Different techniques in Participatory Rural Appraisal (PRA)

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Abstract: RRA is a social science approach that emerged in the late 1970s. The basic idea of RRA is to rather quickly collect, analyse and evaluate information on rural conditions and local knowledge. This information is generated in close co-operation with the local population in rural areas. Therefore, the research methods had to be adjusted to local conditions, i.e. they had to meet the communication needs of illiterate people or people who are not used to communicating in scientific terms. Participatory Rural Appraisal (PRA) as a method falls under the qualitative and participatory group of research methods. PRA is intended to enable local communities to conduct their own analysis and to plan and take action . PRA involves project staff learning together with villagers about the village. The aim of PRA is to help strengthen the capacity of villagers to plan, make decisions, and to take action towards improving their own situation. Participatory Rural Appraisal (PRA) is considered one of the popular and effective approaches to gather information in rural areas. This approach was developed in early 1990s with considerable shift in paradigm from top-down to bottom-up approach, and from blueprint to the learning process.
[Mojtaba Sadighi, Mehran Bozorgmanesh and Mohammadreza Ghaffari. **Different techniques in Participatory Rural Appraisal (PRA)** .Nature and Science 2011;9(4):118-124]. (ISSN: 1545-0740). http://www.sciencepub.net/nature

Keywords: Participatory Rural Appraisal (PRA)

Introduction:

PRA requires researchers / field workers to act as facilitators to help local people conduct their own analysis, plan and take action accordingly. It is based on the principle that local people are creative and capable and can do their own investigations, analysis, and planning. The basic concept of PRA is to learn from rural people. Chambers (1992) has defined PRA as an approach and methods for learning about rural life and conditions from, with and by rural people. He further stated that PRA extends into analysis, planning and action. PRA closely involve villagers and local officials in the process. Similarly, Rapid Rural Appraisal (RRA) reflects the new thinking about development, needs, and people oriented responsibilities. It is a process that is highly systematic and structured, relying on interdisciplinary teamwork and special strategies for data collection and analysis such as triangulation, probing, and iteration. Some critics consider RRA to be a quick and dirty technique(Guijt, 1998).

There are a wide range of participatory tools and techniques available. People can use these tools and techniques according to their situation or needs. Generally, the application of different tools may vary from one situation to another. However, the process for conducting RRA/PRA remains the same.

The most common methods are the following:

1- Diagramming, Mapping and Modeling:
- transects
- maps (resource, social, farm)
- venn diagrams
- seasonally analysis
- historical analysis (time lines, trend lines, activity profiles)

2- Ranking and scoring
- pair wise ranking
- matrix ranking
- matrix scoring
- well-being analysis and wealth ranking
- proportional piling
- pie charts (injera charts)

3- Problem analysis
- identification and specification
- causal chaining
- prioritization

Community Sketch Maps

The purposes of community sketch map or a model: is a visual representation of what the community perceives as their community space. This include showing the shape (appearance) of the community, boundary and all the major features as understood and known by the community(Scrimshaw and Gleason, 1992).

The map shows where resources, activities, problems and opportunities are located, as well as the dimension and scope of issues to be investigated. It is critical to understanding the boundaries and characteristics of the community involved.

Topographical data (elevation, slope, drainage etc.)

Topographical data are basic when drawing a map of community, so is information on soils, vegetation, water availability, road, schools, health facilities etc. There are different sketch maps known for different purposes.

Some of them include(Dunn, 1992):

A. Social maps: Specific type of topical map representing households according to certain indicators.
- Indicates where people live and how many people live in an area
- Social and residential differences in status and wealth
- Buildings where people live or work, uses of space in a house

B. Physical and resource maps: drawn by the people to show natural resource of an area, location and use of natural resources.
- fields and land uses
- physical land features
- water location, quality and use
- soil types, uses, location

C. Topical maps: specific topic maps are drawn to draw attention to a particular type of information of the area, example:-
- location of forest resources
- soil types
- different crops grown
- houses and the number of people live in
- social & economic infrastructures etc.

D. Farm sketch: Making a farm or compound sketch highlight details that would otherwise be lost in a smaller scale maps.

Procedures for collecting spatial data
Who draws the maps?
The community members of their representatives together with the PRA team and the local extension field staff undertake this exercise. The various parties having different but complementary ideas to the process.

HOW?
The community members are the best experts of their area. While it is tempting for a team member to take charge and save time by drawing the
map, it is advisable to let ordinary villagers draw the map on the ground. Literacy is not necessary in order to draw a map of one's place. The PRA team should explain the process clearly. The sketch map is drawn using their fingers, sticks and other locally available materials such as pebbles, leaves, and flowers. The community should be guided through questions to draw the map of their community territory of application(IUCN, 2001).

Community sketch map helps in defining micro-zones, knowing about disparities in wealth, differences in land use. This exercise provides to locate areas where particular problems are thought to be prevalent. The map is also used to lay the transect route. While the map is still on the
ground the community members mark the most representative cross section of the community.

How should one proceed to sketch maps or models?
Before:

- Decide what type of map you want
- Bring people together who will have some knowledge about the area and can contribute
- Choose suitable time and place
- Bring materials with you on which you can copy a map drawn on the ground(Scoones, 1993).

During:
Try to minimize your own participation be an observer?
- Encourage by asking op0en questions
- Encourage the use of different materials, i.e. flowers, twigs, sticks etc
- Be patient!(Swift and Umar, 1991)

After:
- Maker a copy of the map or model, including mapper's names
- Try drawing the same type of map with different groups of people. i.e. one group of women, a group of old men and the young
- Keep it simple
- Orient it appropriately
- Cross-check the map, compare with what you see
- Draw it in the area of study with the local people.

Mobility diagram
The community can get goods and services from different places. Some resources will be available with in the PA, others on the boundaries of the community. People daily, weekly and occasionally fetch for those resources in and out of their area. Therefore they travel long distances under difficult situations.

Purpose
The diagram is used to understand the places traveled, resources collected and to identify the persons travailing. The resource centers could have problems and the road and means of transportation may not be appropriate, PRA team needs to know the critical goods and services that people travel to fetch for.

What?
The community center and the places of goods and services are listed. The pull factors and the reasons for not having the resource at the center are recorded. The team tries to understand the condition of the resources, and opportunities to establish with in the community. The community members may face difficulties on the road and may also be inconvenient to get goods and services at the destination(Uphoff, 1992).

Who?
The PRA team identifies individuals or groups who travel to other places on a purpose. Discussion with men and women travelers can give a clue about resource scarcity(Mukherjee, 1992).

How?
- Select informants who travel for resources
- Write down as many places as possible visited and resources the most wanted.
- The difficulties faced on the way and at the destination

discussed
- The informants mark on the ground the starting point and destination for different resources or services.

Application
The PRA team and informant record resources in short supply and the reasons for not having in the community. The community action plans include ways and means to get critical resources in the future. The difficulties faced on the road and at the resource center (destination) taken due consideration for improvement(Clayton, 1997).

Gender daily calendar:
Purpose
Most daily activities in traditional rural, societies are managed along gender lines. There are activities that are specifically performed by women, men or children. In some communities gender role divisions are still pronounced. In such cases it is necessary for the PRA team to be aware in order not to be seen as interfering with the community cultural norms specific gender roles so that new programmers are not introduced to overburden an already overworked group. Introducing gender awareness in PRA helps a community to begin examining itself(NCAER, 1993).

Who
Community members both men and women, young and old should be in attendance. PRA team members, men and women and local extension staff in the analysis of gender roles and responsibilities.

How
It is better if the community is allowed to lead gender related discussions. The PRA team facilitates discussions through a neutral process of mapping out a gender daily calendar. Men and women discuss on each daily activities on agreed season (raining or dry season). The groups on their timetable, from the time they wake up in the morning to the time they got to sleep in the evening.

Application
Gender daily calendar provides a clear picture of who does what in the community. It will help in the formulation of the community Action Plan. The community will become aware that unless some changes in gender relations are effected rural development will not proceed as quickly as they would like it to be(Holland, 1998).

_ **Daily-activity profiles** -- Researchers can explore and compare the daily-activity patterns of men, women, youth, and elders by charting the amount of time taken to complete tasks.
_ **Semi structured interviewing** -- A semi structured interviewing and listening technique uses some predetermined questions and topics but allows new topics to be pursued as the interview develops. The

interviews are informal and conversational but carefully controlled(Chambers, 1994).

Semi structured interviews (SSI)
SSI is a guided interview here the major topics and a few key questions are formulated before the interview. But many new additional are asked during the interview based on answers to the key question.
Types of SSI:
1. The individual interview
- Get representative information about the society form individual informants
- Ask individuals at a time
2. The key informant interview
- Get specialized information from one or group of persons about the community
- Informants with specialized knowledge
3. Group interviews:
- Useful for obtaining general information about the community
- Better for cross checking information
- Group interviews require very careful preparation
- The ideal group is 8 – 15 people

_ **Types, sequencing, and chain interviews** -- Individual, pair, and group interviews are combined in a sequence to take advantage of key informants and specialist groups.
Using secondary sources
- Secondary sources of information include previously written documents maps, diagrams, tables etc
- Review secondary sources before beginning field survey is census data, aerial photos, marketing reports, etc.
- In reviewing secondary sources, you should keep summary notes, in the form of short paragraphs, diagrams, charts, etc
- In reviewing secondary sources, you should keep summary notes, in the form of short paragraph, diagrams, charts, etc.
- Be as critical as possible in reviewing secondary sources
- To develop understanding of local livelihoods
- Short period of time

Venn Diagram (Institutional analysis)
Venn diagramming is a method to find out who, what person or organizations are important in and for a community.
Purpose
To identify groups and institutions operating in the community and to show how they interact with each other To show the degree of their cooperation and involvement in development programs. To discover their important or influence on decision making in the community.

What?
Venn diagrams have been used with in PRA in institutional context to discuss:
- The role and significance of various institutions
- Levels of communication between organizations
- The role of project bodies and their intervention Improving missing links between existing organizations,
- Potential for working through existing organizations, which ones and with which links.
- Potential roles for new organization
- Formal and non-formal groups and their levels of cooperation
- Communities perceptions of the institutions, always
Who?
The PRA team, key informants as elders, religious leaders, extension staff and other knowledgeable person take the responsibility of listing and
evaluation of individuals and institutions influencing decision making of the community.
How?
List institutions in the community and discuss importance of each institution and what they do. Make different sized circles and not which circle represents each institution i.e. big circle very important and decision maker, small circle with little importance. During overlapping the circles, the size of the circle indicates the importance of the institution, the distance between the circles indicate the degree of contact between institutions. For instance a large overlap high interaction. No overlap distant relationship.
Application
Identify individuals, groups or institutions. Important in the lives of people and establish close relationship with them. Provide the necessary support and effectively utilize their skills and experiences.

_ **Participatory diagramming** -- People are encouraged to display their knowledge on pie and bar charts and flow diagrams.
_ **Wealth and well-being rankings** -- People are asked to sort cards (or slips of paper) representing individuals or households from rich to poor or from sick to healthy. This technique can be used for crosschecking information and for initiating discussions on a specific topic (for example, poverty). The technique can also be used to produce a benchmark against which future development interventions can be measured or evaluated(Blackburn, 1999).
Ranking and scoring
Presentation:
A way in which various kinds of things can be compared according to different qualities people value. It places in an order of what is more or what is less important.
Purpose
Ranking methods allow us to see individual and group

priorities among a number of alternative problems or solutions. It helps to generate reasons why people choose one item from the other.
What
People could use three different ways to generate a criteria for comparison and make up their choices.
(1) preference ranking
(2) pairewise ranking
(3) direct matrix ranking
(4) and direct matrix scoring
Preference ranking method helps to quickly get a good idea of what people think are the priority problem or preferences. The criteria attached to make up a choice is used to consider in the action plan. Individuals or groups vote on the items from most important to least important item. The choices could be between crop varieties, water points, food diets, livestock species, problems, solutions and many different issues, which require preferences. Paire wise ranking is used to compare between two items and make up a choice. It is more useful for exploring the reasons why people prefer one possibility over another. The moment a preference is made lots of criteria are explored to compare items using a group of criteria before a choice. Direct matrix ranking is used to list items to be compared along horizontal line and criteria on the vertical line to rank choices from most important to least important (i.e. 1st, 2nd, 3rd, 4th etc) In this case frequency of the items valued as the 1st choice helps to make up a final decision. Direct matrix scoring helps to attach a score to a comparable items against each criteria listed before a choice. A comparison could be made out of a score of 10(for instance) a comparison could be made between many items against one criteria set, and attach a score out of a maximum of 10 to items to be chosen. The frequencies of the highest scores (closer to 10) attached against many criteria helps to make up a decision for preference.
Who
Ranking and scoring could be done with individuals, households, community members deliberately selected and with mixed group of men, women, traditional leaders, local officials, extension workers etc. The group combination depends upon the issues to be ranked. Who should decision on the issues to be compared? Leads to the choice of informants.
How
The groups for discussion lists items to be compared. Let them generate either directly or thorough pair wise comparison criteria for ranking. Putting in an order of importance or ranking could be done through ranking order, scoring or key voting, from the most to least important. Thorough courting frequencies list in ranked order the items to be compared and make up a decision. The final choice could be made through group of criteria or a single but most important critieria. Some

times, the period for ranking (emergency) or vested need to the item may influence decision-making procedures. While listing criteria, do not mix up. PRA teams criteria with those of the informants. Use positive criteria for comparison

Application

Community action plans are developed on the basis of peoples preferences. The problems, solutions technical inputs etc are arranged on the interests of the users(Appleyard, 1998).

_ **Direct-matrix pair-wise ranking and scoring --** Direct-matrix pair-wise ranking and scoring is a tool used to discover local attitudes on various topics. People rank and compare individual items, using their own categories and criteria, by raising hands or placing representative objects on a board. For example, six different shrubs can be ranked from best to worst for their fuel, fodder, and erosion-control attributes. Other resources can be ranked in terms of taste or marketability. Wealth ranking can be used to identify wealth criteria and establish the relative position of households(Carmen, 1996).

_ **Matrices --** Matrices can be used to gather information and to facilitate or focus analyses and discussions. For example, a problem opportunity matrix could have columns with the following labels: soil type, land use, cropping patterns, and available resources; and rows with the following labels: problems, constraints, local solutions, and initiatives already tried.

_ **Traditional management systems and local-resource collections --** Local people collect samples (for example, of soils, plants). This can be an efficient way to learn about the local biodiversity, management systems, and taxonomies.

_ **Portraits, profiles, case studies, and stories --** Household histories or stories of how a certain conflict was resolved are recorded. This can provide short but insightful descriptions of characteristic problems and how they are dealt with.

_ **Key probes --** A question addressing a key issue is asked of different informants, and the answers are compared. The question might be something like "If my goat enters your field and eats your crops, what do you and I do?"

_ **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. The

exhibition can inspire other villagers to take part in research activities.

_ **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 halts --** 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 --** Short and issue-specific questionnaires can be useful if conducted late in the research process.

_ **Field report writing --** Key findings are recorded before "leaving" the village. (This assumes that the community has consented to having the research data leave the village.) Brief summaries are made of each diagram, model, and map, as well as of the process involved in creating them.

_ **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.

_ **Intriguing practices and beliefs --** Indigenous practices and beliefs are noted, even if they are based on myth or superstition. Even practices that are unusual or don't fit in with conventional scientific thinking are worth exploring because they are meaningful to local people.

CONCLUSION:

As a result of the PRAs, the communities are expected to attain many benefits including:
• Expressing their own ideas and concerns;
• Organizing their knowledge about the past and present;
• Identifying as a community their problems, the causes of these problems and possible solutions;
• Developing a common plan to address these problems;
• Developing the ability to use their own resources more effectively and attract more resources from the outside.

The academicians/researchers involved in the PRAs are expected to get the following benefits:
• Developing better understanding of rural environments and social as well as economic dynamism taking place there;
• Appreciating the fact that communities are capable of analyzing their problems and outlining possible solutions to their problems;
• Participating in designing possible solutions to community problems;
• Utilizing the results of the PRA work as a research output for publications and presentations;

• Building their research and problem investigation capabilities;
• Supporting their classroom discussions to students with practical examples from the PRA findings.
The main objectives of the current PRA are:
1. empowerment of rural communities by assisting them to systematically utilize their local knowledge to identify problems and strengths, develop skills of analysis, and design appropriate mechanisms for intervention by themselves and/or by development agents;
2. advancement of understanding by academicians/researchers of local knowledge and acknowledgement of the capacity of communities to gather data, conduct analysis, and identify as well as prioritize problems and solutions;
3. utilization of the research questions/problems identified during the PRAs for further investigation;
4. documenting and presenting the outcomes of the PRAs to development agents (governmental and non-governmental) and other stakeholders so that they could undertake interventions in line with the findings.
PRA consists of a series of participatory exercises which help community members better assess their history, resources, and overall situation as concerns agriculture, health, marketing, credit, coping mechanisms, education, and other important areas.
During the conduct of the PRAs, rural communities in the selected villages will gather information on the resources they already possess; organize their knowledge; share experience among themselves; learn from each other; identify and prioritize local development needs; and develop action plans which respond to these needs.

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REFFRENCESS:
1. Blackburn, J. and J. Holland (eds). Who changes? Institutionalizing participation in development.London, UK. IT Publications, 1999.
2. Carmen, R. Autonomous development. Humanizing the landscape. An excursion into radical thinking and practice. Zed Books, London, UK. 1996.
3. Chambers, Robert, "Methods for analysis by farmers: The professional challenge," Journal for Farming Systems ResearcWExtension, Vol. 4, No. 1 (1994). pp. 87- 101.
4. Chambers Robert, Notes for Participants in PRA/PLA Familiarization Workshop in 2004.
5. Clayton, A., P. Oakley and B. Pratt. Empowering People - A Guide to Participation. UNDP, 1997.
6. Cornwall, A. Making a difference? Gender and participatory development. IDS discussion paper 378, 2008.
7. Drummond, and Nontokozo Nabane, "The use of indigenous trees in Mhondoro District" (Harare: Centre for Applied Social Sciences, June 1992).
8. Dunn, A. M., "New challenges for extensionists: Targeting complex problems and issues," Paper for the 10th European Seminar on Extension Education, Universidade de Tras-os-Montese Alto Douro (Vila Real, Portugal: September 1991).
9. Ekins, P., Wealth Beyond Measure: An Atlas of New Economics (London: Gaia Books, 1992).
10. Gibson, Tony, "Planning for real: The approach of the Neighbourhood Initiatives Foundation in the UK," RRA Notes, No. 11 (1991) pp. 29-30.
11. Guijt, I. and M.K. Shah (eds). The Myth of Community: Gender issues in participatory development. London: Intermediate Technology publications,1998.
12. Gueye, Bara, and Karen Schoonmaker Freudenberger, MPthnde AccPler& de Recherche Participative (London: BED, August 1991).
13. Hahn, H., Apprendre avec les yeu, s'exprimer avec les mains: des paysarts .se,fiument ir la gestion du terroir (Switzerland: AGRECOL. Oekorentrum, Langenbruck, 1991).
14. Holland, J. and J. Blackburn. (eds). Whose voice? Participatory research and policy change, London, UK. IT Publications, 1998.
15. lnglis, Andrew Stewart. "Harvesting local forestry knowledge: A field test and evaluation of rapid rural appraisal techniques for social forestry project analysis," Dissertation presented for the degree of Master of Science (Edinburgh: University of Edinburgh, 1990).
16. IUCN. Seek... and Ye Shall Find: Participatory Appraisals with a Gender Equity Perspective. Module 2 of the ORMA modules towards Equity, 2001.
17. KGVK. Mancrjiemrnf Training Mnnuul (Bihar, India: Krishi Gram Vikas Kendra, Ranchi, Bihar, 1991).
18. Mukherjee, Neela, "Villagers' perceptions of rural poverty through the mapping methods of PRA," RRA Nores, No. IS (1992). pp. 2 l-26.
19. NCAER. Comparatil'e Study of Sample Survey and Ptrrticipatotyv Rurtrl Apprnisul Methodologies (New Delhi: National Council for Applied Economic Research, I1 lndraprastha Estate. November 1993).
20. Pottier, Johan. "Agrarian change at the household level: A note on investigative styles in research on Mambwe Agriculture (Northern Zambia)," in

Preben Kaarsholm (Ed.), hstitutiom. Culture and Change at Local Community Lervl. Intenmtiorul Development Studies Occasional Paper (Roskilds, Denmark), No. 3, (1992). pp. 61-74

21. Pretty. Jules N., "Participatory inquiry and agricultural research" (London: BED, 1993).

22. Scoones. Ian. and John Thompson, "Challenging the Populist Perspecti\~e: Rurcd People's Knor~'ledge. Agricultural Research and E,uensio,l Practice. " Di.scusvion Paper 332 (Brighton: IDS. University of Sussex. December 1993).

23. Scrimshaw, Nevin S., and Gary R. Gleason (Ed.), RAP Rapid A,ssessment Procedures: Qualitative Methodologies .ji>r Planning and Evaluation of Health Related Programmes (Boston MA: International Nutrition Foundation for Developing Countries, 1992).

24. Swift, Jeremy, and Abdi Noor Umar, Participcrtorv Pustortrl De!vlopment in Isiolo Di.ytri(.t: Sorio-rconornic Rrsenrch in the Isiolo Livestock Development Project (Isiolo. Kenya: Isiolo Livestock Devjelopment Project, EMI ASAL Programme. 199 I).

4/1/2011