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DATA TOOLS

PARTICIPATORY RURAL APPRAISAL TECHNIQUES

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Data tools: Participatory Rural Appraisal Techniques

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FOREWORD

Participatory Rural Appraisal (PRA) impregnates various participatory approaches and methods that enables a development based on local knowledge. Such an approach enunciates appraisal, analysis and decision making by local people themselves for the development process which in turn benefits them or their community as such. The purpose of PRA is equitable and inclusive development in which the participant receives benefits as according to the development pattern designed by them. Hence the responsibility of sustaining the benefits rests with the participant and the success rate of such inclusive development pattern is significant for obvious reasons.

The development professionals at Rajiv Gandhi Chair has developed and conducted a PRA. 'Data Tools: Participatory Rural Appraisal Techniques' is primarily the product of an implementation process of that PRA Tool. The field test was carried out in Assamannoor Panchayat, Odakali region of Kalady in Ernakulam District. The data tools developed for appraising rural environment through participatory mode is well embedded within its context. The tools are found to be responsive to the participants' needs. It has incorporated lessons from previous experiences, at the same time do not duplicate with other activities. Field personnel have facilitated the data collection and analysis undertaken by local people. This facilitation has also functioned as a common platform for shared learning between local people and development professional. The managers of the tool have encouraged creative suggestions from local people in improving the tool and also motivated the field personnel in learning from field specific application of PRA.

The present publication has incorporated all the new knowledge, especially field specific that has been received from the village-based study. The insights have been tremendous and add significantly to the theoretical knowledge of PRA.

I wish to express my appreciation for the sincere efforts taken by Dr. Sindhu Sadanandan, Dr. P.Natarajan, Dr. Jose Antony, and Dr. Vipinkumar.V.P for bringing out this excellent publication.

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PREFACE

Participation implies involving local people in the development of plans and activities designed for their welfare. In it's advanced form, participation is a continuous process of negotiation and decision making which occurs at various levels and with the whole community of stakeholders. This could be achieved through various participatory methods including participatory rural appraisal techniques (PRA), participatory learning and action (PLA), participatory action research (PAR), participatory technology development (PTD), and farmer field school (FFS). Among these, PRA has become more popular among field practitioners, development researchers and other professionals since it functions as an effective medium to involve local people in the decision making, research and development processes.

PRA was first used in the late 1980s. Since then it became widely used in many contexts including, community development, indigenous technology assessment, livelihood enhancement and other development initiatives. The importance of PRA lies in its uniqueness in adapting to local situations. The tools developed in the present context have been applied in a selected village in Kerala. The outcome of such an experiment is worth emulative for estimating rural peculiarities related to agriculture, fisheries, livestock and other livelihood options of rural population. The expectation from writing this book would be fulfilled if many of our volunteers of rural development, engaged in policy-making, action and research can realize that participation of rural people is possible and beneficial. They can further spread the message of participation from their own experiences.

The authors are greatly thankful to the Ministry of Human Resources Development (MHRD), Govt. Of India for providing necessary grant to bring out this valuable contribution. The authors also express their profound gratitude to Prof. (Dr.) P.K.Abdul Azis, Vice-Chancellor, Cochin University of Science and Technology for his constant encouragement, advice and support.

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INTRODUCTION

Institutions of all types have long been relied on questionnaire surveys and quick rural visits to gather information on rural people and rural resources. Samples of people selected from a large population are asked the same set of questions, and so it is assumed that the interviewers do not influence the process. Many informants are selected to account for all variations, and the requesting data are statistically analyzed. Surely these survey methods are generally accepted for data collection and are used.

But there are problems with questionnaire surveys. The questionnaire maker has to determine the questions well in advance. Yet those who design these instruments may not know which issues are important for local people. So they tend to increase the number of questions to ensure that all relevant issues are covered. This leads to forms of absurd length, with several hundred questions consuming hours to administer. In the structured survey, the ill trained enumerator further influences the process by prompting with answers. In a questionnaire survey, people are the objects of enquiry or investigation and are treated as passive entities. They have no involvement in the enquiry going on and cannot influence its sense and direction. The outsiders' understanding of a situation or a phenomenon is considered the objective. The duration of time involved from designing a questionnaire survey to publishing its results tends to be a long and elaborate process. As a consequence, much of the information collected through a survey becomes outdated and of limited use in framing of policies and programmes. The fallacies of presumption from the top have done enough damage to the pursuit of rural development. Many of the ambitious targets of rural development have been met, yet, a large proportion of rural masses remains in deplorable conditions of existence and the programmes have largely benefited the "better offs" in rural areas. As empirically evident from the experiences of many developing countries, the conventional approach has consistently failed to answer the phenomena of poverty, unemployment, inequality and ecological degradations. It is being slowly realised that our conventional models are neither realistic nor sustainable in the long run. As a result of the disillusionment from the conventional models some efforts were being made in different quarters towards realistic

methods, models and approaches. As a result, a multitude of field-oriented methods emerged in the scene. New approaches and methods such as farming system research, exploratory survey, rapid rural appraisal and others, whether through observation or through participation, attempted to understand the problems of resource-poor farmers and improved the quality of information collected on them by overcoming the deficiencies of the conventional survey method.

The requirement of the shifting paradigm of development was not only a relatively quicker method of data collection but also one which would help local people to perform their own analysis. Hence, certain elements were required to be incorporated in Rapid Rural Appraisal (RRA) and other field- oriented methods to make them participatory. It was a shift of emphasis from rapid or quick to participatory and empowering which fitted well with a participatory approach to rural development and became the starting point of Participatory Rural Appraisal (PRA).

PARTICIPATORY RURAL APPRAISAL (PRA)

The origin of PRA as a methodology can be traced back to the multitude of methods and approaches, which gradually emerged since the seventies mainly due to unsatisfactory results obtained from the application of the conventional methodology to rural development.

In a very short time PRA as a methodology has gained in strength through its emphasis on participation in line with the paradigmatic shift which is slowly taking place and has helped to fill the vacuum existing in the sphere of rural development. Participatory rural appraisal is a methodology for interacting with villagers, understanding them and learning from them. It involves a set of principles, a process of communications and a menu of methods for seeking villagers' participation in putting forward their points of view any issues and enabling them to do their own analysis with a view to make use of such learning. It initiates a participatory process and sustains it.

PRA is a means of collecting different kinds of data, identifying and mobilizing intended groups and evoking their participation and also opening ways in which intended groups can

participate in decision making, project design, execution and monitoring. Because of its participatory nature, it is a useful methodology to focus attention on people, their livelihoods and their inter relationships with socio-economic and ecological factors. Participatory rural appraisal is a short- cut method of data collection. It is a methodology for action researches which, utilizes a range of techniques. It involves local people and outsiders from different sectors and discipline. Outsiders facilitate local people in analyzing information, practicing critical self- awareness, taking responsibility and sharing their knowledge of life and conditions to plan and to act.

OBJECTIVES OF PRA

The use of PRA lies in pursuing selected objectives through applications of its principles, processes and methods. Some of the objectives are given below:

a) For greater and better involvement of villagers by learning about their perceptions, experience and capabilities.

b) To generate information and collection of data for immediate or future use.

c) For learning about the impacts of earlier or on-going policies and programmes and to frame new ones.

d) For estimating trends and ascertaining conditions of their issues.

e) For validation or cross checking of data collected from other sources.

PRA is a process of participation with the villagers in which rapport building paves the way for them to perform their own analysis and to express themselves whether by means of "verbals" like narration or "visuals" such as making a map.

WHY PRA?

Participatory Rural Appraisal is emerged as a response to two major concerns of rural social research not adequately satisfied by conventional methods.

- To develop local perspective by becoming more responsive to local people and local situations.

- To evolve a methodology which can provide timely and cost effective information.

However the shift from RRA to PRA represents a change in attitude, objectives and outcomes.

PRINCIPLES OF PRA

1) **Optional ignorance**: This refers to the importance of knowing what it is not worth knowing. It avoids unnecessary details and irrelevant data, it does not measure more precisely than is needed and it optimizes trade of between quality, relevance, accuracy and timeliness.

2) **Seeking diversity**: PRA is concerned more with analysis of difference rather than looking for representativeness of results or data collected. It is looking for diverse rural events, different processes and forces explaining various relationships in rural communities.

3) **Offsetting biases**: Especially used in rural development tourism, which includes by being relaxed and not rushing, listening not lecturing, probing instead of passing the next topic, being unimposed instead of important, and seeking out the poorer people and their concerns.

4) **Triangulation**: It is an important part of PRA. For any data generated, it is essential to check the reliability and validity of the data by putting them to different tests. Triangulation is cross checking the data in different ways. It is done through uses of various methods and by using different sources to validate information. Triangulation is adopted as a principle to improve accuracy. It involves conscious, non random selection in different dimensions such as a) team composition, b) units of observation, c) PRA methods.

Team composition is generally inter disciplinary and can be constituted in such a manner so as to have the information generated from different perspectives. The units of observation can be changed in order to cross check the information gained necessary. For e.g; semi-structured interviews can be supplemented by farm maps, livelihood analysis and flow charts.

5) **Learning from and with rural people**: PRA methods are used directly, and on the site, which include face to face interaction gaining from the indigenous physical, technical and social knowledge.

6) **Learning rapidly and progressively**: In PRA, the amount of learning can increase progressively with conscious exploration, flexible use of methods, opportunism, improvisation, interaction and cross checking, not following a blue print program but adapting through a learning process.

FEATURES OF PRA

PRA has the following unique features:

1) **Iterative**: Goals and objectives are modified as the team realizes what is or is not relevant. The newly generated information helps to set the agenda for further analysis. This involves the" learning as you go" principle.

2) **Innovative**: Innovative techniques are developed for particular situations depending on the skills and knowledge available.

3) **Interactive**: In PRA the team and disciplines combine together in a way that fosters innovation and interdisciplinary action . A system perspective helps make communication easy.

4) **Informal**: It focuses on partly structured informal interviews and discussions.

5) **Community Participation**: Here learning takes place largely in the field or immediately after, or in the intensive workshops. Community perspectives are used to help define differences in field conditions.

KINDS OF PRA

PRA can be of different kinds

a) Exploratory PRA

A PRA exercise can be undertaken for understanding broad patterns and trends in a rural society. Such exploratory PRA are quite common to reveal different aspects of rural life and

also suggest important issues to be pursued. It can form a basis for further probing into selected areas which appear important and useful. A theme for further analysis can emerge out of such exploration which can help in undertaking either a PRA exercise or help in framing a survey questionnaire on realistic lines.

b) **Topical PRA**

This has to do with a particular topic which either constitutes the area of investigation by the outsiders or has been suggested by the villagers as a key area to be focused. For eg., in a theme like "seasonality" of rural life, PRA can help in exploring different dimensions of the theme under consideration. A topic can be probed across different groups in village, across gender, caste, age etc, as a community and over time. It's objective is to generate as much information as possible on a selected topic. It is intensive in its approach and can help in the analysis of a particular topic at great length.

c) **Deductive PRA**:

A PRA exercise can be conducted on different aspects of village life which can be provided as a basis for having information on themes not directly attended through PRA. This can help in relating different aspects of the problem to other factors and also in dealing with sensitive issues. Deductive PRA is especially helpful when used for themes which require tact and cannot be directly probed on account of the nature of the subject concerned such as communal tensions, class struggles, corruption etc. there can be some topics, which are efficiently treated through relating them with different aspects of village life rather than treating them through direct probing for eg, to learn about the impact of local corruption in a village, direct questions on corruption may not yield much response. PRA sessions on different aspects of village life related to corruption would give indications of its extent to impact.

d) **PRA for Research and Training**

PRAs' can be used for the purpose of researching in the forms of participation, processes and methods. PRA can be of a training type for training of different groups of professionals who are likely to use them in their field work or for further training.

e) **PRA for Planning and Implementation**

PRA can be conducted for designing projects and implementing them.

All stages of a project cycle can be based on PRA techniques. It can make projects more adaptable to local needs. If village communities or groups are involved in a project right from its initiation, the chances of sustainability of the project increase through peoples' participation. For eg, if a project is endogenously set up in a village, the chances of success of that project are low. The risk bearing behaviours of the beneficiaries are expected to be higher in all cases where the local people or the intended beneficiaries participate in choosing the project.

F) **Monitoring and Evaluative PRA**

PRA can form a basis for monitoring and evaluation of projects and programmes. It can touch upon the problems faced by the community/ groups/ households in running of projects. With the identification of problems, operation of projects can be better informed and solutions to avoid or resolve those problems can be sought through PRA. A before and after comparison of projects can be undertaken for projects which have either involved PRA methods in project formulation and appraisal or those which have not used them at all.

CONVENTIONAL CRITERIA AND TRUST WORTHINESS OF PARTICIPATORY INQUIRY

Conventional criteria have limited relevance for evaluating participatory inquiry on account of the following reasons.

- Basic differences in paradigms of the two systems of inquiry.

- Generation of both qualitative and quantitative data in a participatory inquiry.
- Open questions lead to multiple responses and hence leave scope for considerable variations.
- Outliers are also considered to be important in a participatory inquiry; they also need to be explained as much as the 'average' picture.

In PRA, all actors have different perspectives and their knowledge and understanding are socially constructed. There are multiple perspectives on a problem situation and there are different ways of expressing one's views. In case of PRA method, a standard way to test the trust worthiness of data is to apply 'triangulation'.

WHAT IS TRIANGULATION?

Team composition is generally inter-disciplinary and can be constituted in such a manner so as to have the information generated from different perspectives. Teams can have persons from different disciplines, sex, culture and experience so that data emerging from PRA can be discussed within a team and with local people by a team to clarify issues and select issues for further probing. The units of observation can be changed in order to cross check the information gained. Different groups can be approached separately or its combination so as to arrive at views from different angles. Other sources of information such as secondary data sources can also be used to examine trustworthiness of PRA data. Different PRA methods can be used to test and verify a piece of information. For eg, semi structured interviews can be supplemented by maps, livelihood analysis and flow chart so as to check and cross – check the information obtained .

RISKS OF PRA

While PRA has many advantages, it is not without risks. Some of these risks can be prevented and some can be mitigated when arise, but others can be quite serious and difficult. In all cases, it is best to be aware of them. Examples of some common risks are as follows:

1) Raising expectations

The intense involvement of local people in the PRA process tends to generate much enthusiasm and anticipation about the development actions that they have identified and thus builds momentum for change. Although this is a positive aspect, it can cause problems if supports for implementations are not forthcoming.

It is essential that the appraisal team to be honest and clear, from the beginning and through out the process, about whether or not resources from out side development institutions will be made available. If outside resources are not available, the focus must be on development activities that can be implemented with local resources only. If resources are forth coming, then it is important to give realistic estimates when they will be available, say in a month, six months or a year.

2) Revealing failure

When the PRA is carried out where development activities are already being implemented, the feelings may reveal negative impacts, failure or needs improvement. In such cases, the PRA team has two responsibilities.

a) to communicate the bad news to the supporting institutions,

b) to explore together with the communities various options for solutions and improvements. This can put the team members in the difficult position of trying to persuade others to change a programme to make it more responsive to local needs. Depending on the attitudes and flexibility of the project staff and supporting institutions, this may be a contentious issue or it may lead to an exciting process of adaptations through increased communication with local women and men.

3) **Learning about illegal activities**

It is not uncommon for PRA findings to reveal activities that are against national laws. For eg: in a village in Nepal, it was learned that women were climbing over the walls around a protected forest, at night in order to collect fuel wood and fodder. The right way in handling such information depends on the openness and responsiveness of the government. In no case, such information can be used in any way that might result in serious sanctions on the village that participated in the PRA.

4) **Stirring up conflicts**

It is not always the case that the PRA process leads to consensus; indeed it may expose deep differences and conflict among various groups. The process can also be seen as a challenge and threat by the more powerful groups because of its emphasis on ensuring that women and disadvantaged groups participate fully. When such conflict becomes apparent, or is very likely to occur, the PRA team has only two options either;

A) to stop the PRA, or

B) to use negotiation and conflict resolution methods to explicitly acknowledge and work with the conflicts.

Precautions in the use of PRA TOOLS

- A tool (any tool) is only as good as its user. Much of the validity of PRA outputs depends on its users' creativity, integrity and the situational appropriateness of the method selected.
- The user must clearly distinguish between perceptions and opinions in analysis and planning
- The selection of informants has to be done with care. Everybody does not know everything neither does everybody hold a view on all subjects.
- The views expressed by a few members cannot be taken as a general view held by all.
- Cross verification of data is a necessary part of a complete PRA exercise.

- Documentation possesses several difficulties due to the wealth of information generated and the need to keep track of both process and output in ways understandable to all parties involved is essential.
- PRA exercises may raise the expectations of participants therefore have to be carefully initiated with proper explanations.

PARTICIPATORY METHODS

For developing any plan one has to first collect the basic information of the area. Based on these basic information and application of our knowledge, and taking into account the resources available under various development schemes, one has to develop the plan. Our ultimate objective is to build the capacity of the people and make the development programme sustainable. But the question is how we will collect the necessary information. What will be the procedure for taking decisions regarding selection of scheme and beneficiaries? How will we monitor the programme? All these questions arise because the ultimate objective is to ensure people's participation and empowerment. There are various participatory methods, which have been used over the last few decades. Some of these are: the Beneficiary Assessment Method (BA), SARAR and Participatory Rural Appraisal (PRA). BA is a systematic investigation of the perceptions of the beneficiaries and other stakeholders. SARAR stands for five attributes, namely self-esteem, associative strength, resourcefulness, action planning and responsibility to follow through, which are considered to be critically important for achieving full and committed participation in development programmes. PRA has evolved from Rapid Rural Appraisal (RRA), which is a process of appraisal, analysis and action by local people themselves. The pioneering work of Robert Chambers and Gordon Conway in a technique called rapid rural appraisal (RRA) was one example of an attempt to include the interests of the poor in the design of programmes and projects. The importance of RRA was that, it recognized the need to consult the poor on their needs and it showed very quickly the inherent limitations of this superficial tour to reality. RRA is mainly seen as a means for outsiders to gather information; and hence, the need to replace or supplement it with Participatory Rural Appraisal (PRA) which empowers the local people. PRA is a method that facilitates the community's own in-depth look at themselves and of their possibilities, and enables them to articulate these discoveries in their own colourful, meaningful, usable and realistic way.

To emphasize on the learning, sometimes the anagram PLA, which means Participative Learning and Action, is used. However, PRA is the most commonly used word. It is also the method, which

is mostly used to encourage and ensure people's participation. PRA can be described as a method that enables people to express and analyse the realities of their lives and conditions, to plan what action to take, and to monitor and evaluate the results. PRA emphasises the process which empowers local people, whereas its predecessor RRA was mainly used as a means for outsiders to gather information.

PRA offers a basket of techniques from which one can select one or a combination of them, which are appropriate to the development activity. The central part of any PRA is semi-structured interviewing. While sensitive topics can be better addressed in interviews with individuals, other topics of more general concern are agreeable to focus group discussions and community meetings. During these interviews and discussions, several diagrammatic techniques are frequently used to stimulate debate and find out the results. Many of these visuals are not drawn on paper but on the ground with sticks, stones, seeds and other local materials and then transferred to paper for a permanent record. During the 1980s, PRA was first developed in India and Kenya, mainly supported by NGOs operating at grass-roots level. Until today PRA evolved so fast in terms of the methodology, the creation of new tools and specifically in different ways it is applied.

Compared to RRA which mainly aims at extracting information, PRA places emphasis on empowering local people to assume an active role in analysing their own living conditions, problems and potentials in order to seek for a change of their situation. These changes are supposed to be achieved by collective action and the local communities are invited to assume responsibilities for implementing respective activities. The members of the PRA team act as facilitators. Here, it is no longer the external experts but rather the local people themselves who "own" the results of a PRA Workshop. Consequently an important principle of PRA is to share the results of the analysis between the PRA team and the community members by visualisation, public presentations and discussions during meetings.

Some of the key PRA techniques are:

MAPPING TECHNIQUES

Mapping exercises as used in a PRA activity not only provide us with information about the physical characteristics surrounding

the community, but also reveal much about the socio-economic conditions and how the participants perceive their community. The maps are usually drawn by a group of villagers either on the ground using stick or chalk or on a large sheet of paper. The exercise often attracts much attention and generates useful debate among the mapmakers and the onlookers. The final map is, then recorded by the PRA team to use in subsequent discussions. Mapping techniques include Social map, Resource map, Mobility map, Basic information about the village, Transect Walk and Venn diagram

Social Mapping

Social Map is to depict the social structure of the village. Any development program is a deliberate intervention in a given situation defined by space and time. So, as a first step, it is necessary to undertake an exercise of physical and social mapping of the given area where a program/project is being introduced. A Social Map is a visual representation of a residential area containing relevant social information. It gives the physical boundaries of a given area, the settlement pattern, physical infrastructure, social, cultural and religious institutions and similar other information. Such a map is to be drawn first on the ground with the direct participation of the local residents and then transferred on paper with appropriate legends and colours. This technique may be used at the early stage of interaction with the community. Mapping generates a lot of enthusiasm among local people and acts as a good icebreaker. A social map of Panicheyam area in Asamannoor Panchayat of Ernakulam District gives the complete social structure of the village (Fig. 1)

Steps:

Select an open space where a map can be drawn on the ground.

- Ask the local people to prepare the map of their settlement that can help others to have a visual picture of their locality.
- Ask the group to show all the features of the settlement that they can think of, such as rivers, hills, roads, tanks, bamboo groves, forests, wells, schools, health centers, clubs, temples, and so on. The clusters of huts, buildings and residential places are also to be noted and marked on the map.
- Labels and symbols are to be used to identify different

facilities, features and infrastructure.

- Allow the participants to select the symbols. Any additional information that the facilitator wants to be included in the map should be introduced only at the end, after the group has finished preparing the map, and after consultation with the group.
- Once the map is ready, one may ask questions about the findings as required.

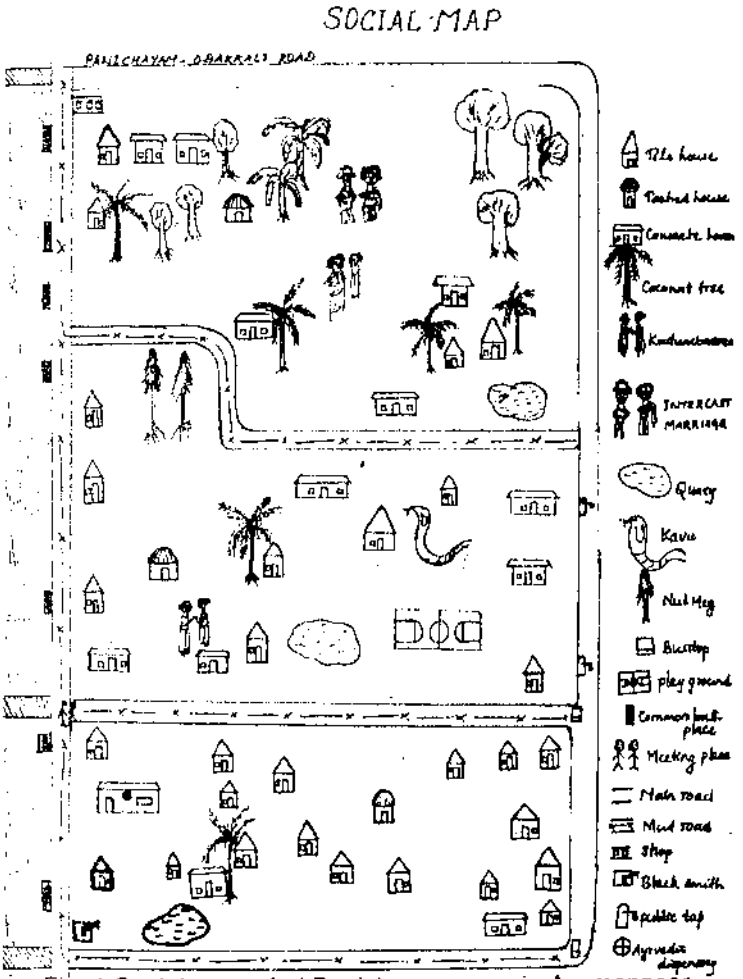


Fig. 1 Social map of of Panicheyam area in Asamannoor Panchayat of Ernakulam District

Resource Map

Resource Map indicates both the natural resources and man made resources needed for development of agriculture. This helps to know about the village and community and its resource base. Basically it includes the detailed land use in the village such as fishing areas, seashore, village ponds, backwaters, agricultural land (wet/garden/dryland), grazing area, waste land, forest land, water bodies, etc. as well as since the society is gendered, the situation analysis needs to be done to ensure women representation and space to express their voice, through common meetings (if required) and through organizing separate meetings for men and women. In the present situation, the facilitator should identify the tool, based on the requirement, organize either a common group with sufficient representation of women or exclusive men and women groups. It is a suitable tool to begin the programme with and encourages people to contribute their thoughts at an early phase of participatory process. Fig. 2 depicts the Resource map of Panicheyam area in Asamannoor Panchayat of Ernakulam District.

Process: A large open space or chart can be used. It will be easier to start by marking a central place and encouraging the participants to draw other things which are important to them and finally asking them to present it and also describing the features represented.

Expected outcome: From this one can get information on the location of the village, available resources and its utilization pattern, utilization pattern of common property resources, source of water, firewood, grazing areas, fishing areas, backwater and constraints/potentials in each indicated resources.

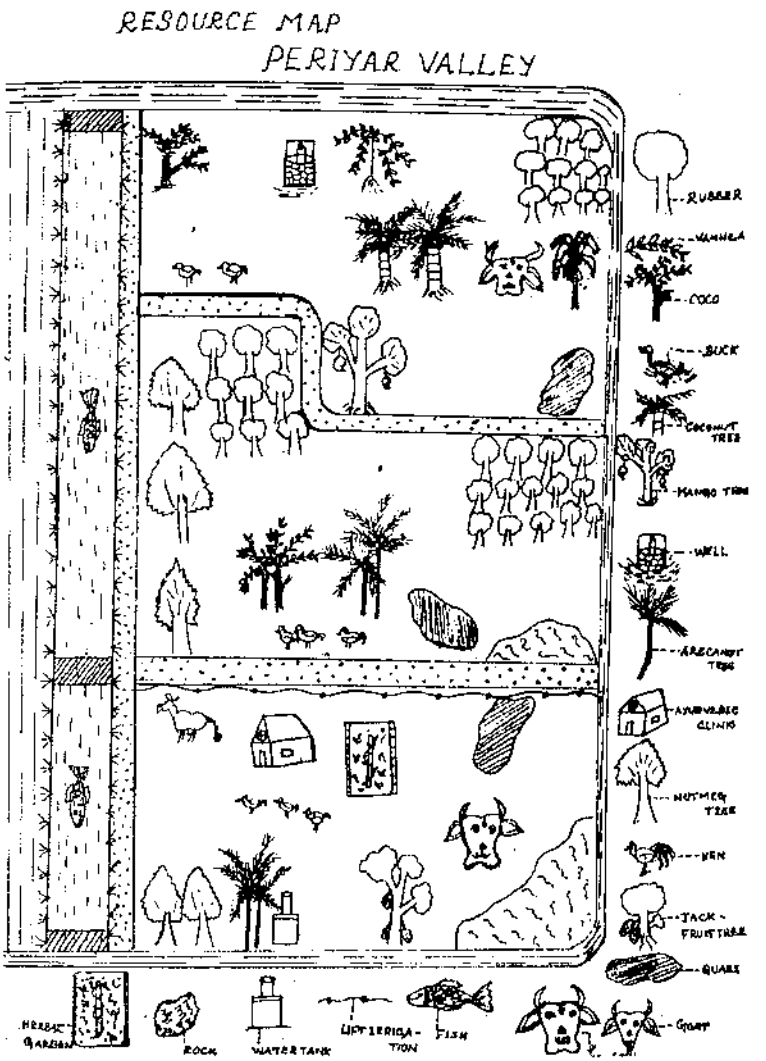


Figure 2 Resource Map of Panicheyam area in Asamannoor Panchayat of Ernakulam District

Mobility Map

This indicates the purpose for which the farmers go out for diverse purpose. Patterns of group mobility of rural people can emerge from individual maps. Mobility of rural people based on socio-economic aspects, gender, age groups and other criteria can indicate the nature of work, wealth, interaction with outside world and interaction within communities and with other communities in the village. It shows the mode of travel, the degree of mobility of groups and communities and importance of different areas in terms of their different activities. Fig. 3 depicts a mobility of map of women from Panicheyam area of Asamannoor Panchayat in Ernakulam district. The map shows that the mobility of women takes place on account of different reasons such as work, health, shopping, education, prayer and entertainment. The map also shows the distance of Panicheyam area to the most visited area by the women folk of the area.

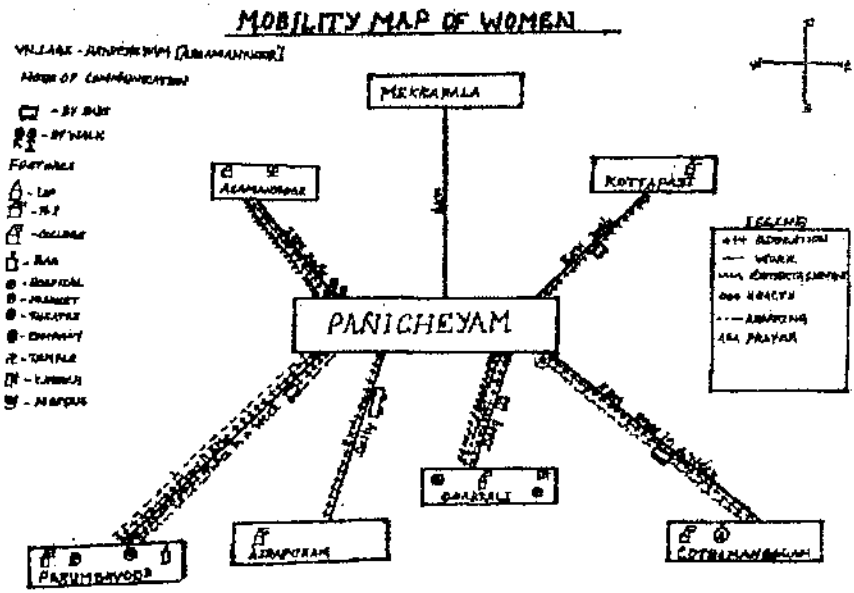


Fig. 3: Mobility Map of women of Panicheyam area in Asamannoor Panchayat of Ernakulam District

Basic information about the village

This indicates the data regarding the population, area under crops, number of families, yield of animals and crops, mortality related to animals etc. In Fig. 4, the complete basic information of the Penicheyam area in Asamannoor Panchayat is given.

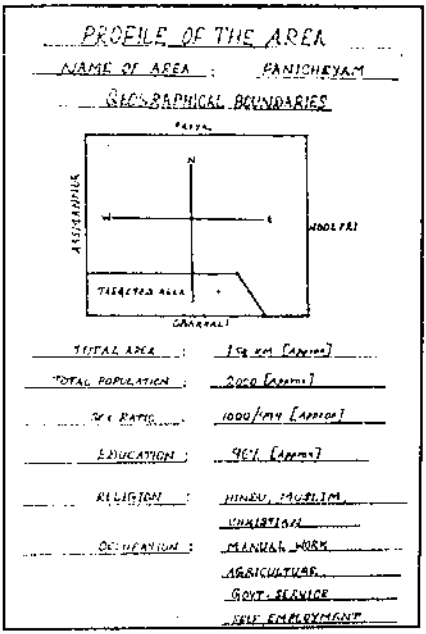


Fig. 4: Basic profile of the Penicheyam area in Asamannoor Panchayat

Transect Walk

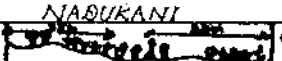
Transect is making a long walk inside the village and locating the various items that are found in the village like soil, crops, animals, problems, etc. It is a structured walk through the locality identified. This walk is best carried out with a group of people who live there and know the area well. These local people should act as guides in the walk, showing and discussing all the features that exist within the area. Transect walk will be very effective if the social map of the area has already been prepared. This will help verification of the social map. It also helps the facilitator to focus on some key areas or issues.

Focus Points

- Once the features such as hats (market place) or the schools or clubs are identified, the facilitator may visit these places for maximum interaction with different segments of the population.
- During the transect walk the facilitator is directly exposed to the physical and topographical features which may open up discussion on various subjects for development intervention, such as water conservation, change in land use or crop rotation pattern.
- It may help in locating the settlements of socially and economically deprived background people. Direct interaction with them would help him/her to identify their special problems calling for attention.

The importance of a transect lies not only in knowing the agro-ecological zones in rural areas but also in getting in-depth account from the participating villagers of such zones in the village, their uses, problems and opportunities. Once transect walk can also be supplemented by other walks so as to enable the outsider to learn more about any village and clarify doubts.

TRANSECT WALK MADUKANI



Features	North settlement area	South-West settlement area	North-east - settlement area
Topography	Ascending	Slope	Descending
Soil	Alluvial soil	Dry soil, Granite	Alluvial soil
Trees	Teak, Jack fruit tree, Tamarind, Mango tree, Mahogani	Tamarind, Mango tree, Bamboo	Tamarind, Mango tree
Crops	Rubber, Coconut, Coffee, pepper, Jaki	Pepper, Coffee, Coconut.	Arecanut, Coffee, Jaki, Coconut, pepper.
Vegetation	papaya, plantain Colocasia	papaya, plantain	papaya, Bittergourd, pea, plantain
opportunities. problems. solutions.	Quary ponds, pisciculture well. Mandasi Eco. pesticides	Quary ponds, pisciculture water scarcity RWH, Rain pit, Lift irrigation	Canal Mandasi Eco-pesticides.

Fig. 5: Transect walk of the Penicheyam area in Asamannoor Panchayat

Venn diagram: This indicates the importance of the various ndividuals and the institution in and outside the village with regard :o a phenomenon. For example getting loan for agricultural ourpose. Venn Diagrams help in understanding the roles the different institutions play in a community, their mutual relationships, and the relative importance they play in people's lives. These are also known as *Chappati* Diagrams because of the circular paper cut-outs used in this analysis. The whole exercise is directed to understand how the people perceive these institutions vis-à-vis their own lives. This method is best effective when the respondents interact within a group. It is expected that a lot of discussion and debate may follow. The facilitator without trying to stop the debate should try to help them to come to a conclusion.

Steps:

- First one can prepare a large circular paper, which represents the community. Smaller circles of various sizes should also be kept handy. These small circles would represent different institutions.
- The size of the circle represents the importance of an institution to the community. (The bigger the shape the more important is the institution).
- The proximity to or distance of an institution from the community is denoted by the closeness or distance of the circle representing the institution from the centre of the main circle (representing the community).
- Similarly distance between circles represents the absence of links between them.

RANKING EXERCISES

The methods of ranking and scoring reveal priorities and preferences. They provide opportunities to rural people to physically rank and re-rank some items or preferences or some uses and explain their reasons for a given ranking. Matrix ranking and scoring are most appropriate when outsiders wish to obtain precise information in relationships amongst several different criteria and wish to rank only a

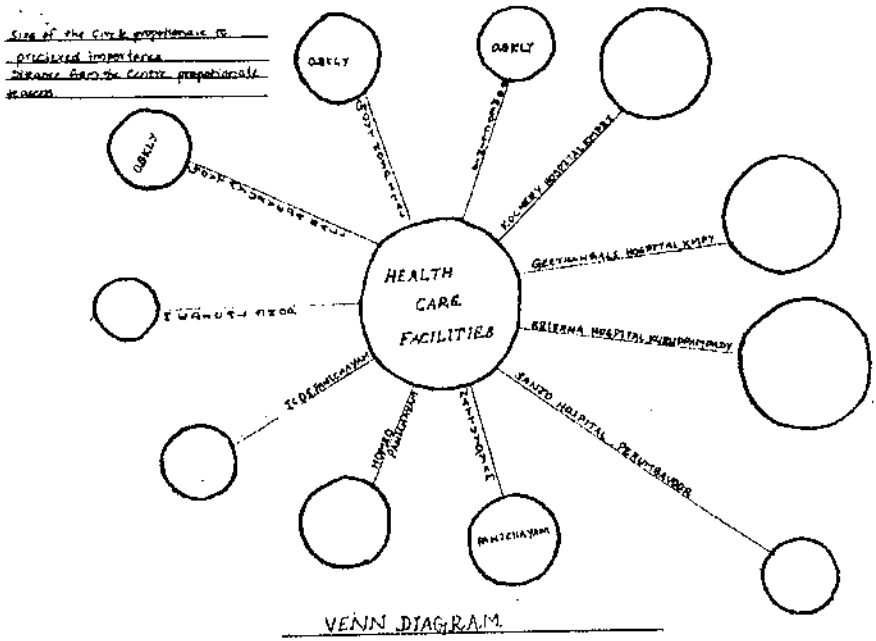


Fig. 6 Venn diagram regarding the health care facilities for the villagers of Panicheyem area.

few alternatives, related to uses, preferences or priorities. They can help in understanding rural people's criteria for ranking as well as relative position of their priorities, preferences and choice in matters of occupation, medical treatment, food, fodder etc. They can be used for easy comparisons. Ranking methods include preference ranking, problem tree, Impact analysis and Bioresources flow etc.

Preference ranking: This is to find out the perception of farmers regarding the magnitude of the problems found in the village. It involves ranking of a set of problems/preferences/priorities by a group or an individual on the basis of their criteria or perceptions. An illustration of preference ranking is given in Fig. 7 which shows the preference of source of treatment by the villagers. At the end of the matrix, the first row shows that the overall rating is in the favour of the Allopathy.

MATRIX RANKING

PREFERENCE RANKING FOR TREATMENT

VARIETY OF TREATMENT

1 Was the best and
4 was the worst

S No		ALLOPATHY	HOMEO	AYURVEDA	TRADITIONAL
1	Distance to the Centre	4	2	3	1
2	Treatment Cost	2	1	4	3
3	Effectiveness	1	3	4	2
4	Attitude of doctor	4	2	3	1
5	Contagenous diseases	1	3	2	4
6	Serious Illness	1	2	3	4
7	Minor Illness	2	3	1	4
8	Awareness	1	4	3	2
9	Speedy recovery	1	2	3	4
10	popularity	1	3	2	4
		18 [7st]	25 [3rd]	28 [2nd]	29 [1st]

Fig. 7: Preference Ranking for variety of treatment as perceived by the villagers of Panicheyam area in Ernakulam District

Problem Tree

The problem tree indicates various resources responsible for the specific problem related to a specific field. This will also indicate the intervention for the various causes which will help in problem identification related to a discipline. The Problem Tree is used to analyse relationships between problems, including their causes and effects. The Problem Tree helps the research team to make an inventory of problems and their solutions as perceived by the target group or other stakeholders in the project. It can thus be used in the analysis of the target group, in the organisational analysis and in the analysis of the project proposal. It is mostly known as a technique to design or to analyse project proposals. The problem Tree is 'built' with the help of index cards. They can be constructed in the following way:

- The participants are asked to enumerate the problems faced with. Each problem cited or listed is written down on a card (one problem per card). When the participants are illiterate, symbols should be used instead of descriptions.
- The cards are ranked for priority. The key question for ranking includes which of these problems is the Core problem, the problem that creates many other problems and has the most important effects on the lives of the participants. The core problem is placed central on the board.
- Subsequently, the participants are asked for each pair of cards with problems: 1. Are these two cards the causes of the core problem or consequences of the core problem or independent issues?
- By doing so, the problem cards are arranged in the form of a tree, with the consequences of the Core problem at the top and the factors underlying the core problem below it. Secondary trees may have formed around other key problems unrelated with the selected core problem.

The participants are asked to focus on the core problem and requested to see whether all important causes of the core problem are included in the tree. Additional causes mentioned are added. The procedure is repeated for the consequences of the core problem. The result gives an overall image of the problems listed by the participants in relation to one another. Fig. 8 gives an example of

the Panicheyem area in Ernakulam district, Where 'Lung disease' is identified as the core problem

The construction of problem tree is useful because it shows cause-effect relationships and provides a basis for discussion on which problems have to be dealt with in order to solve the core problems and to which extend these can be influenced by the participants themselves. In the design stage, the Problem Tree (s) can be converted into an objective tree. To this effect, each card in the Problem Tree is reformulated in terms of an improvement desired. The desired improvements or the changes are written down on cards (one change per card) and arranged in a form similar to the Problem Tree. The result is the objective tree showing how solutions to the problems are related to each other. Good facilitation is indispensable; leading questions or manipulation by dominant participants should be avoided.

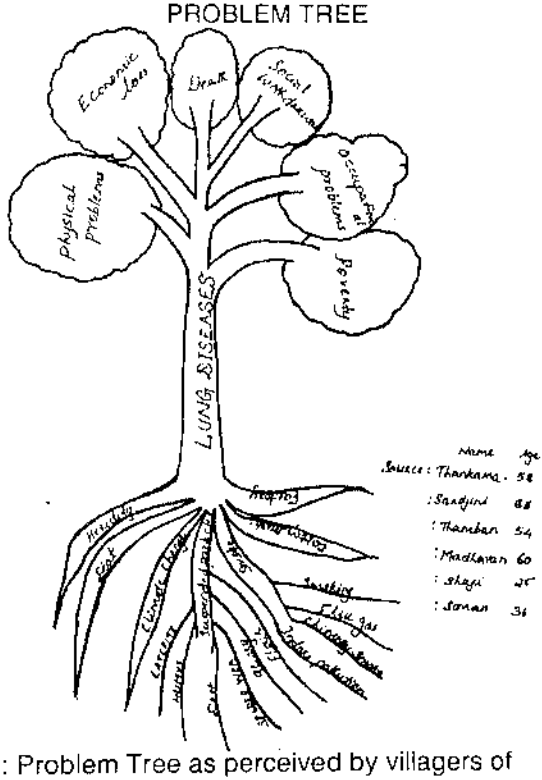


Fig. 8: Problem Tree as perceived by villagers of Panicheyem area in Ernakulam District

Impact Diagram

This indicates the changes that have occurred either for individual or for the society due to adoption of a technology. Impact analysis is a type of flow diagram. It is an impact of the effect of any activity. The effects can be both favorable and unfavorable on rural livelihoods. The impact diagram shows the impact point and the linkages established or disrupted as a result of intervention made. Fig. 9 shows the impact of Family Planning Permanent methods.

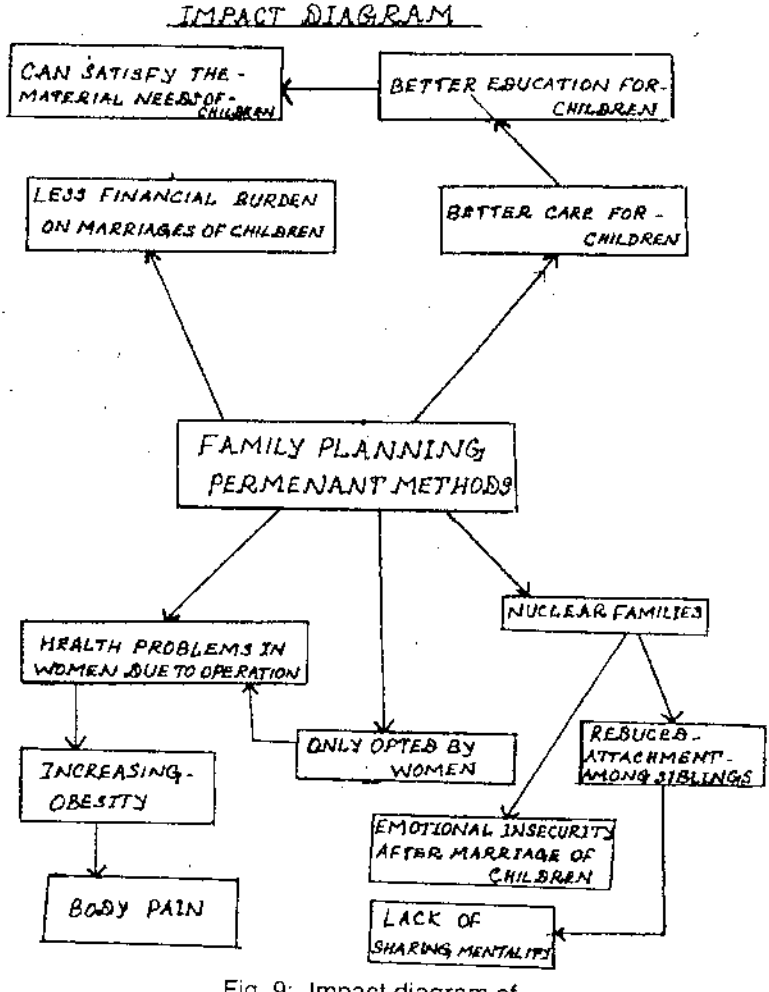


Fig. 9: Impact diagram of
Family Planning Permanent Methods

Bioresouce Flow Diagram

This indicates the degree to which the village household members utilise and recycle the various resources in and around the farm house to suggest remedial measures. Bioresource flow diagram is made to understand the flow of commodities from farm to household, market and cattle, external sources to farm and household, from cattle to farm and household. This is a cyclic chain of events where, each one is linked with one another. This diagram is self-explanatory.

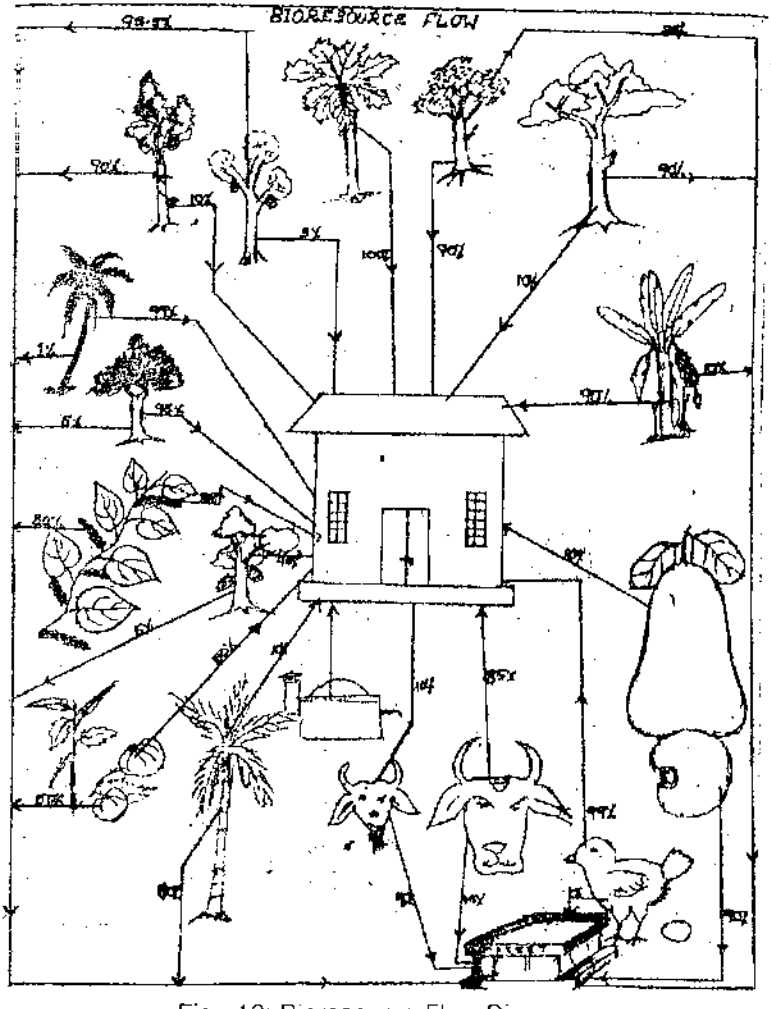


Fig. 10: Bioresource Flow Diagram

TREND ANALYSIS

Time line

This indicates the major events remembered by the villagers. Elderly villagers narrate their life histories. Since it is difficult to remember the exact dates of important changes, villagers can be facilitated to broadly connect such changes with major events, political regimes and thus summarise the major events and changes that have taken place during his / her life time. It was through the method of time line, as shown in Fig. 11, that information was given by an elderly villager on the various development stages of their village over a period of 70 years.

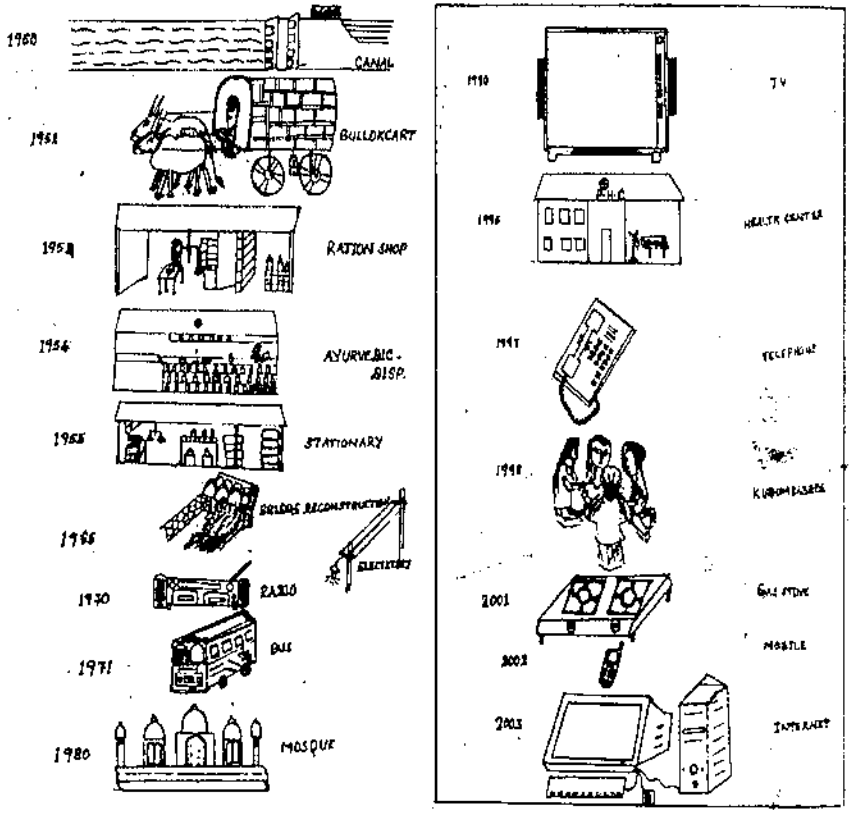


Fig. 11: Time line showing the different development stages in the Panicheyam Area of Ernakulam District

Time Trend

This indicates the change in past few years related to variables concerned with a particular field. This method shows quantitative changes over time in different aspects of village life such as occurrence of major diseases, population affected, livestock population , number of trees, rainfall pattern etc. A Time trend is different from a historical transect or a Time line. The former is more precise in giving indication of change whereas, the latter can show broad movements of different aspects of village life rather than their precise shifts. Fig. 12 illustrates the trend of major diseases, trend of diseases in different life stages and the level of increase in diseases.

Steps

- Start with a discussion on major changes that have taken place in the locality as perceived or identified by them.
- The group is to decide how far back in time they would like to go for this analysis. They should identify the year(s) or period when significant changes were witnessed.
- Ask the group to identify the areas in which they have witnessed theses changes. Then draw a diagram showing these changes over the years. This can be shown by line drawings (like graphs).
- Discuss what prompted these changes. Which ones are considered positive and which are negative and why? Ask whether any of the negative changes can be reversed, and how?

There is every possibility that there would be difference of opinion and debate. Do not interfere. But you may provide necessary information and draw attention to issues, which have not been discussed at the end, so that fresh discussion may be initiated.

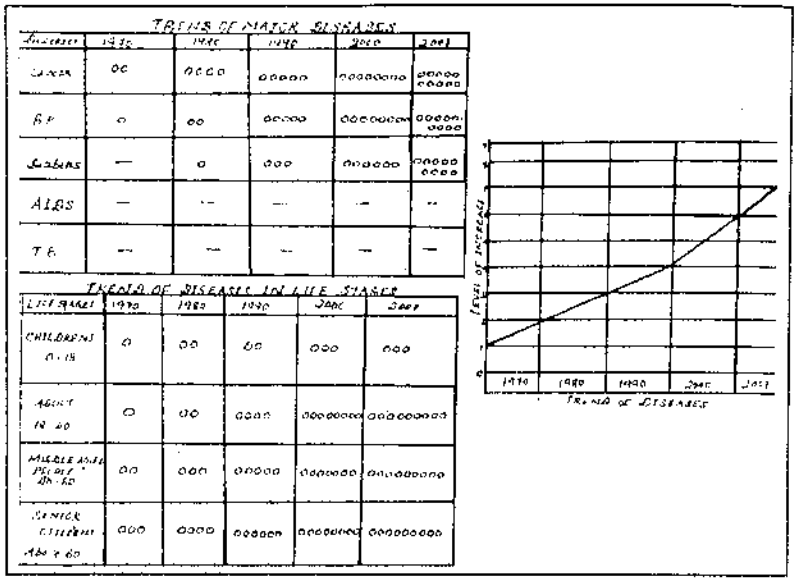


Fig. 12 : Trend of Major Diseases and their level of increase in the Panicheyam Area of Ernakulam District

Seasonal analysis

This indicates the month wise abnormalities with regard to a particular field. This method is used to analyze the seasonal patterns of some aspects of life or activities, events or problems. There are some problems, which are cyclical in nature. Problems which have a cyclical pattern can be analyzed using this method, including availability of food, prevalence of diseases, indebtedness, relative prosperity, stress in livelihoods etc. as also rainfall, availability of water and so on. Fig. 13 is a Seasonal Analysis of five diseases in Panicheyam Area of Assamannoor Panchayat in Odakali region of Ernakulam District. It shows seasonal frequency of diseases of which chicken pox is a frequently occurring disease. The chart can be directly linked to policy measures in terms of strengthening of primary health care depending on the frequency of a disease and its period concerned.

- Ask the participants to decide how they would like to divide the year (months, seasons, quarters etc.) in relation to their

lives. Do not impose your calendar – there can be different forms of local calendars, which the people may be more familiar with.

- Develop the calendar on the ground using chalk, sticks, stones, or any other locally available material. This can also be prepared on large sheets of paper.
- Identify the items or problems with the help of the participants.
- The seasonal variations of the different items are depicted on the calendar, and then the results are compared.
- Once the visual is ready, you can ask questions regarding the relationships between different variables and whether there are any other aspects of life that affect or are affected by this seasonality.
- This visual is then used to discuss problems and opportunities.

SEASONAL ANALYSIS

Diseases	SEASON												Remedies	Awareness	Treatment	Precaution	Age group mainly affected (Children/Adu
	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	oct	Nov	Dec					
Eye Sore	x	x	x	x									Pouring breast milk. Leaves - kuzhambu. Washing with - cold water.	Causing due to dust and heat.	Homeo, Ayurveda	Not to use materials used by the infected person.	All
Mumps						x	x	x					Go to hospital	Contagious during last days of the disease.	Allopathy		Children
Chicken pox		x	x	x	x	x							Cleaning the surrounding and burn the waste. Apply turmeric paste & neem paste. Consume tender leaves.	Virus disease, contagious.	Homeo.	Not to buy food items to the HL. Do the infected person home as well as neighbouring houses.	All
Fever						x	x	x					Go to hospital		Allopathy		All
Dysentery			x	x	x								ORS solution, Salted kanji water	Indigestion	Allopathy	Lemon juice, Lemon tea	All

Fig. 13: Seasonal analysis of Five diseases in the Panicheyam area in Assamannoor Panchayat of Ernakulam District

Daily Routine Diagram

This daily routine diagram depicts the way in which farmer spends time from morning to night. Daily routine diagrams reflect the kind of activities which one does on a daily basis. It not only shows the time spent in different activities but also the size of the work involved. For instance, women spend different hours of the day in activities like feeding children, cooking etc. It is possible to identify general patterns from daily patterns. The general patterns of different groups can be compared. Such daily routines can also be depicted on a seasonal basis in order to identify constraints and workloads of different groups related to different activities.

Fig 14 is a typical daily routine diagram of an elder male, elder female, young male and young female .

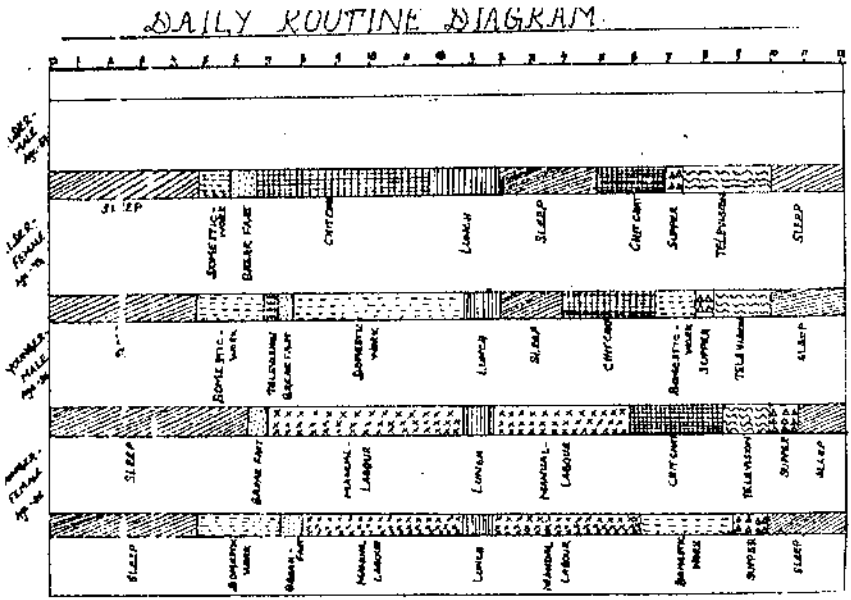


Fig. 14: Daily Routine Diagram of Men and Women in the Panicheyam area of Ernakulam District

For example: Seasonality - Diagram

a) **Purpose**

To understand the seasonal variation in any activity / seasonal factors affecting any issue.

Applications

- To plan agriculture / horticulture interventions by studying seasonal patterns in pest attack / rainfall / markets / storage etc.,
- To plan employment generation activities, by studying labour availability patterns etc.,

Preparations Required

- Make yourself clear what issues you want to study with regard to what factors
- Selection of village / area.
- A visit to the village, to inform the villagers, and to find about their convenience. Also to seek help in identifying possible respondents.
- Buzz session - division of responsibilities (facilitation, interviews observer, process recorder, content recorder)
- Materials – locally available materials like stones, sticks, seeds, chalk powder, large sheets of paper and marker pens to record output.

Process in the field

- Selection of convenient spot, gathering with respondents
- Explain to respondents / others about the exercise
- Elicit and discuss, local calendar on the ground
- Plot the activities / issues on the calendar as and when it occurs
- Analyze the information and also make corrections, if necessary.

Ways to cross check

- Village presentation
- With other methods like livelihood analysis, family profile
- With secondary data

Don'ts

- Don't impose our calendar
- Don't combine too many issues / factors in one exercise
- Don't combine unrelated factors in one exercise
- Follow the don'ts of interviewing

HOW TO DOCUMENT

- Entire process (including ground work) to be recorded
- Transfer the actual output (chart) to a paper, without making changes (land to lab)
- A narration to explain the output
- A record of the interpretation / analysis
- A record of possible actions, if any

SUMMARY

As compared to survey method, PRA is a method which is neither looking for 'averages" nor for set patterns. It has an array of methods principally for analysis of differences in rural phenomena and processes. It is based on people's perceptions to analyse the complexities and heterogeneity underlying rural systems and processes. The main objective of PRA as a methodology is to understand the point of view of the rural people and not to proceed with defined sets of ideas and notions. PRA methods are based on the element of openness where the researcher acts as a facilitator to the villagers' perceptions to open up their discussions and views as to interact from within, in natural surroundings. The PRA methods help to establish effective communication with rural people. This aspect of openness in PRA needs to be emphasized because most methods by nature are extractive rather than participatory including Rapid Rural Appraisal (RRA) which is a predecessor of PRA.

PRA has not evolved in scientific laboratories nor in intellectual writings but in field situations. This can be considered as a major strength of PRA in facing rural realities which has boosted a methodology like PRA to move forward and gain progressively from field experiences. PRA has a rich perspective and offers a methodologically dominant vision of which development practitioners can make good use. PRA, as a data tool, enjoys ample flexibility in terms of initiating participation in different institutional settings. In some limited environments not favorable to participation, PRA can be used as a method for data collection. While in other settings, amiable to participation, PRA can be used for decision making, implementation, monitoring and evaluation of developmental projects.

PRA gains its strength from the participative elements inbuilt in it which is the driving force of PRA. It implies empowerment of people through active participation. It also implies realization of confidence and dignity of rural people, especially the poor and the weak. The goal of socio-economic development is accomplishment of well-being of every individual in a society. PRA provides an opportunity for participation towards attainment of that well being.

This book ends with a positive note on PRA as a data tool which provides an enriched opportunity to commence and maintain people's own development, designed, executed and evaluated by them.

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ABOUT RAJIV GANDHI CHAIR

The Ministry of Human Resources Development (MHRD), Govt. of India established 10 Rajiv Gandhi Chairs in Central and State Universities all over the country to implement the dream projects of Sri. Rajiv Gandhi, the then Prime Minister of India. Cochin University of Science and Technology was identified as one among the prestigious ten Universities in the country to hold the Chair and the thrust area identified for the Chair at CUSAT is on Ecosystems and Sustainable Development. The main objectives of the Chair include:

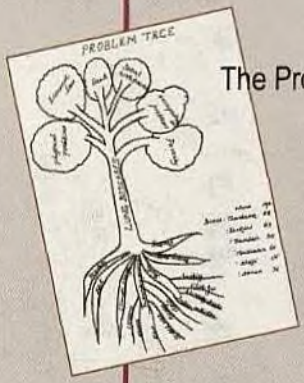
To act as a platform for exchange of ideas between scientists, policy makers, NGOs etc.

To strengthen the role of Universities/Academics in public policy making

- To provide a forum for inter University/ intercollegiate research
- To carry out research programmes leading to PhD
- To design and execute capacity building programmes for teachers in higher education in the areas focused by the Chair
- To conduct short term courses to students, researchers and rural folk
- To bring out research publications, proceedings and monographs
- To organize seminars/conferences/ symposia
- To set up demonstration Units for the transfer of standardized technologies to the field level

DATA TOOLS
PARTICIPATORY RURAL APPRAISAL TECHNIQUES

SINDHU SADANANDAN, P. NATARAJAN
JOSE ANTONY, V. P. VIPINKUMAR



About the Book.....

The Professionals at Rajiv Gandhi Chair and SSUS have developed and conducted a PRA.

This book is primarily the product of an implementation process of that PRA Tool.

The field test was carried out in Assamannooor Panchayat, Odakali region of Kalady in Ernakulam District.

The data tools developed for appraising rural environment through participatory mode are well embedded within its context.

This Book has incorporated lessons from previous experiences, at the same time has not duplicated the activities.

AUTHORS