

Natural Resources Management (NRM)
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Week – 03
Lecture - 18
PRA techniques within Integrated Natural Resource Management

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2. PRA techniques

- ✓ **Folklore, songs, poetry, and dance** -- Local folklore, songs, dance, and poetry are analyzed to provide insight into values, history, practices, and beliefs.
- ✓ **Futures possible** -- People are asked how they would like things to be in 1 year and to predict what will happen if nothing is done or if something is done. People's desires, wishes, and expectations are revealed.
- ✓ **Diagrams exhibition** -- Diagrams, maps, charts, and photos of the research activity are displayed in a public place to share information, facilitate discussions, and provide an additional crosschecking device.
- ✓ **Shared presentations and analysis** -- Participants are encouraged to present their findings to other villagers and to outsiders, providing another opportunity for crosschecking, feedback, comment, and criticism.
- ✓ **Night talks** -- The researchers live in the village during the research process. This facilitates all interactions between the outsiders and the villagers, invites change in the outsiders' attitudes, and allows for early-morning and evening discussions, when villagers tend to have more leisure time.
- ✓ **Short questionnaires**
- ✓ **Field report writing** -- Key findings are recorded before "leaving" the village.
- ✓ **Survey of villagers' attitudes toward PRA** -- To improve the PRA process and techniques and maintain realistic expectations, the researcher asks the villagers what they expected and what they learned from the PRA research process.

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So continuing with the PRA techniques, participatory rural appraisal techniques today we will be discussing some more aspects and techniques of participatory rural appraisal, one of them is folklore, songs, poetry and dance, the cultural aspect of PRA. And it is very important if you see that every states of our country India or every you take for any other country Europe or United States of America, every place has its own food habit, own dance, music, dress, so these all those things actually also comes under the PRA technique because as I mentioned at the beginning that participatory rural appraisal is a technique which involves people and it is with the people.

So folklore especially in our country various parts of has different types of folklore which are part of our life so that can also be effectively used for participatory rural appraisal. Now, some of the things which are people often ask that how they would like the things in future in their village or in their community; means what are the possibility that they anticipate within a time frame in

future could happen so some kind of prediction. What will happen if suppose everything goes business as usual means there is no kind of extra input into the system.

If there is a way to date everything is happening if it goes in the same way then how you feel that suppose within a year or six months something can happen in future so a kind of a prediction, prediction with relation to their desire, wishes, expectations which can also help in long run for a better policy making.

Diagrams is very critical for PRA exercise I mentioned earlier also so this kind of techniques using diagrams and maps, charts, photographs are very efficient techniques for PRA exercise because this brings in lot of information and it also brings out the information from the system for the people who actually are carrying out this exercise and thus it will also go for a better policy making.

Shared presentations and analysis, technically as all of us we know that it is very important for any kind of exercise to carry out information about an area. Often the participants in PRA exercise are encouraged to present their findings to the other villagers who are actually attending that PRA exercise or even to outsiders and that also gives an opportunity for other villagers or community people to interact, to correct, to modify the information which has already been gathered through the PRA exercise so in a sense shared presentation gives you an opportunity for corrections.

Night halts, you might be thinking that why I am putting this point here, I can give one of my own experience that I would like to share with you, I was working in Koraput district in Odisha in the eastern part of India in one of the project where we were working with community for livelihood enhancement through watershed management approach. Going there I found that only visiting that area during the day time will actually give me half story so to understand the entire dynamics of that particular village where I was working it was important for me to stay at least one night in that village.

So it is encouraged that if any one of you in future is involved or going to get involved into a PRA exercise please note that night provides you lot of extra information that probably will enhance the quality of your PRA exercise by multiple times. So, living in the village during this

research process of PRA exercise it facilitates some kind of special interaction during the evening time which probably in the day times you may miss it.

It also allows you to see that how the early morning because in villages early morning is very critical unlike city their day starts very early in the morning, so to capture the activities of the villagers or village community it is very important to be there right at the early morning and also join the evening discussions over a cup of tea. So, those leisure time discussions can only be possible when you decide to stay at least one night in the village where you have gone for a PRA exercise.

Short questionnaires we have already discussed that yes it helps and short questionnaires also it comes quite effectively under RRA rapid rural appraisal, field report writing of course it is important, survey of villagers attitudes towards the PRA is very important. Means when you will go first time to a area and you start your PRA activities you will find some kind of resistance also from the community because largely the rural communities are very protective about their suffering also they do not want to like to share, their difficulties that they are facing that also they do not want to share very easily. So kind of rapport building is very important.

So, before you start this activity in a full phase it is important to understand the villagers attitudes towards the PRA, so first make them ready for that and then go for the exercise that is what I would say.

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Next the organizational techniques, now this is another very important aspect of participatory rural appraisal that organizations of this entire system PRA exercise system it is important for your success of this exercise to develop a quality report which ultimately would lead to some policy preparation or policy document.

So, organizational techniques first is selection of PRA team members, very important. Selection of PRA team members will decide the success of your PRA exercise, the objectives for which actually you are going to the field for this PRA exercise, what are the different sub topics that you would like to address going into the village or going into that particular area, interview how many, when, with whom, how, these are the things that you need to take care.

Sub team meeting is very important. Suppose you have 10 members in a PRA team so it is beneficial sometimes that you divide that 10 members team into suppose two to three members; in each group looking at particular aspect and then kind of a breakup meeting you sit there separately, discuss, deliberate and then come out and again join and that is actually fruitful. whole team meeting after this sub team meeting as I said that you come back and meet all together and then finally you progress towards the report writing exercise.

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PRA tools

PRA offers a basket of tools and techniques from which those most appropriate for the project context can be selected. The central part of any PRA is semi-structured interviewing. While sensitive topics are often better addressed in interviews with individuals, other topics of more general concern are amenable to focus group discussions and community meetings.

During these interviews and discussions, several diagrammatic techniques are frequently used to stimulate debate and record 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.

Thus, the entire toolkit of PRA can be broadly classified and explained under eight (8) major tools:

✓ 1. <i>Semi-structured interviewing</i>	✓ 5. <i>Ranking</i>
✓ 2. <i>Maps</i>	✓ 6. <i>Venn diagramming</i>
✓ 3. <i>Timelines</i>	✓ 7. <i>Structured direct observation</i>
✓ 4. <i>Time charts and Seasonal Calendars</i>	✓ 8. <i>Key informant interview</i>

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Tools; very important. Some of the tools I mentioned earlier while introducing PRA technique to you. So, in PRA nowadays we have a kind of a standard tool kit which can broadly be classified or explained into eight major tools which are required for a effective PRA exercise to be carried out at any site.

First semi structured interviewing, I will discuss each one of these in detail in a couple of minutes, second maps, very important, timelines, we must have time lines for each of the component or exercise or techniques that you are going to apply for this PRA exercise. Time charts of seasonal calendars for various activities even for suppose agricultural practices on crops we should have some kind of crop calendars study under this PRA exercise.

Ranking, very important; ranking of household income, ranking of agricultural production, ranking of academic status, so these all will actually help for policy development. Venn diagram is very important and often used for such kind of exercise. Structured direct observation, structured direct observation means what you see right there in front of your eyes so that will immediately give you certain kind of feedback which you can take for certain a very pointed policy or action development for future.

Key informant interview, among the various informants means the villagers we will be helping on this exercise you need to choose one or two very smart people, smart person from the The

community who actually will provide you the final touch to the entire information that you have gathered.

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1. Semi-structured interviewing (SSI)

Purpose: To gain information from an individual or small group on an issue.

Description :

- Guided conversations where broad questions are asked by the interviewer, which do not constrain the conversation, and new questions are allowed to arise as a result of the discussion.
- This is different from questionnaires and surveys where there are very structured questions that are not deviated from. A semi-structured interview is therefore a relatively informal, relaxed discussion based around a predetermined topic.
- It engages villagers in a conversation through a series of guide questions (not structured questionnaire) relevant to the villagers. Important information is generated by talking with villagers about topics that interest them.
- SSI can be used with individuals, key informants, interest groups or other small groups of villagers (i.e. women's groups).

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So one by one now I will go through this eight major tools. Semi-structured interviewing system SSI, what is the purpose? The purpose is to gain information from an individual or small group on a particular issue very clear so you will try to get information from one individual or a small group of individual on a particular issue.

Now, what actually you do under semi-structured interviewing system, basically you carry out a guided conversation where very broad questions are asked to the people which generally allow them to talk about many other things apart from the particular aspect that you are interested for so that means it provides that particular candidate that you are interviewing enough opportunity scope to tell you something plus to the particular information that you are looking for.

So probably that would lead to a new set of questions and some further discussion. So, this is different from the questionnaires survey, semi-structured interviewing is more kind of open ended and as I said that you give lot of opportunity to the individual to share something extra than what actually we are looking at. A semi structure interview therefore is relatively informal and a relaxed kind of discussion environment that you provide to the candidate.

It also engages villagers in a conversation through a series of guided questions but not structured questionnaires. Structured questionnaires actually will have some number of questions and those questions pointed questions will be asked answer will be achieved, but here it is more open kind of discussion that you are, you are giving a direction and then you are listening more than what actually you need the information.

SSI can be used with individual, key informants, interest groups or other small groups of villagers like self-help group SHGS or any kind of women group so this actually helps you to get lot of information apart from the one that you actually want for.

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1. Semi-structured interviewing (SSI)

Procedure:

- 1) Prepare a checklist of topics and guide questions for discussion and record these in a notebook.
- 2) Select individuals, key informants, interest groups, or other small groups of villagers to interview. Get a good representation of the villagers- spatial, gender, wealth class, etc.
- 3) Observe proper interviewing techniques.
- 4) Use the checklist of topics and guide questions (see sample) but allow flexibility in the conversation so that issues can be explored as they arise.
- 5) Probe (use relevant follow up questions as needed).
- 6) Ask questions that are relevant to the villagers being interviewed (individual or group).
- 7) Use open-ended questions (not answerable by yes or no).
- 8) Record the important points in each interview in a notebook.
- ~9) Modify the checklist of topics and guide questions as new issues arise during the conversation.

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The procedures, how actually it works, first we need to prepare a checklist of topics some guide questions for the discussions and then record these in a notebook. Sometimes people also carry some pocket recorder system but I would like to suggest all of you that before you use those kind of recording system you must take permission from the people, permission from the community that you are interacting with. We must respect their privacy and their permission approval for the entire system to take place.

Selected individuals, key informants, interest groups and other solve small groups from villagers we need to interview under SSI and try to get a kind of a good representation of the village of that area across special dimension, gender, financial condition, etc. Then use the checklist of topics and guide questions but as I said that allow enough flexibility to carry on the conversation

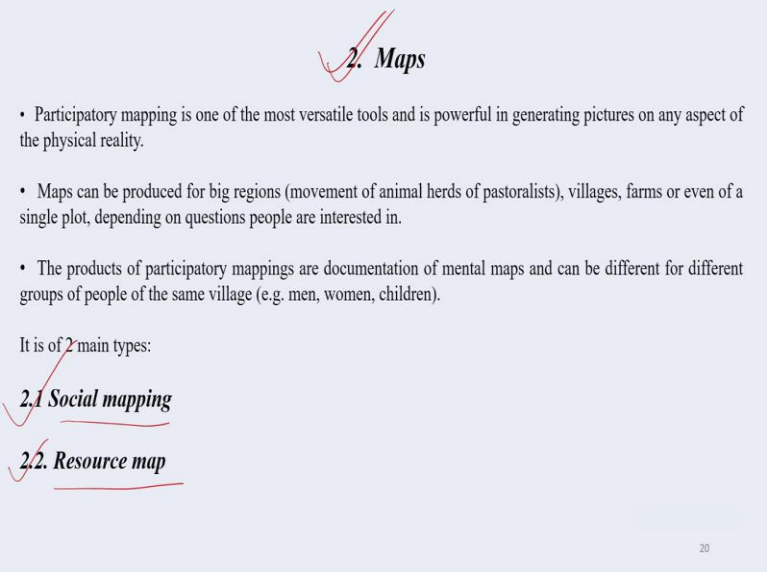
in much more relaxed manner because that is the way you will get as I said that your wanted information plus something more.

Probe, now this is a sensitive procedure. We need to probe but in a very sensitive manner. So, to find out a particular information from the community so that could happen instantly at that particular moment, suppose you ask a question to the person, he or she answers you and that lead to the another questions and then you start guiding him or her towards that direction and this thing has to take place in a very organic manner, entire process is very organic in nature and one has to really move with the flow in this kind of relation.

Ask questions that are relevant to the villagers, it is important we cannot ask we are carrying out PRA in Rajasthan and we are asking some question which is about flood, so certainly that would be little bit awkward from them and same way if you come to north east in Assam and you ask the villagers something related to acute drought so those things we need to keep in mind.

Use open-ended questions, record the important points in notebook and modify the checklist, topics, guide questions, new issues during the conversation as I just now mentioned that it will evolve with the conversation.

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2. Maps

- Participatory mapping is one of the most versatile tools and is powerful in generating pictures on any aspect of the physical reality.
- Maps can be produced for big regions (movement of animal herds of pastoralists), villages, farms or even of a single plot, depending on questions people are interested in.
- The products of participatory mappings are documentation of mental maps and can be different for different groups of people of the same village (e.g. men, women, children).

It is of 2 main types:

2.1 Social mapping

2.2. Resource map

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Now the next tool is maps, participatory mapping is one of the most versatile tools and it is powerful in generating kind of pictorial explanations of the resources and pictorial or graphical

representations of the situations of a particular area that you are actually working with and these maps can be produced using different advanced software.

But at the same time when you go to the ground level, try to utilize the local locally available material to come out with some maps, may be right on the floor where you are having the meeting discussions because that somehow generate a kind of a involvement, kind of a ownership among the community. But if you carry Apple laptop and sit in front of them and use suppose ArcGIS or something and try to do mapping in that manner, probably that may not be appreciated by the community that you are interacting with.

So the point is that even utilizing those locally available material you will get the same kind of information, same quality of information provided you guide them in the right direction. So, products of this participatory mapping exercise and then documentation of mental mapping, mental mapping is very important can be different to different group of people within same village, it could be very different from one tribal group to the other tribal group, one community to the another community, so do not get surprised that within one village you are getting two different set of information. These are treasure; so you must be open to this kind of differences within one geographical unit; this is the beauty of participatory rural appraisal exercise.

So the participatory mapping as I said that mostly we use two kind of participatory mapping, one is social mapping and the other is resource map, social mapping and resource mapping, these are the two most commonly used.

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2.1 Social mapping

Objectives:

- To learn about the social structures in the village and the differences among the households by ethnicity, religion and wealth.
- To learn about who is living where.
- To learn about the social institutions and the different views local people might have regarding those institutions.

Key Questions:

1. What are the approximate boundaries of the village with regard to social interaction and social services?
2. How many households are found in the village and where are they located?
3. Is the number of households growing or shrinking?
4. What are the social structures and institutions found in the village?
5. What religious groups are found in the village?
6. What ethnic groups are found in the village?
7. Which are the female Headed Households and where are they located?

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Now let us discuss about social mapping, what are the objectives of social mapping? Social mapping is an exercise to learn about the social behaviors, gestures of the village, villagers or village community and also the differences among various groups, religion, ethnicity, financial differences. So this allows you to understand the social fabric of an area where you have gone to carry out a PRA exercise. It also allows you to learn that who are the people living there that you are going to deal with.

It also allows you to learn about the different institution at the village level, different kind of institutions, their functionalities, their views and their way of functioning; these all actually allows you to come out with a better result under PRA exercise. So in case of social mapping basic questions that you need to keep in mind to guide the participants in the right direction are like the followings.

First what are the approximate boundaries of your village with regard to different social interaction and services? Second how many households are found in your village and how they are located? Third is the number of households growing or shrinking over a period of time? Fourth what are the social structures and institutions find in your village? Next what religious groups are found in your village? What are the ethnic groups are found in your village?. Then which are the female headed households and where are they located? This is very critical information especially for rural community and rural social fabric. So, these are the some of the key questions that we carry out during social mapping.

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2.1 Social mapping

How to facilitate:

- ☐ Ask the participants to draw a map of the village, showing all households.
- ☐ Discuss whether the total number of households has increased or shrunk during recent years. If there were any changes ask why the number has changed and whether this has caused any problem for certain families or for the community at large.
- ☐ Ask the group to also show institutions, buildings and places that offer some kind of social service or which are popular spots to meet and discuss. Example: schools, churches, health service, traditional healers, community administration, community leaders, local shop, kindergarten, places where people frequently meet, water point etc.)
- ☐ Encourage the group to discuss and show on the map which different ethnic groups are living in their village. Using a common symbol, mark those households in which the minority ethnic groups live.
- ☐ Ask the group to indicate with a symbol on the map all households that are female headed.

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How can you facilitate this social mapping process? You need to first start asking the participants to draw a map of his or her own village and then showing the households. It is very easy for them; I have seen that I have carried out many PRA exercise in many parts of the country starting from south, northeast and western part, north western part of India, so more or less most of the places villagers they are well capable enough to draw their own village, their resources, their households beautifully utilizing their locally available material.

Discuss whether the total number of households has increased over a period of time if there is any change or specific reasons that why this change has taken place, whether this change has caused certain kind of problems or some kind of issues or hurdles for only a specific group of people or families? Then you can ask the group to show the different institutions, social institutions suppose village development councils, water user group, and various institutions at the village level buildings like health center, school if they have any kind of village, knowledge center, whether people go there on regular basis to discuss about their issues. So this will also give you some kind of information about the social dynamics and the fabric of a particular area.

You should encourage the group to discuss and show on the map which different ethnic groups are living in their village and which part of their village and try to use some common symbol or marks to differentiate between different household. So, this actually will lead you a really good

PRA exercise. Ask the group and to indicate with a symbol on the map all household that are female headed.

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2.2. Resource map

Objectives:

To learn the villagers' perception of what natural resources are found in the community and how they are used.

Key Questions:

1. What resources are abundant and what are scarce ?
2. Does everyone have equal access to land?
3. Do women have access to land?
4. Who makes decision on land allocation?
5. Where do people go to collect water? ————— Distance — Women
How much time
6. Who collects water?
7. Where do people go graze livestock?
8. What kind of development activities do you carry out as a whole community? Where?
9. Which resource do they have the most problem with?

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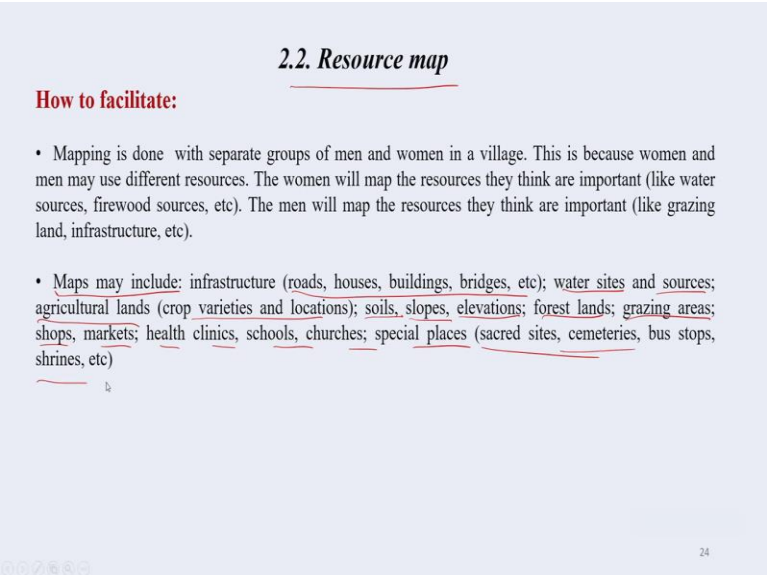
Next is resource mapping exercise. Now, what are the objectives for resource mapping exercise? It is to learn the villagers' perception of what natural resources are found in the community and how they are being used and to do that like social mapping you also need to ask couple of questions? And what are those? Number one, what resources are abundant and what is in scarce; very simple question any villager will be able to answer but that will give you a valuable information to come up with your PRA report.

Second, does everyone have equal access to land? See you are bringing in the land accessibility, land related issues here. Do women have access to land? Who makes the decision on land allocation? Where do people go to collect water? And this gives some information about distance; largely women go for fetching water so that can also talk about that how much time they actually spend behind this kind of exercise.

So, this is there about daily calendar which helps to also decide about women role in the development of an area. Who collects water? Where do people go to graze livestock, within the village, outside the village? What kind of development activities do you carry out as a whole community and where? Then which resource do they have the most problem with water, soil, plants, fish, livestock? So these are very common issues questions which any common villagers

will be able to answer you, but that will give you a kind of a solid base for preparing a wonderful PRA report.

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2.2. Resource map

How to facilitate:

- Mapping is done with separate groups of men and women in a village. This is because women and men may use different resources. The women will map the resources they think are important (like water sources, firewood sources, etc). The men will map the resources they think are important (like grazing land, infrastructure, etc).
- Maps may include: infrastructure (roads, houses, buildings, bridges, etc); water sites and sources; agricultural lands (crop varieties and locations); soils, slopes, elevations; forest lands; grazing areas; shops, markets; health clinics, schools, churches; special places (sacred sites, cemeteries, bus stops, shrines, etc)

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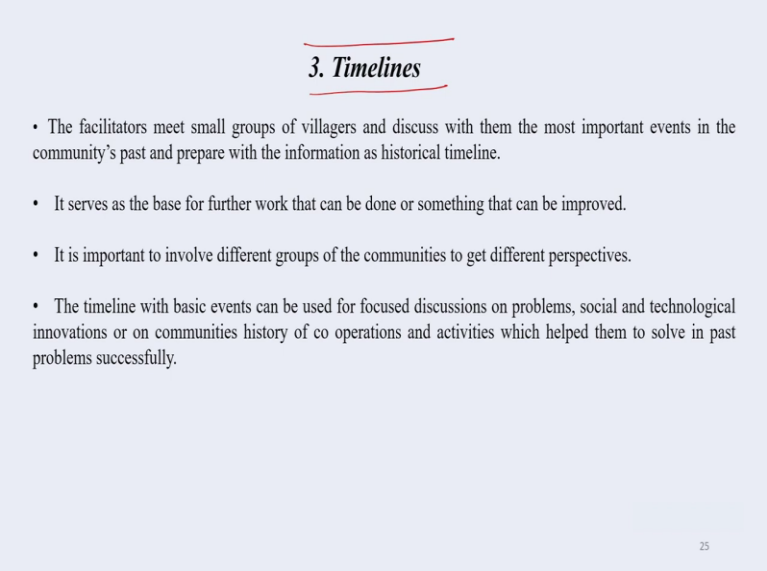
Resource mapping, how you facilitate resource mapping? Mapping normally as I said that it is done with a group of people, separate groups of men and women in a village because you will find that in case of resource mapping women and men they use different types of resources and the way they perceive the value of utility of a resource is quite different. So it is important for us that in a PRA exercise we have a little separate groups of men and women to carry out this resource mapping exercise.

The women will map you will see that resources they think according to them they think that important. What will be those? Certainly water will be number one, then fire woods, it has to do with cooking food, maintaining of house. And the men you will see that they will say like grazing land, pasture, infrastructure so the resource mapping exercise if you carry out making women and men little separately it would give you a better outcome. So, the resource map may include infrastructure like roads, houses, building, bridges, school, health center, water sites like pond or tanks in South India people call it agricultural land what kind of crop varieties, locations.

Soils, what kind of soils you have because that also decide that whether you need apart from rain you need little bit of irrigation. Slope of plant that will decide your rate of erosions, elevations, forest land, grazing areas, shops, markets, health, clinics, schools, churches, special places like

cemeteries, bus stops, these all information together they will give you a kind of a excellent foundation of a very quality PRA report.

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3. Timelines

- The facilitators meet small groups of villagers and discuss with them the most important events in the community's past and prepare with the information as historical timeline.
- It serves as the base for further work that can be done or something that can be improved.
- It is important to involve different groups of the communities to get different perspectives.
- The timeline with basic events can be used for focused discussions on problems, social and technological innovations or on communities history of co operations and activities which helped them to solve in past problems successfully.

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Next is timeline. very critical for PRA exercise, what actually in timeline we need to do. The facilitators like suppose you and me who go for to carry out the PRA exercise, we need to meet a small group of villagers and then discuss with them the most important exercise or event taken place in the community in the past few months or a year and then you prepare a kind of a historical timeline of events for that particular area.

What it does, it serves as the base for your further planning that you could like to do because if you know the history of that particular area over a period of time then you can actually plan efficiently that in which direction for that particular area you would carry out your PRA exercise. It is important for us to involve different groups of communities to get different perspectives. So, time and again I am stressing on one point is that different perspective, you involve different gender, different religion, different section of people because everyone probably look at one aspect little differently.

And to come out with a very good PRA report which ultimately will also lead to a very good policy making exercise which should not ideally miss any kind of perception in a particular area, so our job would be in that exercise to capture as much possible information as we could do within the given time frame. So the timeline with basic events can be utilized for a focused

discussions on different problems, issues in a particular area that could be related to their livelihood, education, health, technology, so various aspect transport, communication so basically with this timeline you plan or chalk out your strategy for carrying out the PRA exercise.

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4. Time charts and Seasonal Calendars

A seasonal calendar is a PRA method that determines patterns and trends throughout the year in a certain village. It can be used for purposes such as rainfall distribution, food availability, agricultural production, income, expenditures and others.

Objectives:

To learn about changes in livelihoods over the year and to show the seasonality of various aspects of a community.

Key Questions:

1. What are the busiest months of the year?
2. At what time of the year is food scarce?
3. How does income vary over the year for men and women?
4. How does expenditure vary over the year for men and women?
5. How does rainfall vary over the year?
6. How does water availability for human consumption vary over the year?
7. How does livestock forage availability vary over the year?
8. How does credit availability vary over the year?

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Time charts and seasonal calendars, these are very important aspect for also a fruitful PRA exercise what are time charts and seasonal calendars, what they talk about. A seasonal calendar in a PRA method, it determines the patterns or the trends throughout the year in a particular area about the cropping system, about land management, various aspect of their life. It can be used for purposes such as rainfall distribution, food availability, agricultural productions, income, expenditures various other aspect. So, time charts and seasonal calendars for an area is very critical for devising any kind of policy tool or intervention.

What is the objective? The objective is to learn about the changes of livelihoods over the year and to show seasonality of various aspect of a community, very clear cut objective. Now, to do that what are the questions we are supposed to ask the community that we are going to interview? Very simple questions, what are the busiest months of the year for you, you can ask that question, community people will be very easily able to answer this largely for Indian conditions May, June, July, August is kharif season in northeastern part of India we call it SRI rice.

So kharif season means the rainy season is a one of the busiest seasons for our farmers, so because of their farming activity. At what time of the year is food scarce? When actually you face difficulty with food availability? Next, how does expenditure vary over the year for men and women? Then next question is how does rainfall vary over the year? Of course, rainfall variations is not in our hand but it is important for us to track and know the trend because that will help us to decide when and how much to irrigate if at all it is required.

Next question, how does water availability for human consumption is required or varying over the year? How does livestock forage availability vary over the year? Because livestock is also a very important component of rural community in India and many parts of Indian subcontinent to be precise.

Then how does credit availability vary over the year? Because see, many activities at the village level even for simple reason for somebody's marriage they may need credit from someone. So, the requirement of credit can also vary in a season and the availability of credit can also vary in season to season. So these all time charts or seasonal calendars are very important to decide what to do and when to do.