1 Introduction

The highlands of western Kenya are a high potential region with good rainfall, receiving between 1500 and 1800 mm per year over two seasons. However, despite these favourable conditions, the region suffers from food insecurity and poverty. Most farmers cultivate small plots of between 0.2 and 0.9 ha, as high population densities of 500-1200 people/km² have increased the pressure on land (Niang et al., 1997). The undulating terrain and relatively high rainfall in the area often cause soil erosion, contributing to reduced yields. Declining soil fertility is a major problem, but most farmers cannot afford to buy inputs. Even those who do use them often apply less than is needed to compensate for nutrients lost after crops are harvested.

Any attempts to improve levels of soil fertility need to take account of the diversity and complexity of farming in western Kenya, where farmers grow a wide variety of crops on small, scattered pieces of land. As they cultivate several types of soil with a number of different qualities, soil fertility technologies for an 'average' farmer or 'average' field are unlikely to be of much use. A far more productive approach is to involve farmers in developing and fine-tuning the best combinations of soil fertility management practices, combining local knowledge with research-based insights to make the most effective use of locally available resources. Generally known as Integrated Soil Fertility Management (ISFM), this approach can be achieved by stimulating joint learning and experimentation among farmers, supported by research and extension work. In western Kenya, collaborative learning has become popular as part of the Participatory Learning and Action Research approach (PLAR).

PLAR for ISFM was initially developed in Mali (Defoer et al., 1996). In 1997 it was decided to test and adapt this to an East African setting, and a pilot ISFM project was set up in a village in western Kenya, within the framework of the Soil Replenishment and Recapitalisation programme (Sanchez et al., 1997). This is a collaborative initiative between the Kenya Agricultural Research Institute (KARI), the Kenya Forestry Research Institute (KEFRI), the International Centre for Research on Agro-Forestry (ICRAF), the Ministry of Agriculture and Rural Development (MoARD) and the Royal Tropical Institute (KIT). The PLAR approach is now being scaled up to operate in seven districts of western Kenya.

The next section describes the general features of PLAR for ISFM, section three presents the experience with PLAR in western Kenya, and the fourth section discusses the institutionalisation of PLAR for ISFM. The paper ends with conclusions and recommendations.

2 PLAR methodology

Objectives

PLAR for ISFM is a process that has been developed to help farmers improve their soil fertility management strategies by:

- diagnosing and analysing their current soil fertility management strategies and practices;
- planning, experimenting and evaluating alternative soil fertility management practices that are practical, appropriate to their particular situation and better able to exploit available resources and diversity.
- PLAR for ISFM also aims to build effective and efficient farmer organisations that will ensure the successful and continued development of ISFM practices (Defoer and Budelman, 2000).

While PLAR was initially developed to involve farmers in the design, management and evaluation of experiments for on-farm agricultural research, it also has significant potential for extension organisations. PLAR for ISFM can play an important part in the creation of an efficient, demand-driven extension system that also empowers farmer groups. One of the effects of structural adjustment policies has been a decline in the ratio of extension staff to farmers, and it is therefore important that these agencies adopt approaches that enable them effectively to reach large numbers of the most vulnerable groups of farmers.

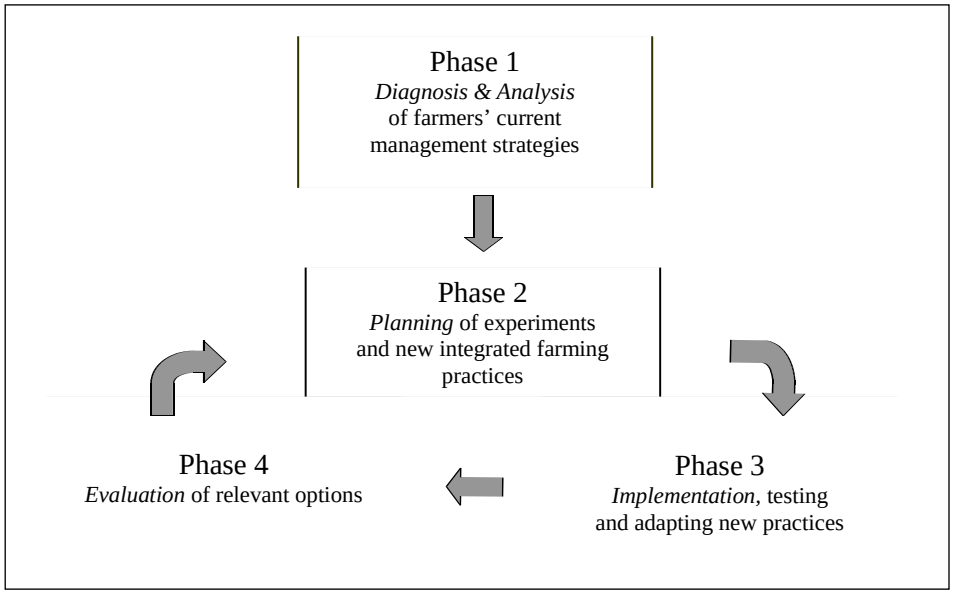
Process

PLAR follows a four-phase process approach with clearly defined procedures, steps and tools, as outlined below in Figure 1 and Table 1 (see also Defoer and Budelman, 2000). This approach is facilitated by the PLAR team which is a multidisciplinary support group made up of researchers and district, divisional and frontline extension staff. Trained to work with the PLAR process and tools, they provide farmers with information on alternative management practices and train village committee members. The primary role of extension staff is to facilitate and support the process, while research staff focus on the identification of potentially useful new technologies.

Table 1. The phases, activities and tools of the PLAR for ISFM approach

Stage	*Activity*	*Tools*
Phase 1	*Diagnosis and analysis*	
Step 1	Diagnosis of the community land use system	• Village territory mapping • Transect walk • Diagram of village organisations • Diversity analysis of soil fertility management • Farm classification
Step 2	Formation of a village committee	• Criteria for setting up a representative and effective village committee
Step 3	Analysis of SFM at farm level, carried out by selected farmers	• Mapping resource flows
Step 4	Training other farmers	• Farmer-to-farmer training in resource flow mapping
Phase 2	*Planning*	
Step 1	Exposure to other SFM practices	• Exchange visits for farmers • Farmers' workshops
Step 2	Planning at farm level	• Planning maps
Step 3	Planning at village level	• Village action plan
Phase 3	*Implementation*	
Step 1	Experimentation	• Guidelines for designing and laying out experiments
Step 2	Capacity building within the village committee	• Guidelines for defining the roles and responsibilities of the village committee
Step 3	Monitoring experiences and sharing results	• Monitoring by committee and farmers • Field visits and field days
Phase 4	*Evaluation*	
Step 1	Evaluation at farm level	• Map of implemented activities
Step 2	Evaluation at village level	• Review of action plan • Assessment of successes and failures • Identify options for follow-up activities

Figure 1. The PLAR process



Diagnosis at community level

The starting point for the PLAR is the village community. A typical community in western Kenya consists of 100-300 households, each averaging 4 to 8 people. The diagnostic phase of PLAR begins with representatives of the community being invited to a meeting and asked to analyse the landscape and the current system for managing natural resources. They do this by drawing up maps of the village territory and making transect walks. They also use diagrams to analyse how the village works on an organisational level and to visualise the information and communication networks within it.

After discussing current soil fertility management practices, farmers analyse their diversity at village level and identify a set of criteria that they consider indicative of good soil fertility management. These are used to classify every household in the community according to the way in which it manages soil fertility. There are usually at least three groups with distinctive levels of soil fertility management, ranging from the least successful to the most able farmers. Working on the assumption that their members are likely to face similar challenges and have a comparable resource base, much of the training, experimentation and information sharing is done within these groups, and care is taken to ensure that each is represented in the next round of learning and experimentation.

Village committee

The PLAR process is co-ordinated and monitored by a specially created village committee, and the success of the approach largely depends on this committee being able to rely on the support of the whole community. Committee members are at the centre of the learning process, especially in the first year of PLAR, and they are expected to share their experience with other farmers from the same SFM class or the organisation that they represent.

It is therefore important to involve as many people as possible in discussions about the need for such a body, developing criteria for membership and identifying the roles and responsibilities of committee members, using the outcomes of the diagnosis at community level. Facilitators stress the need for a genuinely representative committee that includes members of each SFM group, as well as larger village organisations. This is a particularly important aspect of PLAR, as previous extension approaches tended to ignore poorer farmers, either focusing on relatively wealthy pilot farmers or strong village groups based on church affiliation or the production of cash crops. Membership of the committee should be flexible, so that new members can be elected if there is a large increase in the number of ISFM activities or experimenting farmers, or if the committee takes on responsibilities that involve other village development activities. At present, committees average ten to twenty members, half of whom are women.

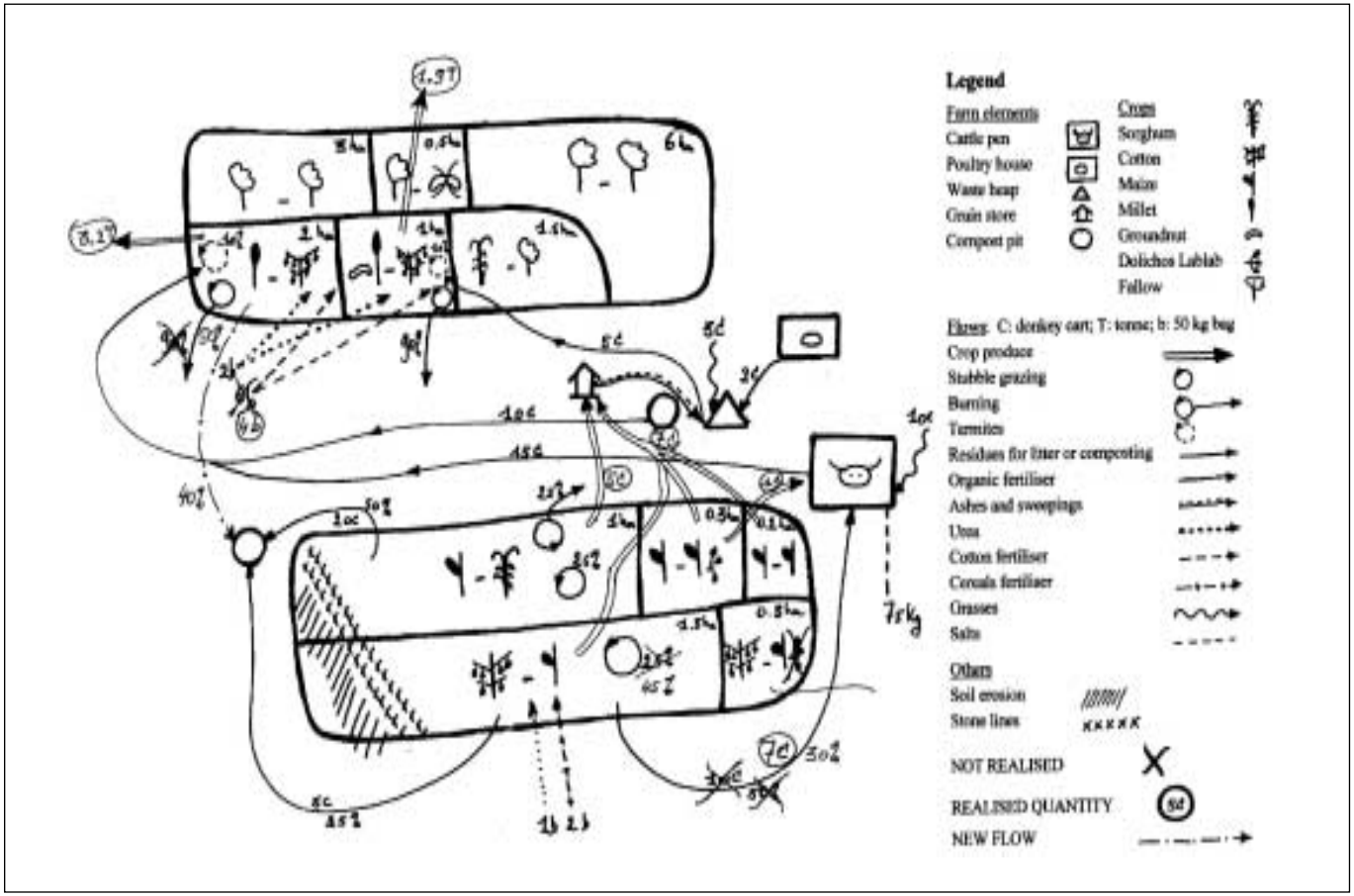
Resource flow mapping

One of the key tools used in most phases of PLAR-ISFM is the map of resource flows into, out of and within a farm (see Figure 2). Resource flow maps enable farmers to:

- Analyse the extent to which residues are recycled, the amount of inputs applied, levels of nutrient loss and the differences between fields;
- Identify and plan experiments;
- Develop alternative ways of managing soil fertility;
- Compare planned and implemented activities, and keep records of the changes;
- Provide a tool for discussing farm activities with household members;
- Exchange experience and knowledge with colleagues and extension staff.

Each committee member analyses the soil fertility management practices on their farm by mapping the flows of resources into, out of and within the farm (Defoer and Budelman, 2000). The map is then used as the baseline for planning experiments, and for subsequent initiatives to set up experiments on the farm. These 'test farmers' are eventually intended to act as guides, helping others to experiment on their own farms. Farmers are generally very positive about the usefulness of these maps as a tool for analysing management strategies and planning and evaluating activities.

Figure 2. Example of a resource flow map



Planning of activities

During the planning phase, frontline extension staff organise exchange visits and workshops to introduce farmers to alternative management practices and show them how they work. Having discussed the new practices they want to adopt, committee members then add them on to their resource flow maps, producing a farm planning map. At community level, an action plan is made for the village as a whole, covering activities such as training events, experimentation with new techniques and practices, and agreements on monitoring and evaluation. The village committee plays a major role in implementing, co-ordinating and monitoring this community action plan.

Implementation

The implementation phase includes training sessions for farmers to discuss new practices and learn how to design, lay out and monitor their experiments. Committee members, who have already carried out experiments, open up their farms for field days and visits to share their experience. This farmer-to-farmer training facilitates both dissemination of proven techniques and fine-tuning of these practices.

Evaluation

During the evaluation phase committee members assess their own experiments, and make a farm map of the activities they actually implemented, which may not be the same as those that were planned. A meeting is then organised to review the village action plan, evaluate the activities implemented at community level, and develop a new village action plan for the next season, based on the assessment of the successes and failures of the current season.

3 Implementing, scaling up and institutionalising PLAR

Results in Mutsulio village

The pilot PLAR project started in November 1997 in Mutsulio village, which is in the Lucose sub-location of Shinyalu Division. A sub-locations corresponds to an extension unit. Researchers from the KARI Kakamega research centre and local extension staff spent a year testing and fine-tuning the PLAR approach and learning tools. Following the diagnosis phase, farmers learned about improved fallow, on-farm production of organic fertiliser and biomass, and the optimal doses of combinations of rock phosphate, organic fertilisers and soil amendments. A Mutsulio village committee was set up, and committee members implemented 71 experiments in the long rainy season (March-August 1998) and 45 experiments in the short rainy season (October-December 1998), using 6 new techniques. A further 107 experiments were implemented by other farmers that had attended farmer-to-farmer training sessions, which did not involve extension staff (see Table 2).

Table 2. Number of farmers in Mutsulio testing innovations in 1998 and 1999

Innovations tested	*Committee members*				*Other farmers*			
	1998		*1999*		*1998*		*1999*	
	LR	*SR*	*LR*	*SR*	*LR*	*SR*	*LR*	*SR*
Rock phosphate with organic matter	15	4	15	4	14	7	20	4
Improving quantity and quality of manure	9	9	11	11	10	16	20	20
Soil conservation	14	14	8	8	14	16	25	27
Tithonia bulking	5	5	-	-	-	-	-	-
Improved fallow	13	13	13	13	10	16	26	30
Improved beans	15	-	15	6	4	-	28	18
Improved bananas	-	-	14	5	-	-	33	-
Improved sweet potatoes	-	-	14	-	-	-	62	-
Poultry vaccinations	-	-	14	14	-	-	19	23
Total number of experiments	71	45	104	61	52	55	233	122

Key: LR = Long rainy season; SR = Short rainy season
Source: Defoer et al. (2000)

The establishment of the farmer committee combined with a programme of field visits and field days at committee members' farms seem to have been particularly fruitful. The number of farmers experimenting with and adopting new techniques rose sharply between 1998 and 1999, as a direct result of them seeing the practices in place and being trained to use them by test farmers. Although the PLAR-team offered only minimal assistance in 1999, farmers carried on experimenting with new techniques, adapting them to their local farming systems and exchanging information and insights with each other (Table 2). The Mutsulio village committee continued to oversee a range of activities, and to organise field visits to experimental plots so that other villagers can learn from the process. Its members implemented a total of 164 experiments over both seasons, and 355 experiments were implemented by other farmers.

Resource flow maps are now commonly used in the village, and thirty-five farmers made a planning map for the long rainy season in 2000. After two years of experimentation the committee has proposed that some farmers be reclassified into a higher class, as they now use many new soil fertility management practices.

However, it has taken a while for committee members to get used to the farmer-to-farmer learning process and become confident in the approach. Some of the original members dropped out when they realised that the programme would not provide fertilisers or other inputs. It took two seasons of co-ordination, experimentation and monitoring before the committee really started to operate as a cohesive and functional body.

Scaling up the process to Lukose sub-location

The success of PLAR in Mutsulio raised a number of questions about how the approach could be extended to larger units, replicated in other regions and institutionalised within the Ministry of Agriculture and Rural Development (MoARD). The flexible, qualitative nature of PLAR requires open-minded support staff who are prepared to invest time in promoting relatively complex learning processes. The PLAR team needs to be careful to maintain a balance between reaching large numbers of farmers and delivering a high quality service.

With these considerations in mind, work to scale up the process started in early 2000. The lowest administrative level at which front-line extension workers operate is the sub-location Lucose, which is a grouping of six villages including Mutsulio. Accompanied by the PLAR team and sub-location administrators, the committee from the 'satellite' village of Mutsulio invited all the neighbouring villages to a field day where they could see what was involved in the PLAR process.

Each village sent representatives to the field day, and three of them were so impressed by what they saw that they asked the PLAR team to include them in the programme.

Diagnostic work with the new villages is done by using the 'quick PLAR diagnosis' developed to limit time and staff requirements. The quick diagnosis takes only one day and includes at least the diversity analysis and farm classification. As all the villages in the sub-location are in the same agro-ecological zone, much of the data gathered in Mutsulio was relevant to the new villages, and could be used as a basic framework for the diversity analysis and farm classifications carried out in these villages. This diversity analysis is necessary to identify the farm class to which participants belong, the type of experiments that will be most useful to them and, on a more general level, to shape the membership of their village committees.

Each of the three new villages set up a committee and held planning sessions to develop an action plan for the village. As the PLAR team could not spend as much time working with the new villages as they had in Mutsulio, a more limited village action plan was produced for the first agricultural season, to give the new committees time to get used to the PLAR process. In the meantime, farmers in these villages experimented with a large number of new soil fertility management practices during the long rainy season of 2000 (Table 3).

Table 3. Technologies tried out in Mutsulio and three new villages between March and August 2000

Technologies	*Villages*				
	Mutsulio (satellite village)	*Shikuzi*	*Shiyewe*	*Kwirenyi*	*Total*
Soil conservation[a]	138	2	0	0	140
Improved fallow	48	15	4	20	87
Improving quantity and quality of manure	41	0	0	0	41
Compost making	15	2	0	0	17
Rock Phosphate with organic manure	36	21	18	22	97
Rock Phosphate with Tithonia	18	7	0	0	25
Tithonia bulking	41	4	0	0	45
Setting up tree nurseries	3	4	3	2	12
Improved varieties of bean	110	25	25	32	192
Vaccinating poultry	43	30	33	0	106
Cooking stoves	5	9	0	0	14
Sweet potatoes varieties	89	0	0	0	89
Total number of experiments	587	119	83	76	865

Key: a = soil conservation technologies include biological stabilisation of terraces and contour farming.
Source: Defoer et al. (2000)

After a while the village committees realised that they were unable properly to address some of the issues related to soil fertility management, such as the supply of inputs, credit, marketing and the use of common resources related to new soil fertility management practices. Most of the institutions involved in rural development work at sub-location level, and it is therefore easier for committees operating at this level to deal with such institutions. In August 2000, after agreeing the criteria for membership of such a committee, nine men and six women were elected onto the new Lucose sub-location committee. Requirements for membership include being a farmer, being literate, settled in the area and available to attend meetings, being accountable, communicative, respectful, social, honest and being a member of a village committee.

One of the issues raised by farmers was the extent to which they are prepared to set aside their daily tasks to train colleagues from another village. They seem happy to train farmers within their own community, but require an additional incentive to travel beyond their village borders. The general consensus was that farmer-to-farmer training should be regulated by the committee at sub-location level.

The role of extension

Although frontline extension staff are initially responsible for promoting interaction between the different committees and helping to get the farmers' platforms up and running, it is important that they are seen as facilitators rather than managers. Farmers will only be able to appropriate and take charge of the PLAR process themselves if they feel in control of the different elements involved in the approach. Extension agents also need to act as mentors to the satellite village committees, helping them develop into rural knowledge centres that can be used as a source of information and inspiration for more recently established village committees. Staff from extension agencies and NGOs will need to:

- Help farmers to assess their own situation and seek out new information;
- Help farmers experiment with new practices;
- Facilitate farmer-to-farmer learning;
- Stimulate interaction between committees;
- Help get farmers' platforms up and running;
- Encourage and facilitate contact between committees and other development organisations;
- Share knowledge with extension and research staff at all levels.

Extension staff and NGO personnel will play an important role in expanding the approach into other divisions within the district, particularly in their capacity as trainers; while staff at division level should assume responsibility for managing the PLAR process, as they operate close to the farming communities.

Introducing PLAR in other districts

The PLAR approach is now being applied across sub-locations in seven districts of western Kenya. After extension staff at district, division and field level were trained in November 1999, the process developed in Lucose sub-location was used to initiate PLAR in one village in each of the other six districts, which will act as a base or satellite for training neighbouring villages in ISFM strategies. All satellite villages have a village action plan, and after being trained in the new techniques, a large number of farmers started experimenting with different soil fertility management practices in the long rainy season of 2000 (Table 4).

Table 4. Average number of farmers trained and implementing technologies in seven satellite villages

Technologies	Average number of farmers per site	
	Trained in the technology	Implemented the technology
Soil conservation[a]	21	15
Improved fallow	24	22
Improved manure production	17	14
Compost making	23	8
Rock Phosphate (RP) + organic manure	20	9
Rock Phosphate (RP) + Tithonia	12	4
Tithonia bulking	12	4
Crop rotation	7	1
Setting up tree nurseries	19	8
Improved varieties of bean	15	12
Vaccinating poultry against NCD	1	0
Cooking stoves (Upesi jiko)	5	1

Source: Defoer et al. (2000)

Farmers have been very positive about seeing the results of experiments in neighbouring villages during field days, and about the overall approach and performance of the extension services (see Box 1). As many villages want to be included in the PLAR programme, scaling up will start in January 2001, which should give satellite village committees time to learn some of the skills required for PLAR and decide on strategies for expanding the approach (Defoer et al., 2000).

The PLAR budget for the first nine months of the process was KSh. 100,000 (US$ 1250) per satellite village, over half of which was taken up by facilitation costs, or the daily allowances for the PLAR team (Defoer et al., 2000). Field days and field tours were the most expensive elements, because of transportation costs and the number of

Box 1. Farmers' comments on the PLAR-ISFM approach

- *Extension staff are now being seen and felt.*
- *I was always so much focused on inputs and support coming from outside; I now see that I should first start by improving what I have and do.*
- *I could not afford to go to a learning institution to be exposed to this kind of training. Nobody can take away from me what I learned.*
- *We have been sleeping, now we are awake.*
- *It is useful for me to work in a group; I can share with others what is in my head.*

Source: Baltissen et al. (2000)

participants involved. It is remarkable that only 2% of the costs are directly related to inputs for testing and implementing new technologies. This can be attributed to the fact that PLAR encouraged farmers to avoid input-related activities whenever they could, and helped them to improve the way that they managed the resources available on their own farms.

Institutionalising PLAR

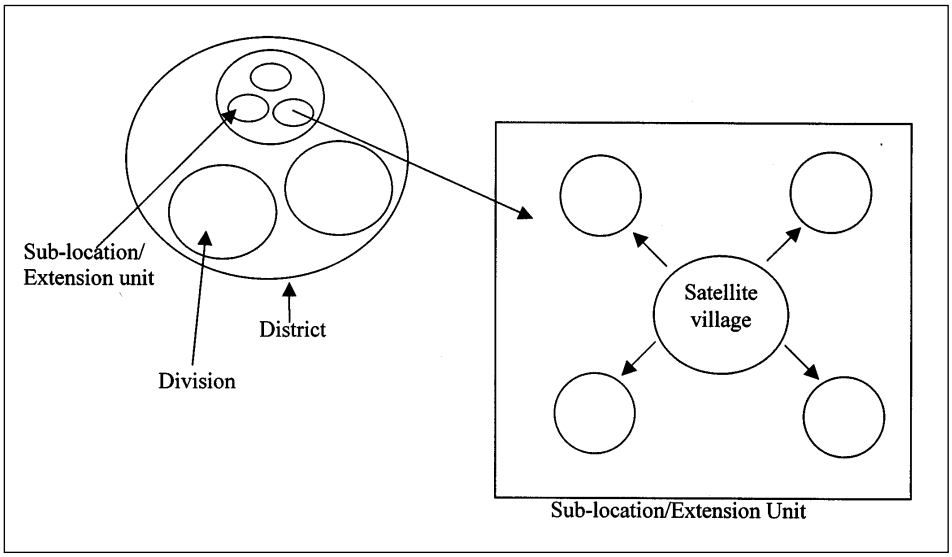
The PLAR-ISFM process can be introduced at different administrative and/or extension levels, depending on the objectives and geographical area covered by the institutions involved in its implementation (Figure 3). At district level, for example, working with skilled trainers, the district training officer should organise and facilitate PLAR training for divisional extension staff, front-line extension staff and NGO personnel operating in the area, who would then form a divisional PLAR team. This team can then introduce the methodology to a satellite village in one of the sub-locations/extension units, before moving on to other sub-locations/extension units in the division. In order to ensure that the process is thoroughly monitored, this would preferably be a village where field extension staff are already based.

In western Kenya, there is only one frontline extension worker in each sub-location/extension unit, which usually averages five villages or about a thousand households. For the programme to be sustainable, members of the satellite village committees need to assume considerable responsibilities, providing information and farmer-to-farmer training to neighbouring villages, learning how to use teaching aids and showing others how to lay out and monitor experiments.

The approach can be extended from satellite villages to other villages in the sub-location/extension unit after just one year, although our experience in Mutsulio has shown that it took two agricultural seasons for the village ISFM committees to acquire sufficient skills to extend the PLAR approach into neighbouring villages. Encouraging

farmers and their committees to appropriate the process so that they can work with it independently enables extension staff to move on to other sub-locations/agricultural units, divisions or districts, while maintaining the initial momentum in the areas where the approach was first implemented.

Figure 3. PLAR satellite villages within the MoARD extension system



The role of research

While research continues into new technologies that may help resolve some of the problems faced by farmers, satellite villages could be used as experimental areas where farmers can test new techniques and provide feedback for adaptations and further on-station research. Extension staff in these research villages will need to be trained to assist test farmers, and should be conversant with simple experimental design and layout. Researchers could also use these villages to train extension staff in the new techniques and to test training and extension materials. Other useful fields of investigation could include analysing and monitoring soil fertility, and examining the links between new practices and soil fertility, yields, farm production and the alleviation of poverty (see also Defoer and Budelman, 2000). As PLAR relies heavily on the network of rural channels of communication (also referred to as the Agricultural Knowledge and Information System), it would also be useful to investigate what effect PLAR has had on the system, and to consider how it may be improved.

4 Conclusions and recommendations

Conclusions

The introduction of PLAR for ISFM in a research and extension context has been successful in western Kenya. The results in the first village, where activities started in November 1997, showed that farmers are interested in carrying out their own experiments to improve their farming techniques and by making better use of locally available resources. They are also willing to share their knowledge with colleagues in their own and neighbouring villages. The initial PLAR team, which was made up of staff from research and extension agencies, not only acted as guide and facilitator to the village committees, providing them with relevant new information, but also supported and maintained the process of farmer-to-farmer training.

Of all the tools developed by PLAR approach, the most useful seem to have been diversity analysis and farm classification. Grouping farmers with the same level of soil fertility management into various classes makes it possible to provide each group with information relevant to its specific circumstances. It enables farmers with similar resources to try out new practices suited to their economic and agricultural needs, and to access and share information. This type of classification also makes it possible to elect genuinely representative village committees, which can promote and defend the interests of each group. The resource flow maps used in the diagnostic, planning and evaluation phase were also particularly valuable as illustrative tools and as a means of sharing insights amongst largely illiterate farmers.

The second stage, which introduced neighbouring villages to the approach, showed that it is possible to scale up the approach to cover larger areas, provided that extension staff and leading farmers are confident in their role as facilitators and trainers. However, farmers need at least one, and preferably two, seasons of focused support by the PLAR team to prepare for this task. The establishment of new satellite villages in other districts went remarkably well. Although the new PLAR teams were only formed and trained in November 1999, they had already achieved visible results by September 2000, both in the satellite villages and in neighbouring communities. The PLAR satellite villages have become rural centres of knowledge that can be used to disseminate the PLAR approach. After several seasons the village committees recognised the need to organise themselves

at a higher level, so that they could join forces to secure inputs and credit or to request assistance from regional institutions.

PLAR in western Kenya has focused on improving soil fertility management, but it can be used for all kinds of topics, and KIT and KARI are currently in the process of developing PLAR as an approach for livestock management.

Recommendations

More than half of the budget was taken up by the costs associated with getting the PLAR process off the ground, which could be greatly reduced by combining activities, better time-planning and generally increasing the efficiency of the PLAR team. Using a 'quick PLAR diagnosis' to extend PLAR within the same extension unit will significantly reduce facilitation costs, as this approach demands relatively little from extension staff, relying more heavily on farmers from the satellite village to carry out training and farmer-to-farmer learning.

The process of learning and experimentation with ISFM makes considerable demands on farmers. Those who belong to village committees are expected to help their colleagues in the village adopt new farming practices, while farmers from satellite villages have to play an important role in raising awareness among those in surrounding villages, as well as training them in the new techniques. The institutionalisation of PLAR for ISFM should therefore put considerable emphasis on capacity building at village level. Experience in western Kenya has shown that satellite village committees and PLAR teams need time to acquire the skills and confidence to ensure that the PLAR process is both successful and sustainable. Plans to scale up the process should therefore take account of the need to strike a balance between reaching as many farmers as possible and maintaining the quality of the process.

As extension becomes increasingly geared towards facilitating learning, the role of extension agents and NGO staff will change, and they will be expected to support the process in a positive manner, in their attitudes as much as through their work. It is also important that they are able to keep farmers up to date with new and relevant information, which will involve the provision of some kind of institutional database or resource centre. If farmers were able to collect or acquire funds to pay for training and research, they would have more say in shaping the PLAR process. PLAR teams in other parts of Kenya are now experimenting with such an approach, in which farmers can order and pay for extension staff to deliver messages.

A variety of extension approaches are used across western Kenya, such as the Farmer Field School Approach, the Catchment Approach and the Training & Visit approach. Each has its own strengths and weaknesses, and it would be useful for all stakeholders

to carry out a joint analysis of their effectiveness. Users and other stakeholders should decide which approach, or combination of approaches, is best suited to their objectives, and then choose accordingly from each of the tool baskets.

The promotion of decentralised management within the extension service at divisional level, with continuous staff training and internal evaluation, would be a significant step towards creating a stimulating environment in which the process can develop in a successful and sustainable manner. The PLAR approach will never be adopted on a wide scale unless policy makers are involved in the process. They need to be made aware of its capacity to empower farmer committees and stimulate institutional change at local level, and should be encouraged to provide favourable circumstances for PLAR by fostering participatory approaches.

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