

Department for International Development
Renewable Natural Resources Research Strategy

Natural Resources Systems Programme
Forest – Agriculture Interface

Forestry Research Programme

Research Project R6918

Forest User Groups Forest Management Project [FFMP]

Final Technical Report

May 2001

Dept. of International and Rural Dev. (DIRD)
The University of Reading
Reading
United Kingdom

Livelihood and Forestry Programme (LFP)
P. O. Box 106
Kathmandu
Nepal

Department for International Development
Renewable Natural Resources Research Strategy

Natural Resources Systems Programme
Forest – Agriculture Interface

Forestry Research Programme

Research Project R6918

Forest User Groups Forest Management Project [FFMP]^{1 2}

Final Technical Report

May 2001

Dept. of International and Rural Dev. (DIRD)
The University of Reading
Reading
United Kingdom

Livelihood and Forestry Programme (LFP)
P. O. Box 106
Kathmandu
Nepal

¹ Original title of the Research Project is 'Sustainable Natural Forest Management by Forest User Groups in The Middle Hills Region of Nepal'

² FFMP Team includes Dr. Y. Malla, P. Branney, H. Neupane, P. Tamrakar (till 1999)

Contents

Executive summary	3
1. Background	4
2. Project purpose	5
3. Research activities.....	5
3.1 Selection of participating FUGs.....	5
3.2 FUG action programmes	6
3.3 Socio-economic survey and follow-up.....	6
3.4 Forest resource assessment	7
3.5 Establishment of and monitoring of participatory forest management research sites	7
3.6 Feedback of information to FUGs	8
3.7 Analysis of forest resource information from research sites and comparison with participatory research.....	8
3.8 Development, implementation and monitoring of a participatory research process...	8
3.9 PAL process and a PAL methodology guidebook	9
3.10 Small-scale forest management guidebook	9
3.11 Training manual on PAL methodology	10
3.12 Workshops	10
3.13 Disseminate guidebooks and training manual.....	10
4. Outputs and comments	10
4.1 Output 1. Generic methodology for participatory action research (PAR) on natural forest management developed and documented.	11
4.2 Output 2. Understanding of the demand and supply relationships between FUGs and their forest resources, particularly in terms of appropriate silvicultural practices and resource potential to meet specific needs of all FUG members for forest products on the pilot sites improved.....	12
4.3 Output 3 Improved silvicultural guidebooks and PAR methodology as a means of promoting sustainable management and use of natural forest by FUGs recognised and disseminated.	13
4.4 Output 4: Training module based on PAL methodology developed, tested and finalised	13
4.5 Dissemination of research outputs	14
5. Contribution of Outputs.....	14
5.1 How will the outputs contribute to DFID's developmental goals?.....	14
5.2 The identified promotion pathways to target institutions and beneficiaries	14
5.3 What follow up action/research is necessary to promote the findings of the work to achieve their developmental benefit?.....	15
6. List of FFMP documents and publications	16
6.1 Discussion papers	16
6.2 Administrative Reports	17
6.3 Guidebooks	17
6.4 Training manual.....	17
6.5 MPhil Thesis.....	17
6.6 Other Publications and Reports	17

Executive summary

The project purpose is that: “*Regenerative ability and sustainable production capacity of natural forests on sloping land is established and surplus produce identified*”³. To achieve this purpose, the project has developed a mechanism for supporting forest user groups (FUGs) in Nepal to make better use of the productive capacity of their community forests with an emphasis on active forest management yielding increased supplies of forest products rather than passive or protection-oriented forest management as is commonly practised.

Research activities have been focused on two areas. Firstly, a clearer identification of what the productive capacity of community forest actually is, and how silvicultural interventions can be used to improve it. This showed that simple harvesting interventions can have a significant impact on sustainable forest product yields compared with the position in many non-active FUGs. Secondly, much of the work of the project has involved working closely with a few FUGs to develop a process where they can themselves improve their ability to be better forest managers (through learning by doing, or participatory action research) with particular emphasis on sustainable management - both in terms of yields of forest products, and institutional sustainability. This has involved a longitudinal study along with FUG members of their socio-economic and forest resource situation both to develop the process (which we have called participatory action learning or PAL) and monitor its impacts on forest productivity and institutional sustainability with particular emphasis on poor and disadvantaged members.

The project has achieved three outputs as specified in the original project proposal and the fourth, additional output, as agreed later between the University of Reading, DFID-FRP and the LFP, Kathmandu:

1. A generic methodology developed and documented for participatory action learning (PAL) in forest management
2. An improved understanding of the demand and supply relationships between FUGs and their forest resources particularly in terms of appropriate silvicultural practices and resource potential to meet specific needs of all FUG members for forest products
3. Dissemination of improved silvicultural guidebooks and PAR methodology as a means of promoting sustainable management and use of natural forests by FUGs.
4. A training manual for participatory action and learning in community forest management planning as a means to test and apply the FFMP results more widely in Nepal.

Community forests in Nepal form an important resource on which rural people's livelihoods depend - especially poorer people who are proportionately more dependent on these areas for their subsistence. There are now about 9,000 FUGs in Nepal with almost 1 million household members (about 5 million people). The project has developed a mechanism (PAL) which can be used to increase the flow of benefits for FUG member households (especially poorer households); address issues of awareness and equity within FUGs; and which directly contributes to long-term sustainable management of these community forests. The project has therefore contributed to tackling issues concerned with the livelihoods of some of the world's poorest people and has enhanced the capacity of the responsible agencies (Forestry Department) to respond to their requirements. The project outputs - particularly the action learning approach to working with FUGs and the emphasis on more productive use of forest have contributed significantly to the approaches being taken under the DFID Forests and Livelihoods Programme in Nepal

³ Project Logframe (1997)

1. Background

Trees and forest play an essential part in the livelihoods of rural people in Nepal. The community forestry programme has placed the responsibility for managing many of the most accessible forests in rural areas on forest user groups (FUGs) of which there are now about 9,000 made up of about 1 million households and covering an area of about 600,000 ha of forest. Community forestry has 2 main objectives - to conserve and improve degraded forest areas, and to bring greater benefits to rural communities - particularly the rural poor - through utilisation of the forests. In practice, it is now known that community forestry is effectively conserving forests⁴ since FUGs are able to protect their forests from most biotic pressures. However, it has become apparent that utilisation of forests has frequently been less than optimal - in many cases with access to forests for the purposes of harvesting products being completely restricted following handover of the areas to FUGs. Since poorer households lack tree resources on their private lands, they tend to be disproportionately disadvantaged by rules which do not permit them to use the community forest. In practice, they may then be forced to travel further to reach other forests which do not come under the protection of FUGs. Not only does this create a greater burden on them in terms of time and labour, but the result may be that more inaccessible forests become degraded at the expense of protected accessible community forest. It is thought that FUG rules may be dominated by richer village elites (and supported by Forestry Department officials) with the result that product supplies from community forests may be oriented towards the needs of the rich at the expense of the poor. For example, short term needs for subsistence products (such as fuelwood) may be limited through harvesting restrictions with the aim of building up a resource of saleable produce (such as timber) in the longer term. Again, this may actually lead to poor people being disadvantaged by community forestry, although the extent to which this inequity operates has not been quantified.

There are 2 major researchable issues contained within this complex social and natural resource management matrix. Firstly, how and why are poor people being disadvantaged through community forestry, and what can be done to address this? Secondly, how can community forests be more productively managed to meet the needs of all FUG members - not just the richer groups?

Although research in natural forest management (most community forests are natural forest) in Nepal has been underway since the mid-1980's^{5 6 7} it has generally received a lower priority than nursery and plantation oriented research in terms of funding and research effort. Where there have been useful research findings, these have rarely been translated or adapted for use by the actual forest managers - in this case the FUGs with the result that there is actually very little information and advice available to forest managers and Forestry Department field staff. Even though natural forest management research now has a higher profile in Nepal, it is questionable whether government research agencies will ever have the skills, resources or motivation to carry out relevant research in what is a complex of environmental and social diversity. In the meantime, there is a need to address the issue of community forest management without delay as so much forest is already under FUG control and so many people are now directly involved in their management.

⁴ Branney P. and Yadav K.P. (1998) Changes in community forest condition and management 1994-98: Analysis of information from the forest resource assessment study and socio-economic study in the Koshi Hills. Nepal-UK Community Forestry Project Report, DFID/HMGN.

⁵ Thompson I.A.S. 1986 A forest management research study in the broadleaf middle-hill forest of Nepal. Oxford Forestry Institute Occ. Paper. No. 30, Dept. Plant Sciences, Oxford.

⁶ Tamrakar P.R. 1992 Management systems for natural *Schima/Castanopsis* forests in the middle hills of Nepal. *Banko Janakari* 3(2) 3-11

⁷ Tamrakar P.R. 1994 Forest user groups in the Koshi Hills: A note on some silvicultural experiences. Nepal-UK Community Forestry Project, Kathmandu.

Although there have been a number of studies on equity and decision-making issues within FUGs⁸ which have shown that poor people do tend to lose out as a result of community forestry, it is not clear how this actually works, and what can be done both by the supporting Forestry Department and by the FUGs themselves to address this. It is well known that the FUG formation process is critical to ensure the inclusion of all households in drawing up rules and mechanisms for managing community forests. In practice however many FUGs have been hastily formed, and lack representation and involvement of disadvantaged groups as a result. There is therefore a large body of FUGs which are thought to be ineffective in their forest management, and where poorer people may be losing out through domination of the FUG by wealthier households. As yet it is not clear how these FUGs can be made into more effective and equitable institutions.

Demand for the project arose from various directions. The closing of the DFID-funded Forestry Research Project in Nepal in 1997 left a gap in natural forest management research, and also a need to continue with some of the approaches to participatory research which had been initiated towards the end of that project⁹ and which seemed to show some promising results¹⁰. Similarly, the Nepal-UK Community Forestry Project (also DFID - funded) appeared to be focusing more on social processes rather than forest resource management as a means to address issues of equity and poor people's livelihoods. This left a clear gap in the area of providing information and resources for FUGs to better manage their community forests.

2. Project purpose

The project purpose is "*Regenerative ability and sustainable production capacity of natural forests on sloping land is established and surplus produce identified*"¹¹. This was developed from the FRP logframe in 1997 at the start of the project. Although the wording of the purpose emphasises the sustainable production capacity of the forest, the emphasis on sustainability has been from the start seen as also including institutional sustainability i.e. that of the FUG. Without the FUG being seen to meet the needs of all its members (especially those of the poorest) this institutional sustainability cannot be said to have been achieved. Better information about the sustainable production capacity of natural forests in Nepal has been achieved by the project - information which relates directly to the community forestry situation rather than controlled research sites using conventional research methodologies..

The project purpose therefore brings together the social and technical resource management issues relating to community forestry and tries to achieve it through outputs combining detailed information and data collection, and development of a participatory process involving FUG members which can be replicated more widely by projects and Forestry Department Staff.

3. Research activities

3.1 Selection of participating FUGs

Considerable effort was initially put into the selection of FUGs to be involved with the project. In retrospect, although some of the selection criteria such as household numbers, approximate forest size and accessibility were useful others such as forest type and forest condition were less so, simply because of the great diversity even within a relatively small community forest and because of the inaccuracy of available information. Willingness of

⁸ Graner E. 1997 The political ecology of community forestry in Nepal. Freiburg Studies in Development Geography 14, Saarbrücken.

⁹ Stewart N., Branney P and Acharya K 1996. Action research: Towards a more participatory approach to forestry research in Nepal. Nepal-UK Forestry Research Project, Kathmandu

¹⁰ DFID 1998. Action research for community forestry. Sharing experiences from Nepal. DFID, London.

¹¹ Project logframe (1997)

FUGs to become involved in the participatory process, and similarity in terms of distance from a road (or district centre) were more important in terms of drawing conclusions about the project findings.

The level of inputs required to carry out the baselines and support the PAL process were such that it was found to be unrealistic to work with too many FUGs. In practice, in depth analytical studies were thought to be of more use than short visits leading to broad generalisations. This led to the final selection of 3 “active” FUGs where the whole PAL process was supported and a single “control” FUG for comparison. A different type of control for forest management purposes was the sites already being managed by the Forest Research Division under different silvicultural systems. These were not selected (they were already in existence), but quantitative information from 3 sites has been used to compile the single tree biomass tables and to compare with the yield information from the action research sites.

3.2 FUG action programmes

An important element of the PAL process has been the development of action programmes by the FUGs based on analysis of information from various sources (household surveys; forest resource assessment; participatory planning exercises by FUG members). This action programme then becomes the basis for external support to the FUG, and in the case of the participating FUGs in each case included the establishment of action research plots to look at different silvicultural options.

3.3 Socio-economic survey and follow-up

A detailed socio-economic study (baseline study) was carried out towards the start of the project during 1997-98. This involved a household survey of 128 households in four FUGs in Parbat and Myagdi Districts. The 4 FUGs were selected on the basis that they were similar in terms of household numbers, forest area, forest type, date of formation and accessibility. In practice this was difficult because of the inherent variability of FUGs, and database information - particularly on forest type - which was available at the start of the project from NUKCFP was not accurate.

Within FUGs, about 30% of all households were selected for interview. The sampling methodology used was stratified random sampling with 4 wealth categories being used to identify the strata. The allocation of households to wealth categories and the identification of the categories themselves was through a participatory process involving the members of the concerned FUGs. The household lists from FUG operational plans formed the population from which samples were selected.

The survey consisted of a structured questionnaire which gave plenty of opportunity for households members to respond and elaborate on their responses. The questionnaire was tested with a few households before the final format was agreed. Areas covered in the survey included: household size and occupations of members; agriculture practices; livestock holdings; fodder supplies; trees on private land; energy sources; use of wood; use of other forest products; knowledge of community forestry policy and the FUG institution and rules. A short validation survey was undertaken after the initial baseline survey to ensure that the responses being given were consistent.

The purpose of the survey was 2-fold. Firstly to provide a baseline against which any changes as a result of participatory action research could be assessed and secondly, to identify issues relating particularly to forest product needs and supplies (with reference to equity within the FUG) which could become the focus of better forest management planning by the FUG.

The analysis of baseline survey information was primarily done by the project research assistant and used as the basis for an MPhil dissertation¹². The socio-economic data were analysed using the SPSS programme with additional support being provided by the Department of Applied statistics at the University of Reading.

A follow-up survey was conducted in the field during 2000 where the same households were interviewed with a simpler questionnaire focusing on a more limited range of issues which it was thought may have altered during the short time period. In terms of a baseline plus a follow-up to measure impact it is recognised that to identify any significant socio-economic changes and to attribute them to the project's involvement in a participatory action learning process would be very optimistic given that there was only about 2 years between surveys.

In order to evaluate the effectiveness of the participatory action learning process, one of the 4 FUGs was treated as a "control" insofar as there was no further involvement with this FUG after the baseline survey had been completed until the follow-up survey. It was recognised that statistically this could not be used as a means of any comparison of with and without participatory action research, but it was felt that a control of this nature would at least enable differences to be qualitatively observed. Since the presence of the researcher for data collection also acted as a facilitator for discussion and change within the FUG "without research" control was not thought to be feasible. Simply by being in the village for extended time periods, the researcher had impact (and was being requested by the FUG to make certain inputs) so the position of an impartial observer was not possible to achieve.

3.4 Forest resource assessment

A participatory forest resource assessment was also carried out during the same time period as the socio-economic baseline. This was not designed as a forest inventory in the conventional sense (since it was not felt that this was needed at this stage), but was aimed at involving the FUG members more closely in an assessment of their forest condition and its associated problems and potentials so that action planning during the action research process could be focused more on a real assessment of the forest resource condition rather than as has happened in the past, a very superficial one.

Note that prior to the establishment of action research plots, and after their implementation, a much more detailed assessment of the plots (before and after harvesting) was carried out, as well as the establishment and measurement of plots laid out in areas selected by FUG for harvest.

3.5 Establishment of and monitoring of participatory forest management research sites

Each of the participating FUGs agreed in their action programmes to establish research "plots". These were used to test, demonstrate and provide information about different options for harvesting forest products. Not only did these yield useful information which has been compared with conventional research sites and existing "thumb rules"¹³ they have invariably provided the necessary stimulus for the FUG to become more interested and active in their forest management efforts - this is partly because they form a good demonstration of the impact of different options, but also because they create confidence (both within the FUG and amongst supporting Forestry Department staff) to become more

¹² Neupane H.R. (2000) *Factors that influence poorer households' access to forest products from community forests: an analysis of forest management and benefit sharing processes*. H.R. Neupane, December 2000. MPhil dissertation submitted to Dept. of Agricultural Extension and Rural Development, The University of Reading

¹³ FFMP (2000a) Biomass tables in community forest management: Bringing together traditional and participatory research. FFMP Discussion Paper No. 3, February 2000

pro-active in forest management. A discussion paper¹⁴ has been prepared to try to analyse this.

As with the household survey, an important part of the participatory research process has been in the feedback of information from these plots back to FUG members.

3.6 Feedback of information to FUGs

Another essential element to the PAL process has been the feedback of information to FUG members in a way which they can readily understand - something which is frequently missing from many participatory processes. Some new techniques for doing this using simple spreadsheet software have been developed¹⁵

3.7 Analysis of forest resource information from research sites and comparison with participatory research.

At the start of the project, it was felt that there was a considerable body of information available from research sites in areas of natural forest not under any FUG management which could be used to develop a better picture of the potential of such forests under community management. Most of these sites originated from natural forest management research initiated under the old Nepal-UK Forestry Research Project which ended in 1987. Since several of the research sites in *Schima-Castanopsis* forest were unlikely to continue to get support from government sources, rather than lose the information from these sites it was planned to maintain them for a further year on the understanding that at the end of this period before the sites were abandoned, some whole tree harvesting would be carried out to produce information on single tree biomass which would be of use for FUG management of community forest. These data would be combined with historical data also from the conventional forest management research sites to make use of a large data set which had not been previously used and analysed to compile biomass tables.

The information was collected and analysed as planned, and was compiled as a discussion paper published by the Department of Forest Research and Survey with support from other project team members¹⁶. Subsequent comparison of this conventional research data (single tree biomass tables) with that being obtained from participatory research plots situated actually within community forests (see Establishment of and monitoring of participatory forest management research sites, below) was done to see how effectively these could be used in the community forest management situation. This analysis was produced as a discussion paper¹⁷. The conclusion that in practice these biomass tables for various reasons had only very limited applicability under actual community forestry conditions and the departure from the project of the national consultant on forest management meant that further work in this area was no longer considered a priority.

3.8 Development, implementation and monitoring of a participatory research process

A participatory research process has been slowly developed and refined during the period of the project. This has been driven by the research assistant in the field with support and inputs from other project team members.

There has been some rethinking with regard to definitions. The whole process starting from scratch and working with the FUG to support it in becoming a more effective institution for sustainable forest management is now being referred to as Participatory Action and

¹⁴ FFMP (2001c) Participatory action learning by FUGs: What has been the impact? FFMP Discussion Paper No. 9 January 2001

¹⁵ FFMP (2000c) Sharing and reflection of quantitative information with community forest users. FFMP Discussion Paper No. 5 February 2000

¹⁶ Tamrakar P.R. (1999) Biomass tables for *Schima-Castanopsis* forests. Discussion paper No. 1, Dept. of Forest Research and Survey Forest Research Division, Kathmandu, Nepal

¹⁷ FFMP (2000a) Biomass tables in community forest management: Bringing together traditional and participatory research. FFMP Discussion Paper No. 3, February 2000

Learning (PAL). This lengthy process is essentially aimed at providing enough impetus for the FUG to function more effectively in meeting the needs of its members and has been defined in 4 main stages with a series of detailed steps in each. The 4 stages are closely linked with the “learning cycle” as conventionally understood. Within the PAL process there is normally a strong element of experimentation by FUG - especially in forest resource harvesting systems which seem to lend themselves well to this type of approach. This is now referred to as participatory action research (PAR).

Allowing FUGs to identify and define the issues and supporting them in implementing actions aimed at addressing them through a self-learning or action research process has invariably resulted in a widening of the “action agenda” where actions to address forest management issues are normally only part of a wider spectrum of actions aimed at addressing issues such as limited involvement of women and disadvantaged groups, and domination of FUG decision making by village elites. In order to avoid approaching FUGs with a preconceived agenda which focuses only on forest management research, the Project has supported a diversity of problem areas which have been tackled by FUGs. The question of whether this then is actually research, or whether it is a more effective extension methodology has been raised and discussed¹⁸, but it is an important overall conclusion for the project that if PAL is to be effective, then it cannot confine itself to simple, researchable issues, but that the FUG itself needs to be actively involved in defining what these are, and that this may not neatly fit with the agenda of a particular researcher. In effect, research into forest management by the FUG cannot be taken in isolation from other issues and constraints.

3.9 PAL process and a PAL methodology guidebook

Impacts of the PAL process have been analysed - both through the follow up socio-economic survey and through the inputs of an independent review¹⁹. Based on these, a set of guidebooks have been developed which describe on a step by step basis how to support PAL amongst FUGs. It is intended that these should be in a simple form to enable them to be used by field staff of the Forest Department, NGOs and possibly by locally recruited animators. Translation of these and final production and dissemination in Nepal is still underway.

3.10 Small-scale forest management guidebook

As with the PAR process, there has been some re-thinking of the type of supporting document required. Whilst the original intention was to produce guidebooks which would assist FUGs in managing their community forests, this has been slightly altered to reflect the need to emphasise that the information being presented in such guidebooks should originate from FUGs themselves rather than from researchers, academics, or government foresters. It is clear that in many FUGs there are innovative and potentially useful ideas being implemented and tested, but these are not widely known to other FUGs. A synthesis of these would create a body of information which would be an input into the PAL process providing FUGs with “options” which they could test through PAR, rather than making prescriptions which they should follow. This approach was outlined with the proposal to now to prepare a document entitled “Innovative forestry: A synthesis of small-scale forest management practice from Nepal”²⁰

This modified approach has been implemented in four main steps. Firstly, a review of secondary literature (especially non-published or project literature from Nepal) which was done in the form of a series of completed formats. Secondly, by holding a workshop (in

¹⁸ Branney P. and Hopley M. (2000) 'Participatory research' – is this research?. In: *Forests in sustainable mountain development: a state-of-knowledge report for 2000* eds Price M and Butt N.; IUFRO Research Series 5, pp 479-486, CABI Publishing, Oxford.

¹⁹ FFMP (2000d) An Independent Review of the Forest User Groups Forest Management Project's Field Work. FFMP Discussion Paper No. 6 October 2000

²⁰ FFMP (1999b) Framework and plan for: *Guidelines for small-scale forest management - a synthesis of best practice from Nepal*. FFMP Discussion Paper No. 2, March 1999

August 1999) to solicit contributions from a wider group of individuals working in community forestry in Nepal and thirdly by carrying out field studies to identify examples of “best practice” in FUG forest management over a range of forest and site conditions. All these steps were completed during the project period and the final step of compiling the document based on the information is still underway.

3.11 Training manual on PAL methodology

In addition to the two supporting documents (PAL methodology and small-scale forest management guidebooks), a 10 day training module on PAL methodology has been developed. A draft 5 day training module on the PAL methodology was first prepared with the help of a training consultant and then translated into Nepali in Reading. The field testing of the manual with a selected group of forestry field staffs was then done by a national Nepali NGO, ForestAction, while the FFMP Co-ordinator and the training consultant observed the use of the training module in each training session, taking notes to improve the module. Prior to the field-testing, an orientation on PAL methodology and use of the training module was organised for the ForestAction team members - the trainers. The final version of the training manual incorporates the feedback from the trainees and trainers and the observations made by the training consultant and FFMP Co-ordinator. A detailed account of this is provided in a FFMP discussion paper.²¹

3.12 Workshops

A number of workshops have been conducted during the project period. Firstly, during 1999 the project was represented at a workshop organised by NUKCFP to present and discuss a series of ongoing collaborative research projects. This was an important event for communicating with NUKCFP as the project partner and with other - closely linked projects being conducted by ODI and the University of Leeds. Secondly, the forest management workshop was held to discuss the information requirements for the “Small-scale forest management” document involving a range of participants from other projects and the Forestry Department. Finally, a series of 2 end of project workshops were held in January 2001 to present the Project findings more widely and to discuss the implications. The first of these was held in Godaveri (near Kathmandu) for senior forestry officers, project representatives and donors and the second held in Baglung for Forestry Department and FUG representatives from within the project area. The workshops have been documented.²²

3.13 Disseminate guidebooks and training manual

The guidebooks and training manual are still in process of preparation. Arrangements are in place for their translation and dissemination on completion.

4. Outputs and comments

The research results and products achieved by the project. Were all the anticipated outputs achieved and if not, what were the reasons? Research results should be presented as tables, graphs or sketches rather than lengthy writing and provided in as quantitative form as far as possible.

Project outputs have been documented during the project period in a series of discussion papers. This section is therefore intended as a summary, and the original documents (particularly the discussion papers) should be referred to for further information. Outputs are discussed in the form they appear in the project document on 1997.

²¹ FFMP (2001e) A report on the development and testing of a training module based on the FFMP findings (May 2001). FFMP Discussion Paper No. 11, May 2001.

²² FFMP (2001a) Project Workshop Proceedings: Godaveri and Baglung (January 2001). FFMP Discussion Paper No. 7 January 2001

4.1 Output 1. Generic methodology for participatory action research (PAR) on natural forest management developed and documented.

Comment

This output has been achieved. The methodology is described in the document “Participatory action and learning: a field worker’s guidebook for supporting community forest management planning”²³. The diagram below shows the overall process, although note that there have been some changes in terminology (as described in activity 4.8 above). The methodology developed has been based around the 4-stage learning cycle working on the principle that learning by doing is an effective means for FUGs to learn new techniques and practices. Within each stage of the learning cycle are a number of discreet steps, which need to be facilitated or supported.

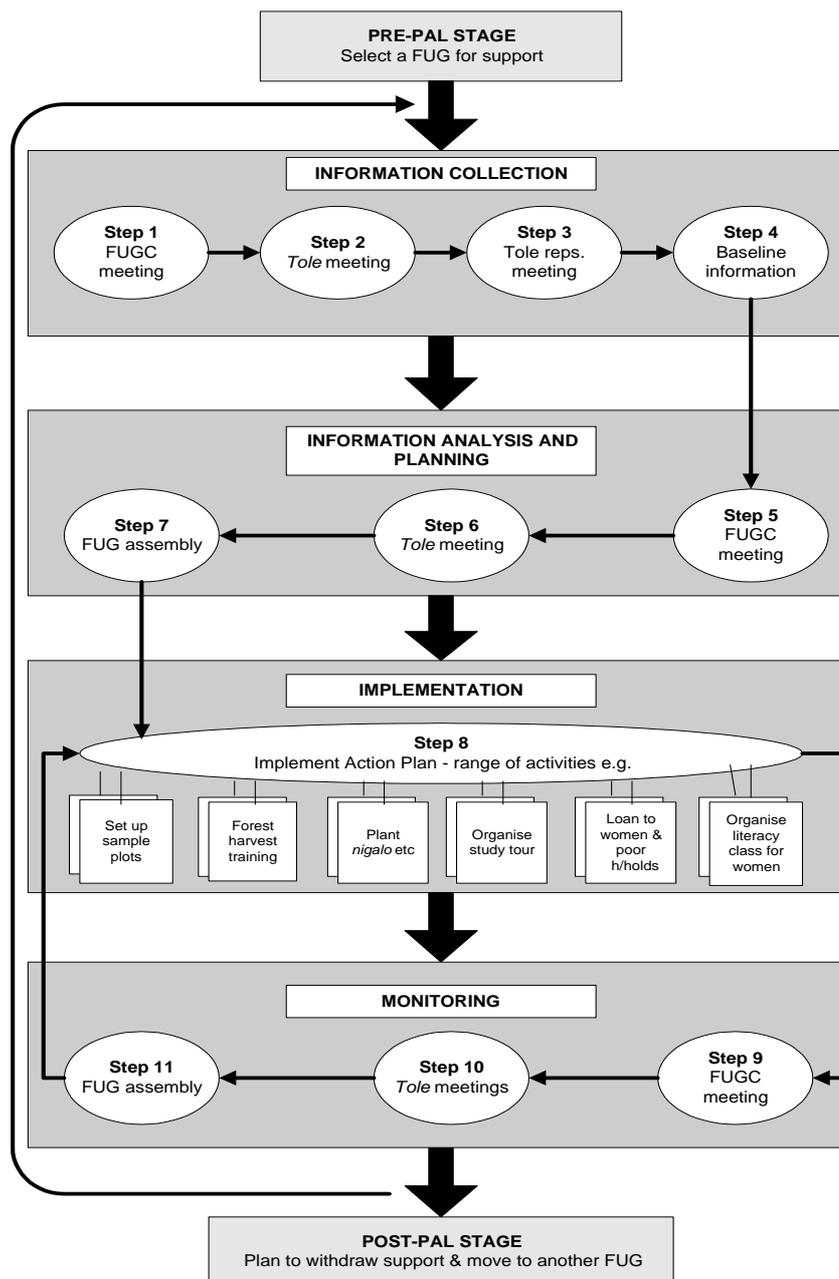


Figure 1 - The PAL process

²³ Malla Y.B., Branney P., Neupane H R., and Tamrakar P.R., (2001f) *Participatory action and learning. A field worker’s guidebook for supporting community forest management planning*. FFMP Kathmandu and Reading

4.2 Output 2. Understanding of the demand and supply relationships between FUGs and their forest resources, particularly in terms of appropriate silvicultural practices and resource potential to meet specific needs of all FUG members for forest products on the pilot sites improved.

Comment

The information included in various reports and particularly in the FFMP discussion papers have contributed to a better understanding of the relationships between FUGs and their forest resources. A summary of some of the most significant findings includes:

- Information from research sites that have been controlled and managed by outside research organisation has limited applicability for the management of community forests by FUGs. The information from such research sites has been based on small-uniform sites; different levels of control over forest management activities; different silvicultural systems from those which are acceptable in community forest situations (for example starting from clear felling); and from forest types and conditions which are non-typical of much community forest.
- Single tree volume tables (originating from controlled research sites) can be used for the purposes of standing volume/biomass estimations in community forest but miscellaneous spp. tables tend to give a better “fit” than single species tables which invariably over-estimate growing stock.
- For participating FUGs (assumed to be representative of FUGs as a whole) only a small proportion of forest product requirements (e.g. ranging from 1-37% of fuelwood needs) were being met from the community forest²⁴
- In all cases, action research plots showed that there was significant potential for increasing the supply of forest products through simple silvicultural interventions carried out in a systematic way. Table 1 summarises the situation with 4 FUGs. Note that as the level of harvest increases, then the actual area being harvested annually is reduced to take into account the need for a longer harvesting cycle. The actual harvesting operation in all these FUGs involves a combination of coppicing/singling and thinning.

	Current supply %	Modest harvest %	Active harvest %
Bhirpani	11%	49%	73%
Jamale chisapani	32%	39%	70%
Khotgairo sattale	1%	107%	89%
Jyamire satbise	36%	n/a	n/a

- Within the FUGs, another set of issues relates to the differences between households (wealthier and poorer) in the consumption and supply of forest products. Overall there appears to be little difference in total consumption of fuelwood, but poorer households are more dependent on the community forest (having less private land resources) than richer households. Whilst more active harvesting may increase the overall production from the community forest, since most FUGs still distribute products equally between households richer households tend to benefit more - in some cases they may be getting fuelwood which they never used to collect from the closest forest because it was not

²⁴ FFMP (2000b) Supply and demand relationships in community forests. FFMP Discussion Paper No. 4 March 2000

²⁵ FFMP (2001a) Project Workshop Proceedings: Godaverri and Baglung (January 2001). FFMP Discussion Paper No. 7 January 2001

needed whilst poorer households continue to have to make up their requirements from other, more distant forests. Distribution systems for other products such as timber and leaf litter also tend to favour poorer over richer households (for example poorer households cannot afford to pay for timber; richer households while purchasing timber from the FUG get in addition the branchwood from the felled trees; while leaf litter is often freely available for all households, it is in less demand by poorer households since they have less land to fertilise).

- Action research - or the PAL process more generally, does appear to be having a positive impact on both these issues (a) by increasing the level of activity of FUGs on productive forest management and (b) by highlighting issues concerning equity and by stimulating FUGs to consider ways of increasing the benefits which poorer households can get either directly or indirectly from the community forest. This is closely connected with the effect which the overall PAL process appears to have on levels of participation and awareness - especially of poorer and disadvantaged groups.

To summarise, action research does appear to offer significant potential for FUGs to manage their forests more productively, and to function better as sustainable and equitable local institutions. However participatory research cannot be “delivered” by outside researchers. It has to be integrated into a support programme involving better information gathering and analysis; better and more equitable forest management planning; and encouragement for FUGs to learn through doing and to be flexible and innovative in their forest management.

4.3 Output 3 Improved silvicultural guidebooks and PAR methodology as a means of promoting sustainable management and use of natural forest by FUGs recognised and disseminated.

Comment

This output concerns 2 guidebooks. Firstly the silvicultural guidebooks (now renamed as *Innovative forestry: A synthesis of small-scale forest management practice from Nepal*²⁶). The demand for this type of material is increasingly becoming apparent as an essential adjunct to field level support for “inactive” FUGs by the Forest Department or by NGOs. Information for the guidebooks has been gathered, and the process of completing them is still underway. This has proven to be a more complicated and time consuming activity than had been originally planned because of the large quantity of information available and the importance of synthesising it into a user-friendly format. However, it is anticipated that this will be shortly completed. The main cause of delay with both these documents was that work on their production could not begin until towards the end of the project due to the need to include in them information from the various field level activities which were taking place. On completion, both of these will be distributed in Nepal.

The second set of guidebooks is *Participatory action and learning: A field worker's guidebook for supporting community forest management planning*, as referred to earlier. This is now complete, and is in the process of being translated in Nepali.

4.4 Output 4: Training module based on PAL methodology developed, tested and finalised

Comment

Often research results are written in a language and form that is understandable to the similar professional and research background, but not to the frontline field staff and

²⁶ Branney, P., Malla, Y., Bhattarai, B., Tamrakar, P. R. and Neupane, H. R. (2001h) *Innovative forestry: A synthesis of small-scale forest management practice from Nepal* (Draft). FFMP, Kathmandu and Reading.

villagers, who are actually responsible for the application of research results in day to day forest management activities. The impact and usefulness of the two guidebooks will be known only if they are applied in the field. It is therefore important that these guidebooks, especially the PAL methodology, are incorporated into the training programme for field staff. As a part of the FFMP result dissemination, a training module based on PAL methodology has been developed and finalised after testing it in a training programme with a selected group of the frontline staff²⁷. This facilitated the process of assessing the usefulness of research results to the field staffs. However, the conversion of research results into a training module that is simple and easy to understand by both the trainees and trainers proved to be quite a complex exercise than was perceived originally.

4.5 Dissemination of research outputs

Dissemination of project outputs has already been through various means.

- A series of FFMP discussion papers (numbers 1-11) which have been widely distributed - mostly in Nepal. They have been generally well received, although there has been very little direct feedback on them except for that from NUKCFP
- A series of workshops with which the project has been involved including an "Experience sharing" workshop organised by NUKCFP in 1999; a forest management workshop organised jointly between FFMP and NUKCFP in 1999; and 2 end of project workshops held in January 2001 to present and discuss project findings. These workshops have been a good opportunity to get feedback from Government (especially the Forest Department) from projects (including NUKCFP) and from other research projects and researchers (particularly those also collaborating with NUKCFP).
- A 5 day training programme was organised for the Forest Department field staff and LFP local animators on the PAL methodology.

Some other publications have been completed, or are in preparation. A list is given at the end of this document.

5. Contribution of Outputs

5.1 How will the outputs contribute to DFID's developmental goals?

The DFID Nepal country strategy (1998) specifically identifies an objective of seeking to "enhance the contribution of community forestry management to sustainable rural livelihoods, building on the successes of the existing community forestry project...". The outputs of FFMP will (and already are) contributing directly to this objective. The potential for greater production from community forests leading to a greater level of livelihood benefits and equity for the large numbers of rural people who are now members of FUGs have been highlighted by the project. Not only has FFMP identified (and quantified) some of the problems (e.g. low utilisation of productive forest potential; inequity in forest product distribution), the project has also developed a methodology which appears to be able to address them. Clearly this needs further testing in a greater range of situations, and an increased emphasis on skills development for supporting staff to deliver this methodology, but it is encouraging that the underlying ideas have been well received and have been integrated into DFID's new Livelihoods and Forestry Programme.

5.2 The identified promotion pathways to target institutions and beneficiaries

The main direct beneficiaries of the project are the Forest Department and a range of projects in Nepal supporting the community forestry programme. Essentially the outputs of

²⁷ Malla, Y., Branney, P., Norris, K. M., Dangal, S. P. and Paudel, K. P. (2001g) Participatory action and learning: training manual. FFMP Kathmandu and Reading

FFMP will enable them to make community forestry more effective - thereby having greater benefits for rural people in Nepal.

The immediate actions are:

- To complete the FFMP documentation - particularly the 2 guidebooks. Both these are well underway. Translation of the first document is already taking place, after which it will be distributed in Nepal
- 2 dissemination workshops have already been held. These have to some extent created a demand for more inputs which cannot be met under the existing project e.g. for training inputs at IOF.
- Training material preparation (with DFID/FRP funding) is already underway. This will be used to train trainers (in April 2001) who will then be in a good position to respond to demands from other projects for further training of this type (particularly forest guards and locally recruited animators)
- Opportunities are still being sought for further publications - these will be followed up over time.
- There is interest in the participatory research approach in the forestry sector from other countries (particularly India). This has led to the idea of a follow-on project to introduce some of the learning and ideas on participatory research to Indian Forestry research institutions (especially at state level). This will also be pursued.

5.3 What follow up action/research is necessary to promote the findings of the work to achieve their developmental benefit?

The new DFID-supported Livelihoods and Forestry Programme (LFP) is ready to start in Nepal succeeding the NUKCFP which ended after extension in 2001. Fortunately, one of the FFMP team members (Branney) was also closely involved as part of the LFP design team during 2000. This created an opportunity to feed some of the research findings directly into the new project with a view to achieving greater developmental impact since the new project will be covering 13 districts in Nepal (including 2 in the Terai). In effect, therefore some of the necessary follow-up action is already underway. LFP's recent support for training in the PAL methodology and the positive responses received from participants in the two end of project workshops²⁸ (FFMP 2001a) are both indications that the project has achieved findings which are valued and which will be further developed.

With reference to the new DFID programme in Nepal, of particular importance are:

- The greater emphasis which will now be placed on supporting more "active" forest management by FUGs in the new project. FFMP has successfully identified that there is considerable potential for achieving this and has quantified the extent of the problem²⁹ (FFMP, 2000b)
- The use of action research to identify simple silvicultural techniques and means of providing greater benefits to the poor, women and disadvantaged members of FUGs.

FFMP has provided some important information and has developed a methodology, which will support both these new approaches.

In order to implement the PAL methodology more widely training of field-level facilitators (either Forestry Department staff, NGO staff, or locally recruited animators) is required. With additional funding from DFID under FRP and with some support from LFP, the FFMP team are currently engaged in developing a training module and will pilot this with a group of participants and trained trainers in April 2001. Clearly a much greater level of training

²⁸ FFMP (2001a) Project Workshop Proceedings: Godaveri and Baglung (January 2001). FFMP Discussion Paper No. 7 January 2001

²⁹ FFMP (2000b) Supply and demand relationships in community forests. FFMP Discussion Paper No. 4 March 2000

will be required in order for the approach to be more widely applied. It is hoped that the trained trainers will be able to use their newly acquired skills to meet the needs of LFP and other projects in the future - clearly there is a demand for this type of training combining technical and social skills.

The Institute of Forestry (IOF) in Pokhara has specifically requested inputs by the project staff in their training programme. IOF is responsible for in-country training of foresters at diploma, graduate and post-graduate level, and it the involvement of FFMP in such training would represent an opportunity to institutionalise the ideas and approaches developed. Currently however no resources are available for this to happen.

Within Nepal, there is much scope for wider testing of the action learning/action research approach. It has been developed in a limited physical environment and covering a limited range of research activities. Wider impact would be achieved if it could be extended to cover a greater socio-environmental range of situations and other types of activity such as NTFP management; plantation establishment; and with greater emphasis on other products such as resins, fibre (for paper), herbs and fodder products.

Existing participating FUGs have been implementing the approach for less than 3 years in all cases (effectively 2 harvesting seasons after the start of FFMP activities). At this stage it is still not easy to determine overall impact and longer-term monitoring with these FUGs would lead to a better understanding of the impacts of the approach and its sustainability. There has been considerable demand from both the FUGs concerned, and from Forestry Department staff in these districts to continue to work with these and further FUGs.

Outside of Nepal there are many places where a participatory research approach may have some application, but where it has yet to be tried. Of immediate interest and relevance would be the Joint Forest Management projects in many Indian states, but particularly those in the Himalayan regions (Uttaranchal and Himachal Pradesh). Forestry research is much more active in both these states through the respective Forest Departments, although experiences with participatory research are almost non-existent.

6. List of FFMP documents and publications

6.1 Discussion papers

FFMP (1999a) The Participatory Action Research Process. FFMP Discussion Paper No. 1, March 1999

FFMP (1999b) Framework and plan for: *Guidebooks for small-scale forest management - a synthesis of best practice from Nepal*. FFMP Discussion Paper No. 2, March 1999

FFMP (2000a) Biomass tables in community forest management: Bringing together traditional and participatory research. FFMP Discussion Paper No. 3, February 2000

FFMP (2000b) Supply and demand relationships in community forests. FFMP Discussion Paper No. 4 March 2000

FFMP (2000c) Sharing and reflection of quantitative information with community forest users. FFMP Discussion Paper No. 5 February 2000

FFMP (2000d) An Independent Review of the Forest User Groups Forest Management Project's Field Work. FFMP Discussion Paper No. 6 October 2000

FFMP (2001a) Project Workshop Proceedings: Godaveri and Baglung (January 2001).
FFMP Discussion Paper No. 7 January 2001

FFMP (2001b) Why poor people aren't benefiting from community forestry: findings of the baseline study. FFMP Discussion Paper No. 8 January 2001

FFMP (2001c) Participatory action learning by FUGs: What has been the impact? FFMP Discussion Paper No. 9 January 2001

FFMP (2001d) Learning by doing: Participatory research with forest user groups in Nepal. Discussion Paper No. 10 January 2001

FFMP (2001e) A report on the development and testing of training module based on the FFMP findings by K. M. Norris. Discussion Paper No. 11, May 2001.

6.2 Administrative Reports

Forest User Groups Forest Management Project. Start-Up Report. September 1997

Forest User Groups Forest Management Project Progress Report March 1998

Forest User Groups Forest Management Project. Position Paper And Annual Work Programme 1998-99

Forest User Groups Forest Management Project. Progress Report, January 1999

Forest User Groups Forest Management Project. Visit Report, March 1999

6.3 Guidebooks

Malla Y.B., Branney P., Neupane H.R., and Tamrakar P.R., (2001f) *Participatory action and learning. A field worker's guidebook for supporting community forest management planning*. FFMP Kathmandu and Reading.

Branney P., Malla Y.B., Bhattarai B., Tamrakar P.R., and Neupane H.R. (2001h) *Innovative forestry: A synthesis of small-scale forest management practice from Nepal (Draft)*. FFMP, Kathmandu and Reading.

6.4 Training manual

Malla, Y. B., Branney, P., Norris, K. M., Dangal, S. P. and Paudel, K. P. (2001g) *Participatory action and learning: Training manual*. FFMP Kathmandu and Reading.

6.5 MPhil Thesis

Neupane H.R. (2000) *Factors that influence poorer households' access to forest products from community forests: an analysis of forest management and benefit sharing processes*. H.R. Neupane, December 2000. MPhil dissertation submitted to Dept. of Agricultural Extension and Rural Development, The University of Reading

6.6 Other Publications and Reports

Tamrakar P.R. (1999) Biomass tables for *Schima-Castanopsis* forests. Discussion paper No. 1, Dept. of Forest Research and Survey Forest Research Division, Kathmandu, Nepal.

FFMP (1999) Forest User Groups Forest Management Project (FFMP). European Tropical Forestry Research Network (ETFRN) Newsletter 1999.

Malla Y.B. (2000) Impact of community forestry policy on rural livelihoods and food security in Nepal *Unasyuva* 202 Vol 51 2000/3 pp 37-45

Branney P., Malla Y.B., and Neupane H.R. (2000) Learning by doing: Participatory research with forest user groups in Nepal. In *Forestry, Forest Users and Research*. (Anna Lawrence ed.) European Tropical Forest Research Network (ETFRN). Wageningen, The Netherlands.

Malla Y.B, Branney P. and Neupane H.R. (in press) Why poor people aren't benefiting more from community forestry: A participatory research study. ODI Rural development forestry network, London