was to be done. Yet year after year we were having hunger and food shortage after all that teaching"

(Extension Worker)

After the awareness workshop people are given some time to discuss the issues relevant to them in their community. Depending on their requirements this can be some weeks. In the meantime the extension worker follows up on the needs and problem analysis with individuals in the community.



Identifying community needs

Before any actual work can be started, the extension worker needs to work with the community to identify in more 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. It is important to understand these differences 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 (see box below) 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 articulate rich people are considered, most other people will not identify with these goals and 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 as the changes can be refferred back to the initial situation.

Ranking households by wealth

Some volunteers were asked to help the extension worker with the wealth-ranking exercise. Two men and two women who knew most people in the village were chosen. Each volunteer was asked to sort the names of the community members into four different piles according to their levels of wealth. They were also asked to explain why they had ranked them that way. Four wealth ranks were identified, ranging from those described as 'master farmers' with enough food for themselves and sometimes a surplus, down to rank four, which consisted of people without any assets.

Understanding needs. The next step in the process is to hold intensive discussions with individual families from the different wealth ranks to understand their needs. This helps to ensure that members from all different wealth ranks 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% of the total number of households can be chosen for a door-to-door survey.

The needs survey in Chivi

In the door-to-door surveys the most important point community members emphasised was that they wanted to have enough food to eat with their families and to be secure with a little extra from one year to the next. The lack of water or rain was identified as the key obstacle to attaining this dream. However, the needs of different groups differed quite considerably. All felt needs of different people were noted and later presented to the community.

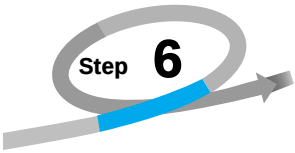
Needs differ; often women's needs are not articulated as prominent as men's needs. The needs survey helps to keep the balance

4.2 Phase B: 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.

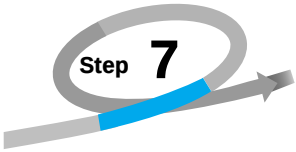
As collective decision-making and ownership of a project are essential for it to succeed, workshops such as this help create this sense of collective purpose.



Prioritising problems and needs

Once the outcome of the door to door 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. The 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 but that all others have access to their experiences. Often the priority problems identified here need to be analysed more deeply. The root cause analysis demonstrated in the awareness workshop is applied again. Problem trees help to visualise the causes and effects and to clarify in more detail what the real underlying problems are.

Action Planning



Searching for solutions

„Knowledge is like fire; you get it from your neighbour“

(Shona proverb)

Once the 'root causes' of the priority problems are better known, it is easier to identify possible solutions. For each problem, possible solutions are identified by the workshop participants. 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 which are not available or accessible, these solutions have to be discarded. This procedure helps people to develop ideas based on their resources and skills and to avoid depending on assistance from an external donor.

Being realistic: lessons from practice

One of the biggest problems identified by the community in Chivi was the poor rain. In the search for solutions, the community suggested some ideas 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 was ourselves who were going to do it. So we needed to say can we do it or what are the problems that we will face in those solutions to our problems. We were not just dreaming like children. We wanted to say this is what can be done"

(Mr K Mavhuna, Chivi)

Fresh solutions to old 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 they could be tried out and who will co-ordinate the 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. Often there is much traditional knowledge which has been 'forgotten' e.g. traditional pesticides, health care etc. This has to be found out and tried out again. However, the search is not limited to people's existing knowledge. Often people themselves know or have heard of solutions and ideas which other farmers elsewhere practice. Or the extension worker may know of solutions developed elsewhere.

There was one farmer whose tomatoes were never attacked by red spider-mite. But he would not tell everyone what he was using. He was probably afraid of being laughed at or even being accused of not using 'modern methods'. Gradually as we talked and shared information and everybody felt at ease to share what they knew, he told us that he used the sap of a local drought-resistant aloe.

(Extension worker)

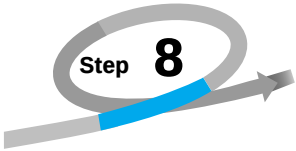
Exposure or 'look and learn' tours to innovative farmers, neighbouring communities or research stations can be planned to get more ideas. These allow farmers to see first hand how others have successfully dealt with problems which they are facing. Such trips have to be planned by the community. They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

New things are learned through travelling (Chisva chiri murutsoka)

In order to find solutions to inadequate water, poor soil and lack of tools, the community decided to visit other communities. Some of the farmers had never been outside the area, and they wanted to see what methods other people had devised to cope with the recent severe droughts. The groups themselves 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. The visit to an innovative farmer and to nearby research stations exposed the farmers to water conservation techniques. They were particularly impressed by the water conservation, water harvesting and moisture retention techniques practised by other farmers.

After the visits, the community met to hear how things had gone. The report back sessions were facilitated by the community themselves: in this way it was not us describing each technique and trying to sell it, but instead the community members discussing with one another. Once some of the techniques had been described, the community reached a consensus on which ones were best suited to their environment or could be adapted, and which ones were affordable. They then decided that on-site trials of these technologies should begin in the garden groups, and individual farmers were also keen to experiment with them.

(Extension worker)



Mandating local institutions

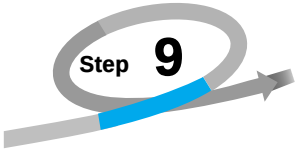
Once some possible solutions have been selected, the community needs to take actions forward through their local institutions. These have to be mandated to co-ordinate activities and to take responsibility. Without this important step, the responsibility to move things on will remain with ‘everybody’, ‘anybody’ which means ‘nobody’. This would mean that the extension worker is left to make decisions and become the 'driver' and the 'owner' of the process instead of the community itself. There needs to be a consensus among all parties involved about which institution to choose; otherwise one institution will block the other one in the process.

This is where the earlier institutional survey comes in. For example, if water shortage for crop production is one of the main problems, the institutional survey may have shown that the role of farmer clubs is to bring in ideas and new technologies for crop production. Then one would ask the people to discuss whether this would be an institution to take responsibility for implementation of the possible solutions, whether it is strong enough, if not why not and what to do about it? If people feel that this institution is weak, options on how to strengthen it need to be discussed. Strengthening means to improve leadership through better communication, through clarifying the goals and putting up criteria and requirements for the leaders to follow and to choose leaders accordingly if possible. A strong, motivating institution or organisation involves all the members in decision making and represents their interests well. In case of conflicts a strong organisation deals with them openly.

Strengthening local institutions

In some of the farmer and garden clubs the low membership was said to be a result of poor leadership. People complained that leaders do not feed back information they got in meetings with others, that they even used their position to get personal advantages. After Training for Transformation workshops which expose people to different leadership styles and show how positive openness and criticism are, the members questioned some of the leaders. In long debates in the groups the self-organisation was analysed while avoiding personal criticism. Conflicts arose but some groups elected new representatives according to their new criteria, others suggested leadership courses to their leaders. This process of institutional strengthening resulted in a ten-fold increase of members of the clubs which have now become strong bodies which really represent farmers.

If the chairpersons or the leaders of the institution in the community meeting agrees to take responsibility for the need area and the resulting activities in the presence of everybody, this creates commitment and accountability which is the foundation for sustainable action in the development process.



Action planning

After clarifying the possible solutions and the institutional responsibilities, concrete actions need to be planned. Often this takes place after the feedback of the participants of the 'look and learn' tour. A good way of feeding back is a field day for the whole community where all the ideas seen are explained and demonstrated if possible. The options most promising to solve their problems are chosen, agreed upon and decided on how and who should try them out and implement them. A 'Time Plan of Action' (ToA) is developed by the community (Figure 5).

At this stage, the community is now able to define clearly the nature of support they expect from the extension worker. This should be clarified so that both sides are clear what their role in the joint learning cycle will be.

It is important to start small and not to try to tackle all problems at once. Small steps and phases are needed in implementation so that the community can see success which motivates them more for further action.

NAME OF COMMUNITY .....

PLACE Ward ..... Vidco .....

OBJECTIVE .....

ACTIVITY	TIME	RESPONSIBILITY

Figure 5: Format for a Time Plan of 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, between neighbouring villages and within each village. For example, within a village the individuals with the best ideas will be the winners. The competition between villages will award the community which has the most innovators. With this two-fold competition, the individual innovators get far more accepted by the community and their ideas will much faster be shared and spread. Prizes can be sourced from contributions of the villagers themselves or from sponsors.

Criteria and indicators to measure the success of the activities have to be agreed upon as well while planning (How do we know a certain innovation is performing well?, What do you consider a successful implementation?). This is important so that people set themselves targets and they can monitor and evaluate their own activities and the process. In the end it is them 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 it fails.

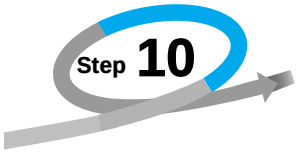
Defining indicators of success locally

In Chivi, the community itself 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. In each meeting, the groups defined their objectives as a group and for each objective they decided on indicators. The results from these 12 discussions were synthesised by the extension worker and presented to a larger community leadership meeting. At this meeting participants ranked these objectives in order of importance. Having ranked them, the participants then identified indicators which could be used to measure the progress of each of the stated objectives. For example, one objective was co-operation, and indicators to measure this were suggested as the formation of more groups, helping each other with draught power, organising shows and fairs, etc.

Having reset the objectives and indicators, the community went on to discuss how they would monitor themselves and their own 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.

4.3 Phase C: Implementation and Farmer Experimentation

Whilst in some cases the potential solutions identified by the community can be a standardised technology (e.g. a Blair toilet) where the implementation is mainly linked to the organisation of material and labour, in most cases potential solutions are not so clear. New ideas have to be tried out, adapted and improved to suit local needs and conditions, for example alternative toilets which do not require expensive material like 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 experimenting and trying out new ideas

The implementation phase of PEA is also called farmer experimentation to underline the learning process involved. Farmers in Masvingo called this process of trial and error KUTURAYA, 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 source of knowledge or from outside sources. This helps to re-value local knowledge, its combination with new techniques and a synthesis of the two. It encourages a dialogue between the different knowledge systems. Experience has shown that the knowledge and understanding gained through the trying out or experimentation process strengthens farmers' confidence in their own capacities 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 which were not seen at the beginning are likely to arise and will become the community's 'action research agenda'. Ideally, if technical problems are involved, research agents should join in the process of joint learning. It might 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 might be taken to the research station for further research under controlled conditions (see Figure 8). 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. Guiding farmers to

conduct 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 side by 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 themselves. 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 (Figure 6).

Figure 6: **Comparing two techniques through a paired design**

In the example shown in the picture, a farmer in Zaka tried out two different methods of planting groundnuts. The comparison showed him that germination was much better with the method practised on the right hand side of the field. This will help him next season to choose the planting techniques which work best for him.

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

Trying out

Mr. and Mrs. Masengwe had problems with the establishment of maize when they fertilised it with manure. They were never sure which type of compost was best. Encouraged through 'KUTURAYA' they tried out various options in two planting rows each. They dropped seeds on top of manure on one side and on ash compost on the other side. Establishment in the lines where manure was added was very poor, so they had to replant, whereas on ash compost germination was very good. After six weeks however, the crops on the ash treatment started yellowing and in the end the lines which had to be replanted on manure yielded much more than the initially well-performing ash treatment.

These observations were shared with other farmers and together farmers analysed why these differences occurred and discussed the best way of managing the crop. Mr. and Mrs Masengwe have taken this knowledge on board as it came from their own practical experience. In the coming seasons they will have a better basis on which to make decisions about planting maize, while the other farmers also benefited from sharing these experiences. This was only one example in detail. Experiments on mechanical conservation works, rill reclamation, live hedges, fodder plots, new varieties, planting techniques, plant spacing, intercropping, strip cropping, mulching, wetland cultivation, composting and many other practices were thought out in detail and initiated by farmers themselves. Some farmers in Gutu, Zaka and Chivi had more than 10 small experiments in a single season, trying out many ideas to improve their crops. It is easy to imagine how in a rather short time a tremendous farming knowledge can be built through trying out and sharing. Encouraging farmers to experiment is the key method for effective learning in PEA.

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 trying, 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.

4.4 Phase D: Monitoring and Evaluation Through Sharing Experiences and Ideas

This is the fourth phase in the process of enhancing rural people's problem solving capacity. It 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 monitor and 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' and monitoring 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 of the neighbouring community. Among others, the innovativeness of the idea should be an important criteria. Other criteria often used 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 go around the fields to see the experiments and 'trials'. In contrast to a classical field day which is organised in one farmer's homestead and fields, each farmer running interesting experiments presents his/her fields, ideas and findings to the group for discussion. The objectives are to:

- share the knowledge and experiences gained through trying out among farmers;
- build confidence through presentations; and
- encourage more farmer to farmer extension.

For researchers and extensionists, farmers' own evaluation is very important as it reveals their knowledge and criteria, often not spoken out in extension meetings. In smaller communities this 'evaluation' can take one day, in bigger ones sometimes two days. If time is not sufficient, 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 do and do not merit further research

and/or promotion. This screening of technologies can be done using participatory ranking or scoring techniques. The technologies which farmers suggest need further research can be put in for more formal on-farm trials or fed back to the research station in the following season (see Figure 8).

Ranking and scoring of the tested techniques

The matrix helps to evaluate the performance of technologies in relation to criteria named by farmers. At the top there are symbols for the different technologies and at the side there are criteria (e.g. labour requirement, yield, conservation effect...). Farmers then score these criteria by putting up to three stones on each field. The more stones the better the technology. Matrix scoring is one of the PRA tools.

The technologies which are classified as ready for promotion can then be promoted to neighbouring areas. This can be done jointly by farmers, researchers and extension staff. One innovative approach is to write a fact sheet on each technique, which describes and summarises the experiences gained. The extension worker multiplies these fact sheets and distributes them to the farmers involved and to other farmers. In cases where resources were limited in Masvingo, farmers contributed and bought these fact sheets (photocopies) from extension agents.

Process review, self-evaluation and planning

Ideally one or two months before the start of the next season, a feedback/review and planning workshop needs to be organised by the community. The timing depends mainly on the nature of the issues to be addressed. This workshop is to review the whole process, assessing it against the planned activities and the indicators for success which farmers suggested during the planning phase. This includes criteria like the leadership and the strengthening of self-organisational capacities as well as the participation of everybody, including the poor, in the community development process. Issues agreed upon in the community awareness workshop are taken up again 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.

Achievements and failures are evaluated in small groups

Often it reveals during the implementation phase that the real problems are different from the ones identified initially. For example, one community once planned to dig out their dam in order to increase the water storage. The soil was removed, but heavy

rains at the beginning of the season caused a lot of erosion and filled up the dam again. Obviously the problem was not fully understood initially, but now the community evaluated their success and went back to the problem analysis. They concluded that first of all the soil in the fields had to be conserved. This, however, needed different technical options than in the first year. The community knew innovative farmers who were good in soil and water conservation and they decided to organise a look & learn tour to get more ideas. They also analysed the necessity that all farmers in the whole catchment had to conserve their soils as otherwise the dam would still fill up. So, they discussed on how best this can be organised at a catchment level, which involves various leadership problems. Meetings and discussions with other communities were held and measures were planned together... Probably one year later, after their reflection on these activities, the community will have identified other problems which also need to be addressed to achieve their goals.

Through this cycle of action and reflection the problem analysis reaches more and more the root causes which hinder their development and they always try steps to improve. As the community goes through each learning cycle, they develop more capacity to plan, to implement, to reflect and to manage change better. They learn to negotiate their rules and adapt them to new situations. This learning can challenge the prevailing set-up (e.g. leadership, power structure) and therefore can create conflicting situations. These are often necessary to make things change for the better. On the technical side of change, PEA creates a framework for the evolution of new technologies as a synthesis of old and new ideas. It is the building upon existing knowledge at the speed of the people which induces a steady learning curve and which makes the learning process sustainable (Figure 7).

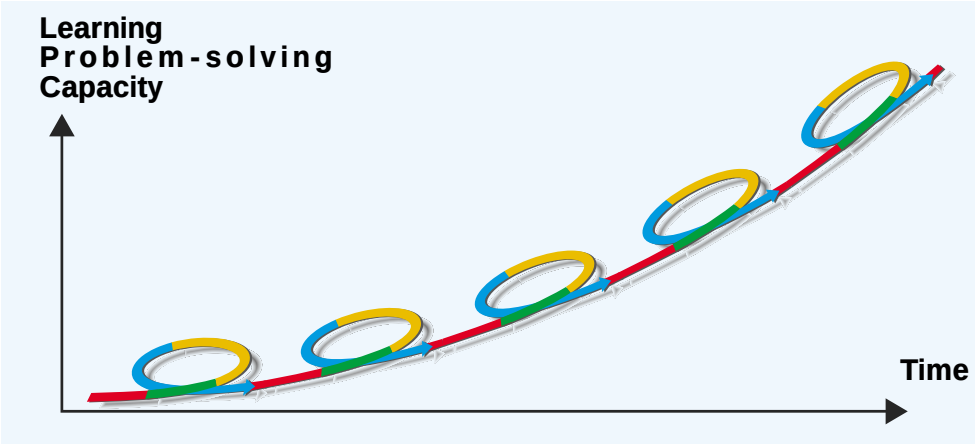


Figure 7: The learning curve in PEA

Preparations for celebrating the community's achievements

4.5 An Operational Framework for PEA

In Masvingo Province extension agents developed an 'operational framework' which summarises the PEA learning cycle (Table 4, see next page). These process steps or activities are not to be taken as a rigid blueprint, but are one example of the structure of the PEA process.

It must be emphasised again that these steps are not set in stone. In some cases one might decide to skip a step because there were lots of discussions before. The whole process can take a long time and be very intensive. Sometimes, the process review might show deficiencies in the problem analysis. Then one needs to go back to the social mobilisation and re-address certain issues again in more depth in order to make a major step forward in the next cycle. The timing also needs to be flexible to accommodate the requirements of different issues to be dealt with.

Table 4: **An Operational Framework for Participatory Extension (PEA)**

	PROCESS STEP	WHAT ISSUES?	WITH WHOM?	TOOLS	TIME
social mobilisation	**1 Entering the Community and Building Trust:** ***Information Meeting***	• presentation and discussion of new approach • concensus of way forward	• Ward leaders	• Open discussion in meeting	March
	2 Identifying and Supporting effective Organisations: ***Institutional Survey***	• Identification of local institutions, • analysis of their roles, strengths, weaknesses and cooperation	• villagers • 'traditional' and 'modern' village organisations • Farmer clubs • Govt Dept, • NGOs, • Churches,	• individual, informal interviews	April/ May
	3 Feedback to the Community ***Community Meeting***	• Report back on institutional survey • analysis of situation with people	• leaders and community representatives	• open discussion • Venn diagrams • group discussion	End of May
	4 Raising Awareness in the whole Community: ***Community Workshop***	• identification of potential groups • start of problem identification • identification of leadership structures • raising of awareness through introd. of TFT in community	• villagers/ community	• discussions • role plays • codes • basic concept of TFT	June
	5 Identifying Community Needs: ***Needs Survey***	• identify and analyse felt needs and problems	• with different categories of people, wealth, gender, age, master farmer/ non-MF	• group & individual discussions • informal observations • informal interviews • wealth ranking • listening surveys	June to August
action planning	**Community Workshop** **6 Prioritising Problems and Needs ;** **7 Searching for Solutions** **8 Mandating local Institutions** **9 Action Planning Workshop**	• feedback on needs survey • prioritise problems • identify possible solutions and their sources • link and mandate problems to relevant local institutions • planning of what to do, when and where • discuss need for further exposure to possible options/solutions • develop time plan of action	• villagers/ community	• Workshop • present flipcharts on needs survey • ranking methods • group and plenary discussions —> consensus • ToAs (forms)	August – Sep-tember
implement./ experiment.	**10 Implementation / Farmer-Experimentation: learning through Trying out new Ideas**	• putting into action what was planned • farmers' own experimentation • monitoring farmers' experiments	• villagers/ community • farmer Groups • relevant institutions	• experimentation • exposure tours/visits • method demonstrations • discussions	as from October
sharing experience self-evaluation	**11 Mid-Season Evaluation of new Techniques**	• evaluate successes and failures in the field • sharing of ideas	• community and other institutions	• field days/tours • visits • discussions	Feb./ March
	12 Process Review, Self-evaluation and Planning	• review TFT/leadership successes and failures • planning for next season • re-assess needs and problems	• community and other institutions	• workshops • ToAs • participatory evaluation & impact monitoring tools	August/ Sep-tember

4.1 How to Link PEA with Research?

The mid-season evaluation and the 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 into the basket 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 researchers to analyse in more depth. The questions arising in the screening process determine the role of research in the PEA process. (see Figure 8)

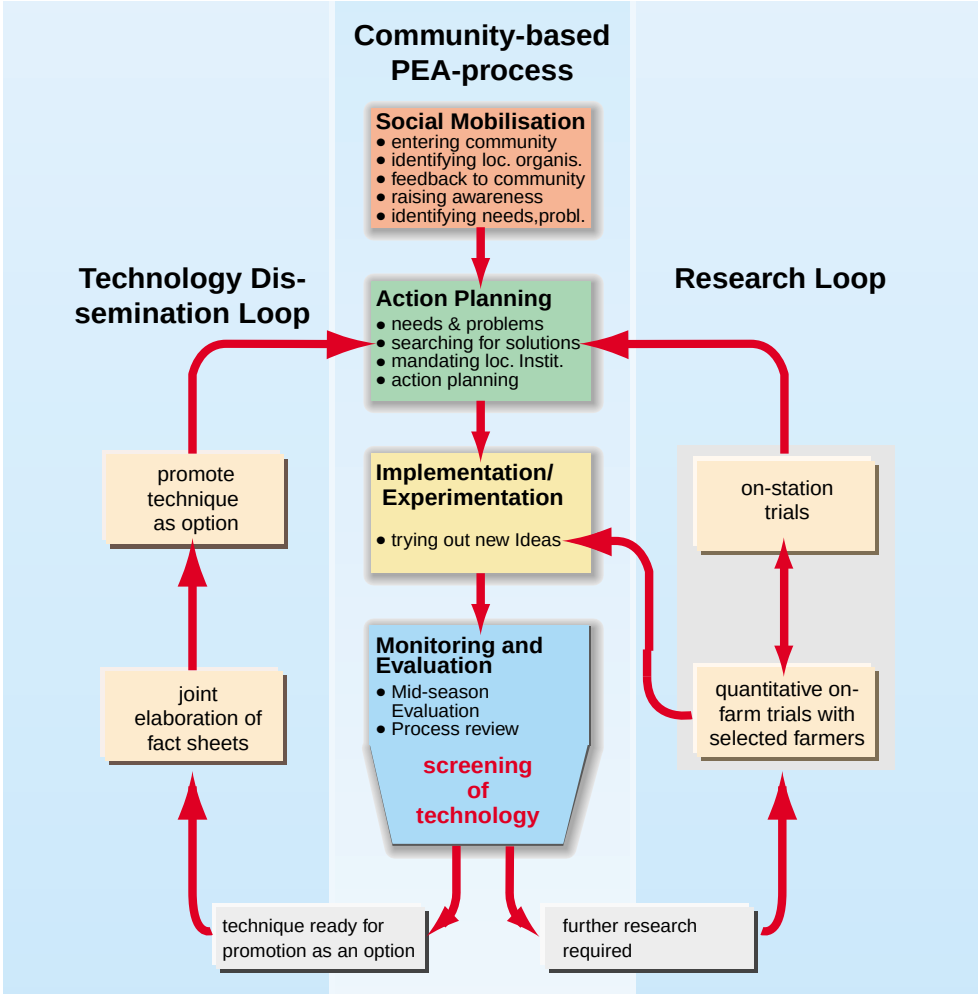


Figure 8: Loops linking PEA-process with research/technology dissemination

As mentioned before, research is a provider of potential technological options and serves as a back-up to the farmers own experimentation process. Through the PEA process, farmers problem analysis in terms of technological issues and the needs for research will reveal more clearly than in conventional extension. Based on the screening of farmers' own experiments and insights, farmers, extension workers and researchers together are able to draw up research questions. For example, when certain techniques are not fully understood, they might require more in-depth research or farmers task researchers to find a solution to one of their concrete problems. Research can then be carried out on-farm together with farmers selected by the community or, in case more controlled conditions are required to address the problems, researchers might consider to carry out the work on the research station. As the research agenda addresses concrete problems of farmers, the results of research will directly feed back into farmers' learning process as knowledge or as technical options. This feedback loop ensures that the research is relevant and contributes to farmers' problem solving. For the researchers it offers the benefit of linking their work effectively with farmers without having to become community facilitators themselves.

Farmers and researchers together monitor and evaluate farmers' trials

5 Experiences in PEA Implementation

5.1 Problems and How to Overcome Them

When a pilot group of extension workers were trained and started PEA implementation without any donor support, they initially faced a number of problems in practice. Many of the problems they encountered were the actual challenges which PEA is geared to address. Problems like 'dominance of certain individuals in the community' or 'poor farmers do not come to the meetings' or the 'donor syndrome' are the underlying problems which cause the inefficiency of the present extension approach. As PEA tries to address active participation of all community members, these hidden issues reveal on the surface. The members of the pilot group had many ideas and positive experiences on how to overcome these problems. Table 5 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 co-operation. Training for Transformation tools have a great role to play in solving these problems.

Major Problems Faced	How to overcome these Problems?
Dominance of leaders over people: • leaders make solo decisions, dominate in meetings, do not attend meetings	• organise leadership courses and TfT for traditional and modern leaders • try to understand leaders and convince them personally • carry out institutional survey and stress on roles, qualities and styles of good leaders • use codes of good leadership in community meetings • ask community members individually and encourage them to speak out their concerns • arrive early at meetings, leave late and listen attentively what peope discuss
Dominance of men over women: • women do not attend the meetings, • the planning is done by men, but the implementation by women	• always invite the men and the women (the families) specifically to the meetings • formation of groups according to gender and age (e.g. in the needs assessment) • encourage women to contribute, give them a chance to speak and show to others that they are very able • do not use gender-biased words like 'chairman', let 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 accompany shy people on their way home and listen...

Dominance of master farmers over ordinary farmers: • master farmers resist the new approach as they are afraid to loose their privileges	• introduce community to community competitions which force them to share with ordinary farmers as otherwise they can not win on their own • discuss in community meeting what the role and behaviour of master farmers should be and how everyone could benefit from extension • use codes and role plays • hold practical demonstrations in the field of poor farmers and motivate them by giving them chances to speak, appraise them
Problem / needs assessment is skewed: • the said problems are only the surface and often they are exactly what the donors offered elsewhere, shopping lists come out of it, • the poor with their problems are often neglected	• Lets start from the goals which people want to achieve in the future and than develop the problems to be tackled to achieve the goals. This provides more ways of going to the goals. • carry out a real root cause analysis (ask why? why? why?...). Often problems mentioned are actually just lacking solutions (e.g. 'lack of fertiliser'). The underlying problem would be 'low soil fertility'. From there a lot more solutions are possible. Then the shopping list boils down to few real issues • carry out wealth ranking and group people accordingly as the needs of the rich are often very different from the needs of the poor • clarify that they should analyse and plan on the basis of their own resources. Let them prioritise their problems with minimal external influence
Donor syndrome versus self reliance: • people always expect free handouts, • low turn-up in meetings if nothing is provided for free/ no donor,	• break the culture of donors by carrying out a good problem/needs analysis so that a project is peoples own project • provide more training and less 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 the responsibilities to the people, empower them • always ask for community contributions to go along with any outside assistance • invite the leaders and key people in writing so that the messages do not get 'interpreted wrongly' and distorted

Table 5: Major Problems in PEA Implmentation (continues next page)

Major Problems Faced	How to overcome these Problems?
Conflicts in communities: • poor co-operation, jealousy and leadership problems	• conduct awareness meetings with TFT • use of codes during workshops (entangling game, co-operation and development game etc.) • try to build trust among community members • use role plays in conflict situations • be neutral as facilitator • try to discuss these conflicts openly in community meetings but in an impersonal way (e.g. through role plays) and also in personal discussions with the leaders, try to understand the different parties • talk to the chief and other influential people
No funds for exchange visits and look & learn tours: • transport to research stations and innovative farmers is expensive	• encourage contributions from community for transport • organise look & learn tours to nearby areas with related projects and innovative farmers • encourage community to have co-operative 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 your local experiment station) • enhance neighbour to neighbour sharing and learning

PEA helps farmers to find their own solutions and become self-reliant. Here, a farmer has developed a new way of making compost. It helps him to reduce costs for fertilisers.

5.2 Implications of PEA for Extension Workers

Two years after starting PEA, 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 slightly more at the beginning but decreases after the first process cycle is completed.
- working relations with farmers have improved: there is now harmony as we are working together, no more tensions, no friction
- farmers' attitudes towards us have changed
- our workload was reduced
- we get more recognition of work due to an increased work output
- the community projects are now more sustainable than before

All involved extension workers felt that their job satisfaction has gained through PEA. This was one of the factors which they considered highly motivating.

5.3 Criteria for Successful PEA Implementation

After their two years of own PEA experience extension workers described the criteria which they would use to assess if PEA has been implemented successfully. The following selection of criteria give an indication of what can be expected as PEA output under the prevailing conditions.

PEA is successfully implemented if....

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

6 How to Build the Capacity to Implement PEA?

The PEA framework and learning cycle described above requires a lot 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. Every community is different. Some steps in the process might take several months with one community but just one day in another, depending on the consensus which has to be negotiated. Solutions to such situations can not be prescribed by outsiders even if the temptation is high.

The complexity of rural situations and the flexibility required for such a process are a challenge to the skills, capacity and identity of an extension worker who is perhaps used to being a technical agent who advises 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 capacities 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 and renew 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 and re-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 can not 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 (see Box next page).

This capacity building process among extension workers was very successful in Masvingo. 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 certain conflict situations. Such experiences are very encouraging and lead to a real improvement of service provision in extension.

Iterative PEA training process for operational extension staff

Phase 1. The start: 2-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. 6 months)
- if possible follow up and backstopping by trainers in the field
- mutual learning support among AEWs, further exposure of local staff

Phase 3. 1-week workshop: evaluation and re-planning (new action plan)
- sharing of field experiences during first action plan and learning from each other
- joint working on how to overcome the major problems faced in the field
- training on more tools and methods
- second action plan formulation

Phase 4. Field implementation of action plans (approx. 6 - 9 months)
- peer to peer sharing and support
- mutual learning support and follow-up by trainers

Phase 5. 1-week workshop
- sharing of field experiences during second action plan and further learning
- joint working on how to overcome the major problems faced in the field
- review of the whole process experience and planning for future learning support

The experiences in Zimbabwe indicate the high potential PEA offers to contribute to the improvement of the livelihood systems in rural communities. Action learning 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 peoples own creativity and flexibility. In other words, the success depends on YOU, the reader of this booklet,

on **your motivation,**
on **your creativity** and
your commitment to development.
Let's try

7 Annex

7.1 How to introduce Training for Transformation in the Community

Farmer participation is not simply a method but a process which involves changes in attitudes and behaviour. For changes of that nature, a philosophical framework was considered necessary to stimulate confidence in farmers' own capacities and to encourage a change of the presently hierarchical roles of researchers, farmers and extension workers. Such a philosophical framework was introduced in the form of 'Training for Transformation' (TFT). This training programme was developed in Kenya in 1974, and adapted to Zimbabwean conditions by Hope & Timmel (1984). It originates in the pedagogy of Freire (1973) and is built on conscientisation through participatory education, where learning is based on experience in the own living world of the actor. Teaching therefore consists of dialogue via problem posing, which means facilitation of communication flow and asking questions to help groups find the causes and the solutions themselves instead of teaching of 'foreign' knowledge and realities. TFT provides concrete methods to implement Freire's approach and empowers local people to control their lives through active participation in their own development and sharing of ideas and knowledge. It stresses the importance of participation and co-operation in organisational development in order to build institutions which enable people to become self-reliant. It aims at strengthening people's confidence (e.g. slogans like: "nobody knows everything and nobody knows nothing") and integrates social analysis to help groups to find the root causes of problems (Hope & Timmel, 1984). Freire's key principles form a philosophical framework which is relevant for any individual living in a society and can be applied in almost all situations in life. The link between TFT and farmer experimentation was created through the principle that problems will not be solved through ready-made recipes, but only by trying out ideas and through the development of innovations.

The community awareness raising workshop

How to translate such a philosophical framework into farmers' language? TFT, with its social analysis tools, is used to increase rural people's self-analysis and awareness. This is the foundation for action learning and enhancing the problem solving capacities of rural people. The programme of the awareness raising workshop follows a 'problem solving process'. There are five major themes in the sequence of this workshop

Session 1: Exploring views on development (The vision)

Session 2: Analysis of root causes of problems in the community

Session 3: Self organisation and leadership

Session 4: Improving leadership

Session 5: Openness, criticism and sharing

These five themes are explained to people by using various visual and verbal codes and metaphors, role plays, songs etc. The codes and metaphors are easily-understood illustrations or examples of an issue, developed in a way that people can remember easily and think back to in the future (see some of the figures below). These codes are used by the facilitator to help people analyse delicate issues in their own environment. Group discussions in the workshop are in plenary and in small groups differentiated according to gender and age, such as older men/younger men, older women/younger women.

A community workshop

Session 1: Exploring views on development (The vision)

Participants discuss in small groups (organised according to age, gender, etc) what they feel development means in their community (their visions and goals) and which development agents they consider important and why). They present their results to the whole group in the plenary. The many different needs and desires which are expressed highlights the fact that first a community needs common goals in order to achieve development. The bus code (Figure 9) is a good example which people will remember and refer back to when disagreements come up within their communities.

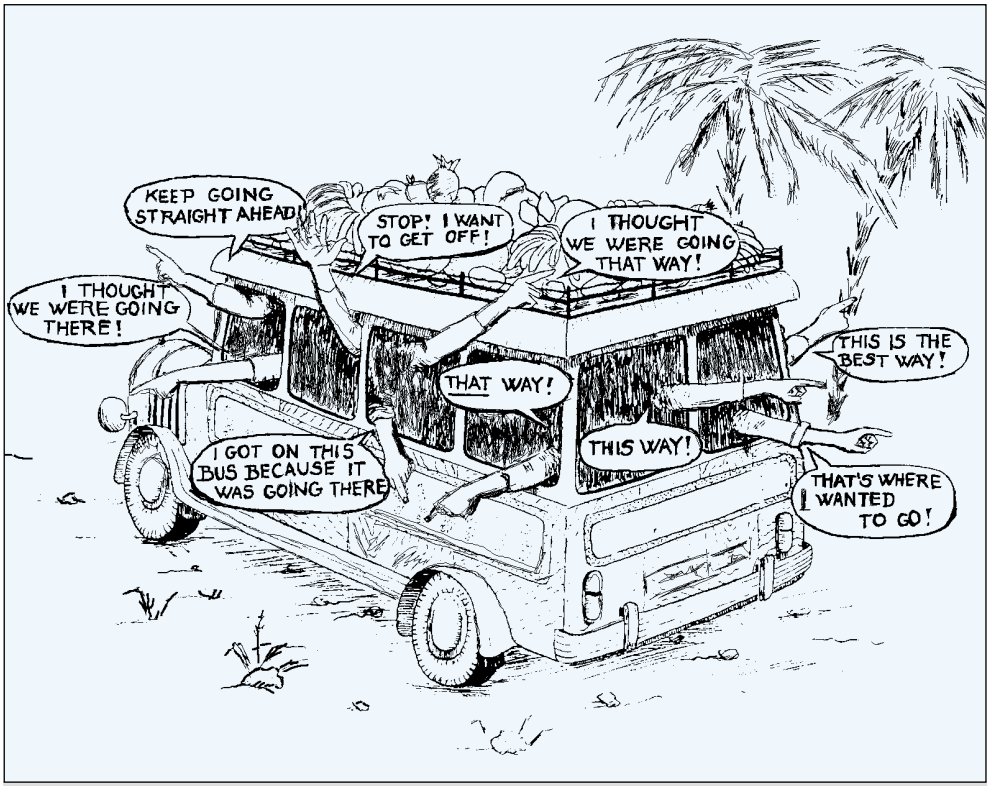


Figure 9: The 'bus code': The bus is full of people, all wanting to go in different directions. Obviously, the bus can only move in one direction. The facilitator explains asks the question: 'how should the group on the bus organise themselves to make the bus move?' or: 'in which direction should they go first?'.

Another 'code' to discuss education, development and the question of dependency and self reliance is the 'river code'. This is a mime or a play without words. Two lines fairly wide apaprt are drawn on the floor in chalk to represent banks of a river. Pieces of paper are used to represent stepping stones in the river and an island (a piece of newsprint) is put in the middle of the river.

Two men come to the river and look for a place to cross. The current is very strong and they are both afraid to cross. A third man comes along and sees their difficulty. He leads them up the river and shows them the stepping stones. He encourages them to step on them but both are afraid, so he agrees to take one on his back. By the time he gets to the middle of the river, the man on his back seems very heavy and he has become very tired, so he puts him on the little island.

The third man goes back to fetch the second, who wants to to climb on his back. But the third man refuses. Instead he takes his hand and encourages him to step on the stones himself. Halfway across, the second man starts to manage alone. They both cross the river. When they get to the other side, they are extremely pleased with themselves and they walk off together, completely forgetting about the first man, sitting alone on the island. He tries to get their attention, but they do not notice his frantic gestures for help.

Discussion questions:

What did you see happening in the play?

What different approaches were used to help the two men across?

Who could each person represent in real life?

What does each side of the river represent?

Why are some people left in the middle of the river?

In what ways do either education or development projects build a sense of dependence?

What must we do to ensure that those we work with develop a sense of independence?

(based on Hoipe & Timmel 1984)

Session 2: Analysis of root causes of problems in the community

Once the group has explored their visions of development, they think about the obstacles they face in trying to accomplish these goals. Through this exercise, the group appreciates the need for an in-depth analysis of problems, rather than only dealing with symptoms of their problems. Often many problems and needs are identified (the famous 'shopping lists') but an in-depth analysis reveals the core problems.

Through this process, communities can begin to find lasting solutions for the development problems they face. One way to visualise the cause-effect relationship and root cause analysis is through a problem tree (see Figure 10).

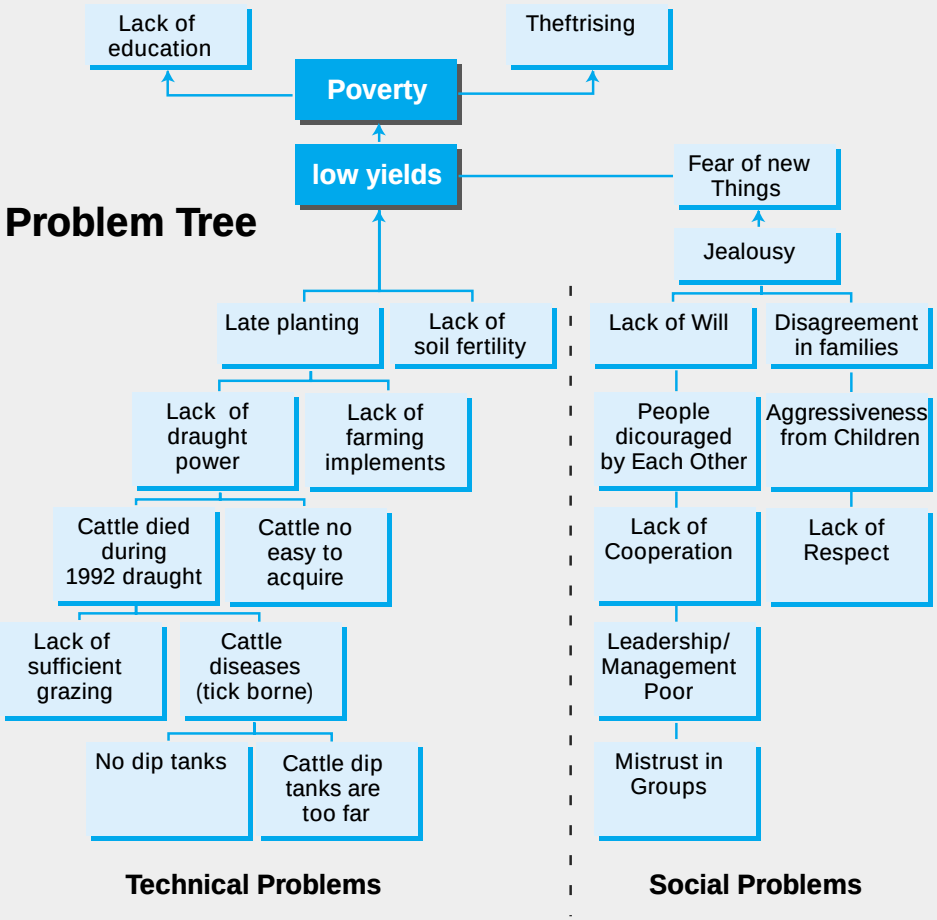


Figure 10: Part of a problem tree as developed by farmers in Chivi

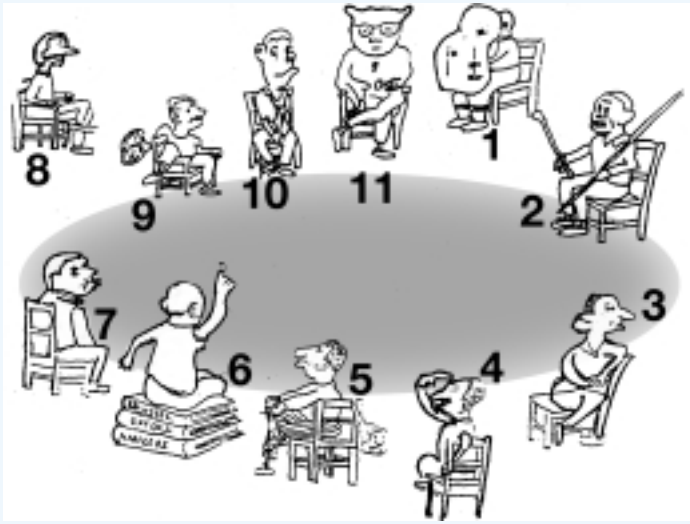
Problems and causes as understood by the community, are systematically built up in the form of a tree. Problems and their causes are identified, prioritised and linked, or grouped together. The completed tree provides the community with a deeper and clearer understanding of the real problems and challenges they face.

Session 3: Self organisation and leadership

Once the group has established why they have a problem and defined what needs to be done, they now have to decide how best to tackle it. This involves organising themselves in a way that everyone will contribute to problem solving.

In examining group dynamics and self organisation, the EW uses a picture code with eleven different characters, similar to a football team (Figure 11).

Figure 11: The code '11 different characters'



After describing the strengths and weaknesses of each of the characters, the group decides who should be eliminated from the team to make the team stronger and more effective. People are quick to find faults in the characters and have them removed from the team. Soon, after some suggestions, there are no players left. This leads to the conclusion that, without all eleven players we do not have a team and cannot play at all, so we better use the strengths, and deal with the weaknesses of all the players. This is now related to real life situations in the community. This again is an example of a code which people will remember and refer back to when real situations come up within their communities.

Session 4: Improving Leadership

Once the group appreciates the fact that everyone in the community needs to be involved in problem solving, the community needs to think about the leadership needed to guide the process. Questions such as, 'what are the qualities of good leadership?' and 'how can we improve our leadership?' are discussed. It is interesting for the leaders, who are also present in the group, to learn what the community expects of them. Sometimes role plays on different leadership styles can be a fun way for people to describe what they consider appropriate. This exercise, combined with the institutional survey, triggers an awareness and negotiation process which helps to improve leadership and self-organisation. Leaders are helped to become more responsible to their communities which is crucial for improving the development process.

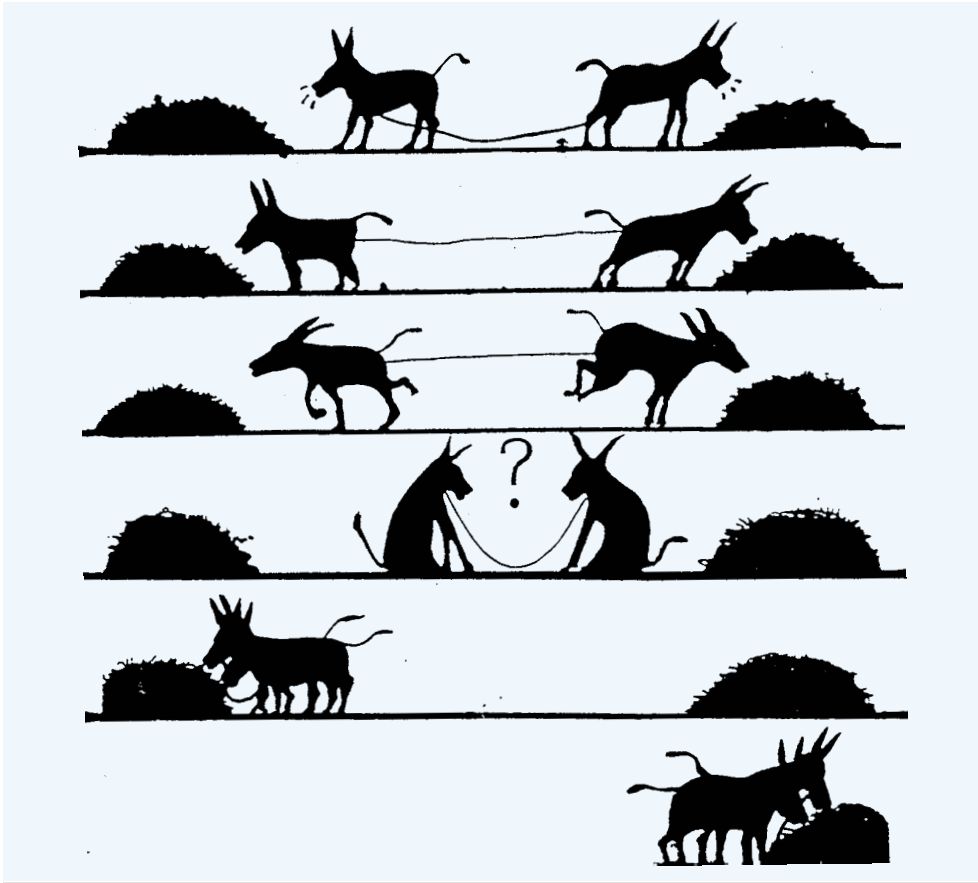


Figure 12: A code to discuss co-operation and communication

Session 5: Openness, criticism and sharing

People have different views on many issues. Leadership is no exception. Leadership will improve in communities where people are open, able to accept criticism and where knowledge and ideas are shared. This insight needs to be highlighted, and in this session people explore the fact that we all perceive things in different ways (Figure 13).

Figure 13: This picture can be used by the extension worker to show how perceptions differ. Some people see an old woman, others see a young woman. The facilitator asks: 'who is wrong and who is right?' and often a heated debate arises, during which they conclude that different perspectives need to be accepted and discussed without calling them wrong or wright.

The final session of the awareness workshop looks at finding practical solutions through experimentation, or Kuturaya, as the farmers call it. It is highlighted that the best solutions are always the ones which one has tried out oneself. Therefore, people are to carry out their own research while building on their own knowledge through trying and identify the most suitable solutions to their problems through sharing their experiences with others in a joint learning process. The guiding statement of training for transformation is a key principle in this collective process:

„NOBODY KNOWS NOTHING AND NOBODY KNOWS EVERYTHING“.

7.2 Further Reading

The following papers are other sources in which the PEA or related approaches are described. They are available upon request.

AGRITEX (1994): Agricultural Extension Programme Planning, Incorporating Diagnostic Survey and Rapid Rural Appraisal. Resource/Training Manual. Agritex Training Branch, Harare.

Campfire Association (1996): Zimbabwe's Campfire. Empowering Rural Communities for Conservation and Development. Africa Resources rust, Harare.

Chambers, R. (1993): Challenging the Professions. Frontiers for Rural Development. IT publications. London.

CTA (1997): 'Extension Services: Masters or Servants'; Spore Newsletter No. 68.

Drinkwater, M.J. (1987): 'Exhausted Messages'-Training and groups: A Comparative Evaluation of Zimbabwe's Training and Visit System. Working Paper, Dept. of Agric. Economics and Extension. Univ. of Zimbabwe, Harare.

Hagmann, J., Chuma, E., Murwira, K. (1997): Kuturaya; Participatory Research, Innovation and Extension. In: van Veldhuizen, L., Waters-Bayer, A., Ramirez, R., Johnson, D. & Thompson, J.: Farmers' Research In Practice: Lessons From the Field. IT publications, London, pp. 153-173.

Hagmann, J., Murwira, K., Chuma, E. (1996): Learning Together: Development and Extension of Soil & Water Conservation in Zimbabwe. In: Quarterly Journal of International Agriculture, Vol. 35, No. 2, pp. 142-162.

Hagmann,J, Chuma,E., Murwira,K., Moyo,E. (1995): Transformation of Agricultural Extension and Research Towards Farmer Participation; Approach and Experience from Masvingo Province, Zimbabwe. In: Twomlow,S., Ellis-Jones,J., Hagmann,J., Loos,H. (eds.) (1995): Soil And Water Conservation For Smallholder Farmers In Semi-Arid Zimbabwe, - transfers between research and extension. Belmont Press, Masvingo, Zimbabwe. pp. 135-145.

Hope, A. & Timmel, S. (1984): Training for Transformation, a Handbook for Community Workers. Mambo Press, Gweru.

Intermediate Technology Zimbabwe (1997): Our Community Ourselves. A Search for Food Security by Chivi's Farmers. ITZ Harare, 60pp.

Madondo. B.B.S. (1995): Agricultural transfer systems of the past and present. In: Twomlow S., Ellis-Jones J., Hagmann J., Loos H.: Soil and water conservation for smallholder farmers in semi-arid Zimbabwe. Proceedings of a technical workshop held 3-7 April 1995 in Masvingo. Belmont Press, Masvingo, Zimbabwe.

Makhado, J. (1994): Introductory Remarks. Proceedings of the Annual Technical Conference held 21-25 February 1994 in Harare. AGRITEX. Harare.

Moyo, E.S. (1996): Re-thinking Community-level Planning and Development (CLP&D). Conceptual Considerations for the Future. Discussion paper, IRDEP Masvingo, Zimbabwe.

Murwira, K. (1991): Report on Institutional Survey in Ward 21 (Chomuruvati Area) in Chivi District, Masvingo Province, Zimbabwe. Intermediate Technology Zimbabwe (ITZ), Harare.

Röling, N. G. (1994): Innovation and the Agricultural Knowledge and Information System. In: The Setting, Background Material to the Multimedia Package: 'Discoveries on the Farmers' Track' - Print and Pictures on Agricultural Innovation. Peter Linde Productions, Wageningen.

Scoones, I., Hakutangwi, M. (1996): Evaluation of the Chivi Food Security Project. Unpublished report, Intermediate Technology Zimbabwe (ITZ), Harare.

Complementary to this guide book, a **video clip and a trainers' manual** are also available.

The video 'Learning together through participatory extension: a video on an approach developed in Zimbabwe' shows how an extension agent practices participatory extension (PEA) with farmers in Zimbabwe. It demonstrates the steps involved in the PEA process that enables farmers to take central responsibility for their own development with the extension agent as a facilitator of the process rather than a teacher of a given technical subject.

The video can be used to create general awareness on participatory extension approaches or as an aid in facilitating training/learning programmes for extension agents seeking to develop their skills in participatory approaches for rural development.

The book: 'Learning together through participatory extension: a trainer's manual' provides the details of an iterative PEA training/learning programme as described in the section 'How to build the capacity to implement PEA?' in this booklet. Interactive training modules are described for a series of three workshops.

The video and the trainer's manual can be ordered from the distributor:

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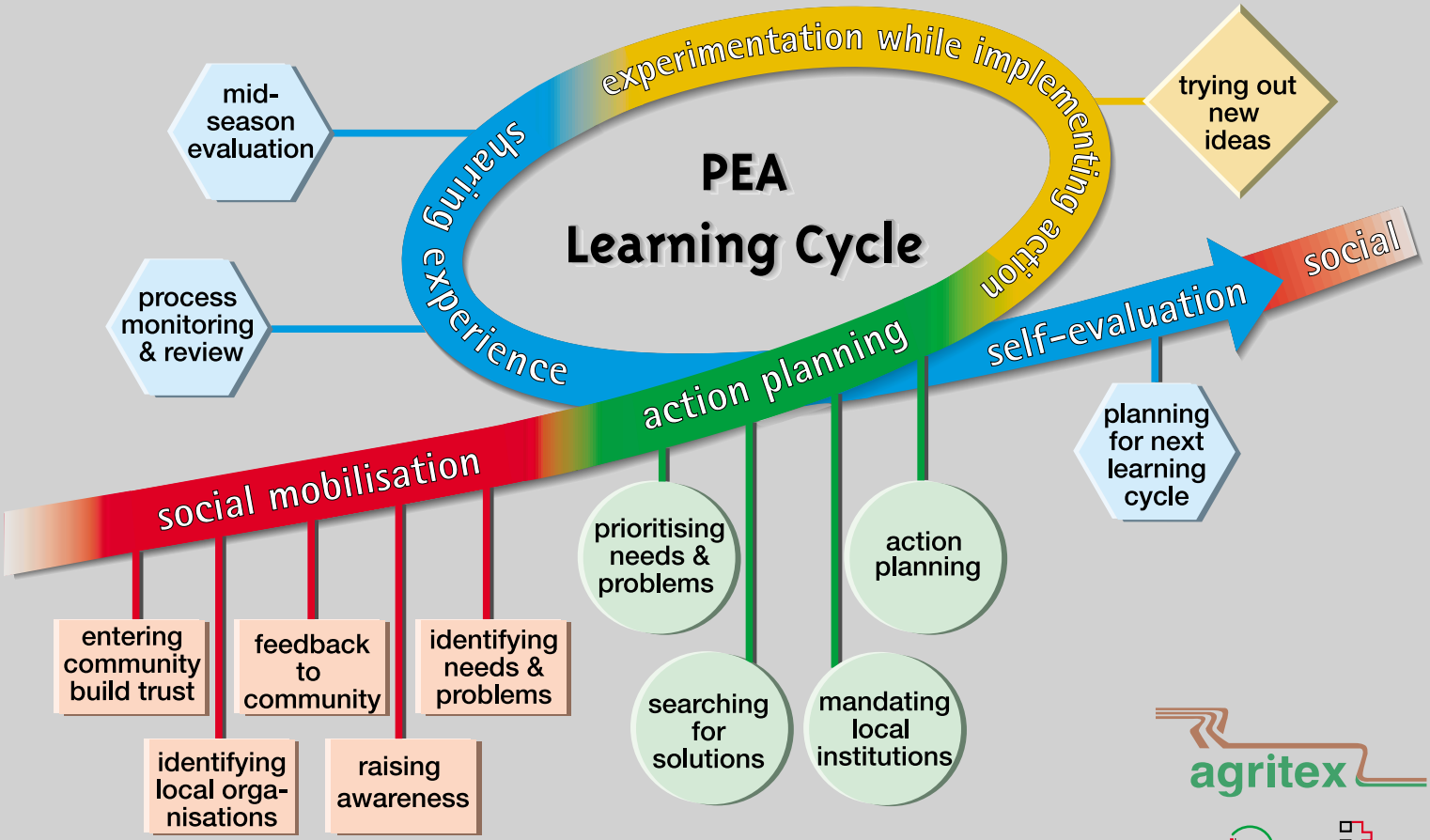
Learning Together Through Participatory Extension Approaches



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