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PRA/RRA-Techniques

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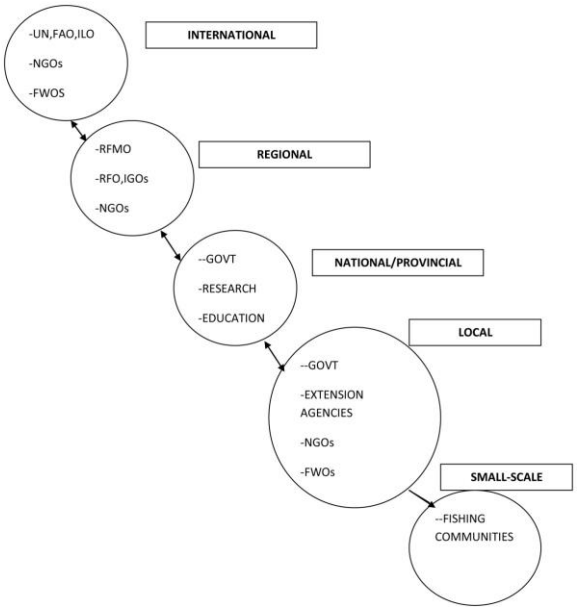
Introduction:

Information and Communication Technologies

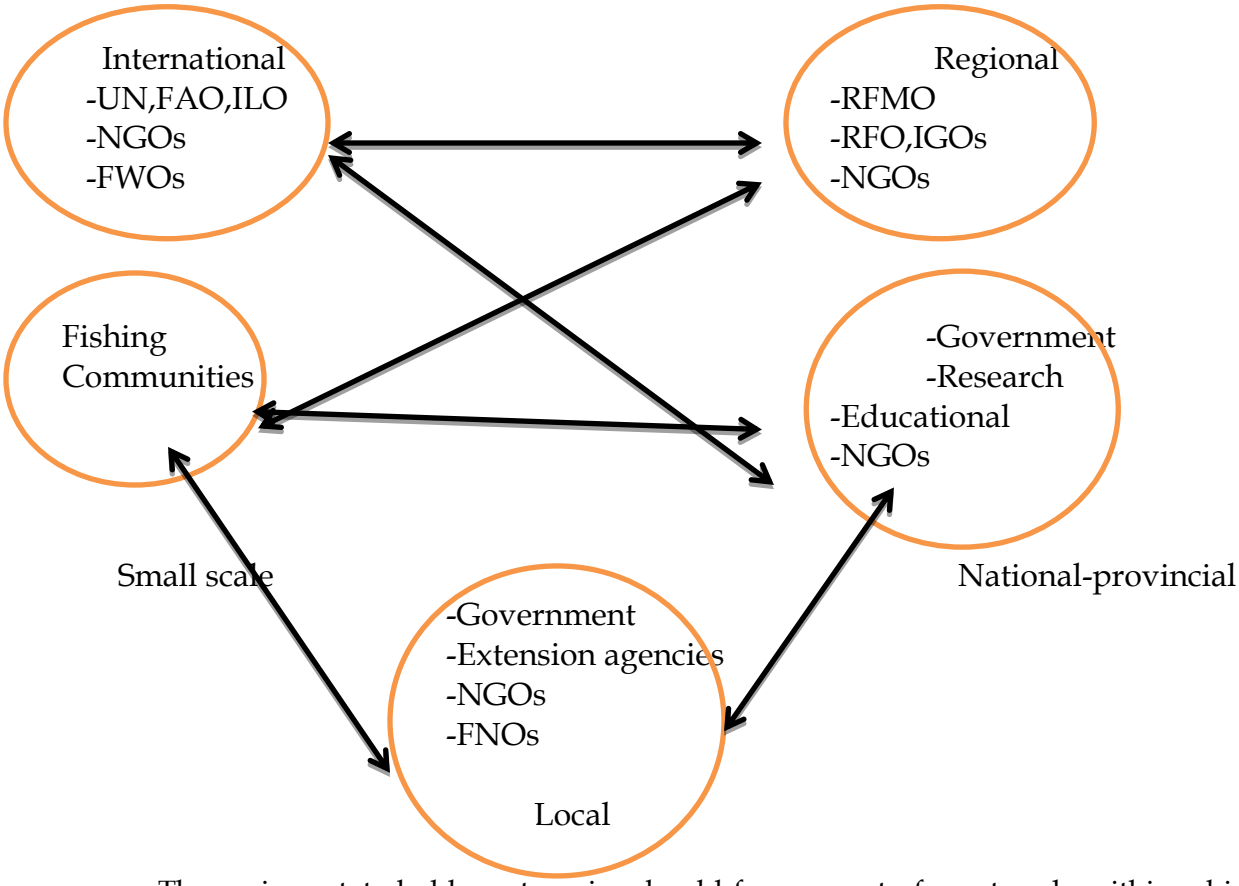
ICTs are technologies that facilitate communication and the processing and transmission of information by electronic means. This definition encompasses the full range of ICTs from radio and television to telephones, computers and the internet.

Figure 1. Current Information flow



The flow of information becomes more linear as it approaches the resource users, particularly in the small scale sector. The dotted lines indicate a less frequent and less effective flow of information

Figure 2. Required information and Knowledge flow



The various state holder categories should force a part of a network, within which smaller, more specialized or focused networks already operate.

Fisheries Management Practices and the flow of information.

The way the fisheries are managed and the participation by different state holder groups has implications for information provides as well as management decision makers.
The recent developments in fisheries management have revolved around the ideas of decentralization, devolution, regionalization & participation
The code emphasizes a participatory approach including consultation among state holders and the effective participation of industry representative fish workers in decision making processes & in policy formulation and implementation

Characteristics of fisheries Information:

1. Fisheries information is broad by multidisciplinary

2. It has depth in terms of time and perspective older information is valuable and more essential for effective fisheries management
3. It involves various scales from very local to global. The local has to be integrated with the global as fisheries resources are shared across space and time
4. It comes from a complex mix of sources information from different sources and disciplines may be at times contradictory.

New information and communication technologies (ICTs) are being used across the fisheries sector from resource assessment, Capture a culture to processing and commercialization. Some are specialist applications such as sonar for locating fish others include the global positioning system (GPS) used for navigation, location finding, mobile phones for trading, radio programming with fishing communities and web – based information & networking resources. These wide ranges of technologies can be adapted and introduced in the remotest of rural communities leading to a positive impact on their lives.

ICTs are thus defined as technologies that facilitate communication and the processing and transmission of information by electronic means
Responsible use of ICTs can contribute constructively to livelihood enhancement and poverty reduction in fishing communities

Access to and exchange of key information can assist fishing communities in making informed decisions on a variety of matters from whether to engage in specific fishing operations to trading at a local market to participate in a meeting.

ICTs can also assist people to be heard encourage networking, knowledge sharing and increase access to the governance process and political agency.

Flow ever there are concerns that marginalized and vulnerable communities may not benefit equally and that ICTs can contribute to widen the gap between rich and poor the powerful and exploited. Functional literacy may be needed for many digital technologies, which in turn requires new skills and capabilities.

In the long run, raising demand, falling equipment prices, growing integration and interconnectivity of ICTs suggests the spread of these technologies.

Keeping in view, the enormous potential of ICTs, it is argued that there is argued that there is an agent need for ensuring that

- The exploitation and spread of new technologies in fisheries is oriented towards meeting the needs of the poor
- Use of new technologies in fisheries in integrated into participative, people Centered Communications for development and knowledge sharing approaches.

Electronic technologies used in fishing operations

- Used as navigational aids and satellite enable communication systems such as GPS to mark fishing spots for easy return, saving time and fuel.
- Once on fishing grounds, sonar and echo sounders can be employed to locate specific shoals of fish

At present, sonar- based "fish finders" are getting cheaper, with local NGOs and fishing associations promoting their use for small scale fisheries, They can be installed in Telecentres-eg the one at M.S Swaminathan Research Foundation Pilot at Veerampattinam, Pondicherry, South India.

Key ICTs are:

1. Community or loudspeaker radio- price information received by the radio station or researched via specialist websites at the local telecaster is passed on to the community through established communication channels.
2. Mobile phone- providing there is network coverage, fishers, buyers and merchants communicate through voice calls, via SMS messages, Catch can be sold, white out at sea, buyers and processers can be informed of catch details before landing.

Abraham (2007) in his study on mobile phones in the fishing industry in India has found out that the fishing community in the southwestern state of Kerala has adopted mobile phones in large numbers. Using mobile phones at quickly to market demand and prevent unnecessary wastage of Catch – a common occurrence before the adoption of phones.

At the marketing end, mobile phones help Co-ordinate supply and demand and merchant can take advantage of the free flow of information on price to catcher to demand in undersupplied markets.

Fishermen spend less time idling on share and at sea, whereas owners and agents go to the landing centers only when they receive information via mobile phone that their boats are about to dark.
Reference: Reuben, Abraham (2007) Mobile phone and Economic development: Evidence from the fishing industry in India Information Technologies and International development Volume 4, Number 1, 5-17.

Wastage in fisheries sector in India has been reduced from 5-8% of total catch to lose to zero and increased average profitability by around 8 percent (Jensen, 2007)

Initiatives in the Fisher sector

ATIC- Agri Technology Information Centre acts as a single window system with an objective to help farmers and other state holders to provide solution to fish farmers and farmers, fishermen and fisherwomen.

Kisan call Centre: The department of agriculture & Co-operation Ministry & Agriculture, Government of India has launched Kisan Call Centre across the country to deliver extension services to the farming community. A Kisan call Centre across the country to deliver extension services to the farming community. A Kisan Call Centre consists of a complex of telecommunication infrastructure computer support and human resources organized to respond to the queries raised by farmers in their local language.

Form school on all India Radio:

Radio has been used extensively as a educational medium in developing countries. Each broadcast ends with few questions to encourage participation and the audience are asked to send in replies with in a weeks time.All India radio Cuttack recently broad casted 11 lessons related to aquaculture

Aqua choupal:

Unique web based initiative offers the farmers of Andhra Pradesh all information on products, Services, need to enhance productivity, improve farm gate price realization and cut transaction coast Farmers can allers the latest local and global information in weather, scientific farming practices and market prices at village itself through a web portal all in Telegu. It facilitates supply of high quality form inputs as well as purchase of shrimps at their doorstep.

Information Villages:

Was set up by Mr.Swaminathan foundation in 1998 in 10 villages in Pondicherry. The project includes local language content and wireless internet access. It also provides relevant information regarding fish density in the ocean to the fishing communities.

Village Knowledge Centers:

In the wale of the Tsunami in 2004, village knowledge centers have been widely set up in major Coastal villages of selected districts. The knowledge centers are run by local self-help groups NGOs and villages to knowledge based livelihoods and creates income avenues for rural people, farming communities and disadvantages people.

Use of PRA and RRA in Responsible Fisheries Management

PRA and RRA (Participatory Rural Appraisal and Rapid Rural Appraisal) methods are new being used in Responsible Fisheries Management.

In the Bang Saphan Bay pilot project, in Thailand implemented by the Department of fisheries, the PRA method was used as an interactive data collection method, for the fishers

to ask about where, when and how they fish with different types of fishing gear and the kind of species they catch.

The local fishers knowledge collected through PRA is systemized into a Geographical information system (GIS), using relevant software (eg grass)

The knowledge base covers areas where they find resource species, location of fishing areas, used by different types of fishing gear and the overlapping use of resources by fishers from different villages

Eg: Preparations of resource maps by PRA method was followed by the local fishers' .It was effective in identifying, locating and classifying the resource occurrence distribution, tenure, access and areas where illegal fishing is done can be identifying in this manner.

HISTORY OF RURAL APPRAISAL AND RELAXED RURAL APPRAISAL

It was the late 1970s when rapid rural appraisal came to lime light. There was an urge among the rural development professionals to find out new methods, ways and means for understanding rural situation, way of living of the villagers, problems of rural folk etc.

Workshops

The workshop on 'rural development tourism' organized by Institute of Development Studies, which comes under the umbrella of Sussex University at Brighton in United Kingdom, in 1977 paved the way for outsiders (Rural development officials, extension workers, administrators, scientists, students, teachers and others) to think about alternative methodologies for knowing about rural life and conditions. Subsequent workshops like 'Indigenous technical knowledge workshop, conducted in 1978, the two workshops organized under the 'Rapid Rural Appraisal itself' in the same year (1978) and the next year (1979) at the same institute (Institute of Development Studies) made further emphasis for the need for methodological change of studying the rural life.

The six origins of Rapid rural Appraisal

Literature indicates that there were six origins for the birth of rapid rural appraisal (RRA).

They are:

1. Need for better information
2. We- the problems- they – solution
3. Obsolete experience of senior (male) officials
4. Antipoverty bias
5. Disillusion with survey slavery
6. Indigenous technical knowledge

1. **Need for better information:** Because of a variety of technologies pouring into villages from different fields of science like agriculture, health. Sanitation, engineering, etc., there

was fast and accelerating change in rural areas. This had developed curiosity and interest among the rural development professionals to find out and search for good quality and timely information which could give better insights and in-depth knowledge about the rural life, situations and conditions.

2. **We- the problem, 'they'-solutions:** There was a growing realization among the rural development professional (agricultural scientists, extensionists, administration, research scholars, rural sociologist, rural health practitioners, rural engineers, students and scholars planners, philanthropists and altruists) that there was something wrong in us- in knowledge, skill and attitude towards rural development which are the real problems and impediments for rural development. They- villages, have been living with the problems, managing their problems with little outside help, but with their own knowledge which should be considered as real solutions for problems in villages.
3. **Obsolete experience of senior (male) officials:** Senior officials, by virtue of their seniority, thought that they knew more about the conditions existing in villages, though they might not have visited the rural areas in the recent past. But. Slowly, they started realizing that their experience was obsolete (out dated). They also realized that their experiences were isolated ones which could not be generalized for all rural situations and conditions. The seniors were insulated from knowing the realities by virtue of their supervisive and administrative work which hardly permitted them to know the realities existing in rural areas. Most of the officials were all men and at helm of affairs and they rarely found time to understand the situation by going through the lengthy and voluminous reports about the studies made in rural areas. All these made them think of alternative methods to understand rural situations.
4. **Anti- poverty biases:** This refers to the dissatisfaction with the biases, with special reference

   To quick and short visit to villages by the rural development experts and officials of development departments whose offices and residences are located in urban areas. This type of short visit to rural area by urban based rural development professionals is called rural development tourism, according to Chambers, et al. (1989). It was quite likely that antipoverty biases could join together which would result in the worst poverty and deprivation not coming to limelight, but hidden.
5. **Disillusion with survey schedules and their results:** Another factor which could be considered as the second origin of Rapid Rural Appraisal was the disillusion with routine way of conducting village surveys with the help of survey schedules and their results. In the past (and even today), in many organizations, academic institutions, and universities, village surveys took a lot of time to complete and were boring both to the interviewee (villager) and interviewer (rural development researcher).

Finally, these village surveys did not give any result and served no purpose either to the farmer or development departments. This has been thoroughly discussed by Moris (1970) in his paper entitled 'Multi-subject farm surveys reconsidered: some methodological lessons' which he presented in an economics conference in East Africa.

In the words of Moris (1970) and Chambers (1992):

Again and again, over many years and in many places, the experience had been that questionnaire surveys tended to be long drawn out, a headache to administer, a nightmare to process, and write up, in accurate and unreliable in data obtained, loading to reports, if any, which were long, late, boring, misleading and difficult to use any way, ignored.

Thus, the difficulties experiences with and the poor impact of village survey schedules made all concerned think of alternative methodology to understand the rural situations and conditions which resulted in emergence of Rapid Rural Appraisal Methodologies.

6. **Indigenous Technical knowledge:** The sixth origin for the birth of Rapid Rural appraisal techniques was recognition by the rural development professionals of the bitter truth that villagers were highly knowledgeable regarding many things, closely related to their day-to-day life and occupation. Development professionals started searching for simple, but cost effective technology or indigenous technology. According to Institute of Development Studies (1979) and Brokensha, Warren and Warrer (1980), the indigenous technological knowledge was increasingly seen to have richness in a high value for practical purposes. The problem faced by development workers and professionals was the non- availability of a clear cut, simple procedure to elicit the required information about ITK which could be used by others for the purpose of analysis of ITK for its future use by farmers of other areas, extension workers and scientists.

Alternative to survey methods invented,: but not publicized

There are claims (Chambers, 1992) that alternative methodologies to survey methods did find their entry in the invention-box in late 1970s, due to the efforts of intelligent rural development professionals, but were not published due to the fear of what is called 'professional credibility'. For example, Collinson (1981) had developed one week-methodology to identify agriculture research priorities, but he had to use again a formal verification survey to convince the conservative bosses whom he calls "Establishment". With the result, the process became costly with delayed decisions and actions.

RRA ACCEPTED IN 1980s

Because of continuous and untiring efforts of rural development professionals and extension experts in finding out alternative methodologies for rural – schedule based survey techniques, Rapid Rural Appraisal technique as a family of approaches and methods emerged, in 1980s, to understand rural life and conditions. It was readily accepted and was viewed as if it had its own principles and rigour (Belshaw 1981: Carruthers and chambers 1981). RRA was argues to be cost effective for gaining timely information and insights which could be hardly obtained by survey-schedule tool. RRA was cost effective, had validity and reliability compared to survey techniques. But RRA based data would attain these qualities when it was not rushed, but, carried out with a self-critical attitude. In many

contexts and for many purposes, RRA, when well done, showed itself to be not a second-best, but, a best.

RRA Pioneers:

There were many countries, individuals and institutions who could be considered as pioneers in establishing the methods and principles of RRA. The table here indicates the number of countries which used RRA in the earlier years.

Table 1- Countries which used RRA in the earlier years

S.No.	Continent	Number of Countries
1	Africa	12
2	South and East Asia	8
3	Latin America	3
4	Australia and Pacific	3
5	Europe	1

RRA:From Rapid to Relaxed Appraisal

The word 'rapid' in Rapid Rural Appraisal has given the Impression that the appraisal should be done with great speed which has resulted in criticizing the method itself. The word 'Rapid' makes RRA practitioner to do rushing during the appraisal.

The word 'rapid' might have been a necessity in 1970s and in 1980s to differentiate it from the time consuming survey approach where the survey-researcher could collect data from two or at the most 3 farmers in a day whereas the entire rapid rural appraisal just takes a week's time to complete data collection in a village. But, the word 'rapid, has became a liability. There are evidence to indicate that 'Rapid Rural Appraisal', just because of the presence of the word 'rapid' in the methodology has been misused to legitimize brash and biased rural development tourism. The important rationale for RRA has been that one should make time to find the poorest to learn from them and to empower them. But, hurry and luck of commitment may lead to compound errors. Being hurry, the RRA practitioner may not find time to search for the poorest of the poor in the village. With the result, the poorest are once again, ignored, not met, not heard, and not listened to: neither the RRA practitioner learns from the poor. This means that the very purpose, i.e. to avoid antipoverty biases, for which RRA came into being is lost, and the devil of rural development tourism takes its life again. Hence, as Chambers (1992) has suggested, 'R' of RRA stands better for 'relaxed' (and not for rapid) allowing plenty of time.

Table 2: Contribution of Individuals and Organizations for the growth of RRA

S.No	Year	Organizations/Individuals	Work done
1	Mid 1980s	Khon Kaen University Thailand (K.K.U.)	1. Developed RRA theory and Methods 2. Introduced multidisciplinary team Approach 3. Institutionalization of RRA as a part of professional training.
2	1985	-do-	1. International Conference on RRA 2. Publication of a volume of papers a land mark
3 4 5 6	1987 1987 1987 1987	Beebe Gibbs Grand staff and Grand staff Jamieson	1. Confirmation of practical value of RRA 2. Outlining the underlining theory of RRA
7	Later 1980s	International Institute for Environment and Development, London	1. Dissemination of RRA principles through an informal publication of RRA Notes (1988-1989) 2. Dissemination of RRA through Extensive training 3. Working with African and Asian Colleagues
Health and Nutrition			
8	1987	Scirmshaw and hurtado	1. Parallel and overlapping developments in specialized fields 2. Rapid Assessment procedure in 20 countries
Agriculture			
9	1985	Potten	RRA in Irrigation
10	1989	Greenfeldt	RRA in Irrigation

RRA continues

Thus RRA emerged in 1970s. It still, is a powerful tool for outsiders to learn and understand the rural conditions and situations. It enables the outsiders to gain information and insight from rural people and about rural conditions in a more cost effective and timely manner. It is less exploitative than extractive survey technique where much is taken by the

outsiders and little or nothing is given back. RRA is extractive or neutrally elicitive (Chambers.1992).

Participatory rural appraisal (PRA):
Participatory learning and action (PLA)

The usual method of understanding the villages and villagers and village conditions by survey techniques with the help of schedule and questionnaire now a days has a counter by an alternative techniques called Participatory Rural Appraisal which is the off spring of a technique called Rapid Rural Appraisal.
While dissemination of rapid rural appraisal was in 1980s (originally it came in 1970) the participatory rural appraisal dissemination was in 1990s.
PRA emerged as an answer to the criticism biases of rural development tourism and questionnaire survey methods. RPA emerged as an answer to the criticism biases of rural development tourism and questionnaire survey methods. RRA slowly gave birth to PRA. They are synonyms in some respects. They owe much to the experiences: new lights and approaches of social anthropology, farming systems research, agro ecosystem analysis and activist participatory research where the basic principle is that local people should be able to do their own analysis.
PRA has been described in many ways: 1) a set of tools 2) an approach and 3) as an ideology.
It is a reverse flow from practice to theory rather than theory to practice.

Definitions of PRA

There is no dearth of definitions of PRA. It has been defined in umpteen numbers of ways by different scholars concerned with PRA directly or indirectly. Some of the definitions are given below:

I. PRA maximizes possibilities, helps in placing intervention activities with the community value system and is effective in addressing the goals of cross-cultural understanding (Fussel, 1990).
II. Participatory Rural Appraisal is a way of learning from, and with, community members to investigate, analyse and evaluate constraints and opportunities and make informed and timely decisions regarding development projects. By PRA, one can quickly and systematically collect information for
    1) The general analysis of a specific topic, question or problems.
    2) Needs assessment
    3) Feasibility studies:
    4) Identifying and prioritizing projects:
    5) Project or programme evaluation:

PRA is applied most effectively in relatively homogenous rural communities, which share common knowledge, values, and beliefs. Short duration and low cost nature of PRA make it possible cary out a series of PRA rather than having to rely on the result of one large survey.PRA is an intensive ,systematic but semi structured learning experience carried out in a community by a multi-disciplinary team ,which includes community members(Theis and Grady,1991).

III. Chambers(1992) defined Participitaory Rural Appraisal has a growing family of approaches and methods to enable local people to share ,enhance and analyse their knowledge of life and conditions to plan and to act .Evidence to date shows high validity and reliability in information shared rural people through PRA.(Chambers,1992).

IV. Participatory Rural Appraisal aims at any enabling the rural people in analyzing their past ,examing their present and envisaging their future by assessing their socio economic and geographic situation,identifying their problems ,exploring their localy available resources ,hammerimg out faceable solutions and formulating and action plans realizable during a certain time span(Narayana swamy and Boraian,1993).”In the whole of PRA exercise, the local people constitute the actors as well as the audience and the outsiders serve merely as observes and, at times, as facilitators, but seldom as intervenors or interrupters” Narayanaswamy and Boraian (1993) added.

V. Though many PRA techniques are simple, there are some which are complex to implement, requiring concentration, organization, and full participation. One can get best results of PRA then they are used flexibly and in sequence (Kate 1994).

VI. PRA is a technique of increasing the capacities of the local people because it 1)enables the local people to collect information assess its relevance ,to cross check its validity and documents and present the findings ,to prepare project proposals 2)enhances capabilities to prepare project proposals (planning, management)and 3)improve local skills for dealing with potential conflicts between different interest groups (Richards,1994).

VII. The significance of PRA data collection techniques is that local communities potentially gain greater access to and control over the process of understanding and analyzing themselves in which development workers are engaged. This is a welcome departure from more ‘extractive’ forms of data collection which historically have disempowered communities (Watson and Cultis, 1994).

VIII. Participatory rural appraisal is a well-defined and practical set of tools and techniques which if applied skillfully contribute to the process of empowerment and enhance the quality and validity of the information, (Grosse link and Strosser, 1995).

IX. Participatory Rural Appraisal provides a creative approach to information sharing and a challenging to prevailing biases and preconceptions about rural peoples knowledge. Advocates of this approach argue that the production and the generation of potential solutions should be devolved on

to those whose livelihood strategies from the subject for research (Anonymous,1996).

X. PRA techniques offer a variety of methods ranging from field based visualization, to interviewing and group work. They promote interacting learning, shared knowledge ,and flexible,but,at structured analysis.These methods have proven valuable for understanding local perceptions of the functional value of resources ,processes of agricultural innovations and social and institutional relations (PLA Notes,1996).

Early And Relaxed Rapport Building for Initiating PRA

The most important training for successful conduct and fruitful results of PRA is rapport building by the rural department professionals (outsiders like extension workers, scientists, administrators, researches, students and scholars) in the beginning of PRA activity .Rapport building facilitates acting participation of rural people in PRA. This has to be slow, steady and relaxed.

One of the principles suggested by Chambers (1992) to build early rapport is transparent honesty of the PRA practitioners telling the rural people who the PRA practitioner are. "Tell them what you are doing, what you are trying to learn". Chambers (1992) adds.

To build relaxed rapport with rural people

(1) One should show:
   a) Simlicity in appearance
   b) Humility
   c) Respect
   d) Patience and
   e) Interest in what villagers say and show.

(2) The PRA practioner has to wander around the village rather than making flying visit.
(3) The PRA practitioner should pay attention, what the villagers discuss.
(4) He or she should give a patient hearing of what villages complain.
(5) He or she has to watch what the villagers show.
(6) The villagers should not be interrupted when he is seriously telling or explaining some problem in the village.
(7) An analysis of PRA definitions reveal the following point:
   a) A good tool for cross – cultural understanding.
   b) A learning experience to know constraints opportunities of approaches.
   c) A family of approaches
   d) Local people analyse their knowledge and condition for planning and acting on the plans
   e) Flexible and sequential applications give good results. Preparation of realistic plans

f) The outsiders play the role of facilitators
g) Intensive, systematic, semi-structured learning experience
h) Analysing the past, present and future problems, resources, and solutions of people
i) Local people analyse and understand themselves
j) A process of empowerment
k) The quality and validity of information is enhanced
l) As the concentration is on livelihood strategies of rural people, involvement of rural people in knowledge production and potential solution generation is a must.
m) It involves interactive learning knowledge sharing
n) Flexible but yet structure analysis
o) Most effective in homogenous rural communities
p) Short duration and low cost in nature
q) Many are simple but a few are complex and hence require concentration, organization and full participation of local people.

A PRA practitioner can get maximum benefit out of a Participatory Rural Appraisal provided he/she has favourable attitude towards the following:

1) Participation of the local people in the appraisal process.
2) The principle of 'give respect and get respect' with special reference to villagers.
3) Genuine appreciation and interest in what the villagers do and practice, have and know, talk and preach, indicate and show.
4) Willing to learn, having patience, being relaxed and not rushing, interrupting:
5) Real interest in listening and not in interrupting:
6) Not lecturing and talking too much without realizing the reaction of the person to whom one is talking.
7) Humbleness and
8) The ways and means by which the villagers can be empowered to indicate, increase, exchange and assess their knowledge.

A comprehensive definition of PRA

PRA is a flexible, low cost and time saving, set or family of approaches and methods used to enable the rural people to collect and analyse information in terms of the past, present and future situations to understand about the rural people and the conditions existing in rural areas which would provide a through and comprehensive idea regarding problems, potentials, resources and solutions to formulate realistic development programmes, by the villagers themselves but facilitated by PRA practitioners, feasible to achieve within a specific period of time by the villagers of a rural locality or to use the information and analysis by researchers to formulate need based research programmes to solve the problems of rural people.

PRA to PLA: The PRA has been called as Participatory Learning Action now a days. Here local people and outsiders actively participate in assessing the rural situation during which time both learn quite a lot which will help them to prepare a meaningful plan to put into action. Hence, Participatory Rural Appraisal (PRA) has been renamed as

Nomenclature of Rural Appraisal

Comparison of RRA and PRA

Though much of the activities remain common for rapid rural appraisal and participatory rural appraisal, in the words of Chambers (1997), RRA developed into PRA, and they are interchangeable in some respects. They have been made possible by new insights and approaches to social anthropology, farming systems research. Agro-Eco-System analysis and farms of activist participatory research. Based on literature review (Chambers, 1992 and Goss link and Strosser, 1995) and actual experience in field situation, the following eighteen points could be taken into account for comparing RRA and PRA period development, base of innovation, user difference, resources over looked, major innovations, mode, ideal objectives, long term outcome, outsiders role, owing, analyzing and using of information, checklist, scope for innovation, nature of participation of local people, involvement of local people and difference in end product.

Table : 3 Comparison of Rapid Rural Appraisal and Participatory Rural Appraisal

S.No.	Items	RRA	PRA
1	Period of major developments	Late 1970 and 1980s	Late 1980s and 1990s
2	Major innovation based in	Universities and Research Organizations	Non- government Organizations
3	Main users	Aides agencies and Universities	Non-government organizations & government field organizations
4	Main resources earlier overlooked	Knowledge of local people	Capabilities of local people
5	Main innovations	Methods	Behaviour

6	Predominant Mode	Elective and extractive	Facilitating and participatory
7	Ideal objectives	Learning by outsiders	Empowerment of local people
8	Long term outcome	Plan, projects and publications	Sustainable local action and institutions
9	Role of outsiders	Everything is done by outsiders like development officials extension workers research scholars, students, administrators, non-government organizations, foreigners, etc	Everything is done by local people. Outsiders are only conveners, facilitators. Catalysts and learners
10	Information owned, analysed and use by	Outsiders	Local people
11	Checklist	A 'must' for effective RRA	A 'must' for every PRA technique
12	Rapport building	A 'must for effective RRA	A 'must for every PRA
13	Difference in content	Content is same for every technique as in PRA	Content is same for every technique as in RRA.
14	Cross checking of data	To be done using triangulation principle	To be done using triangulation principle
15	Scope for innovation of new techniques	High	High
16	Nature of participation of local people	Passive- local people do not have much say in the various stages of appraisal process	Interactive – people participate at every stage of appraisal joint data collection, joint analysis, joint action plan
17	Involvement of local people	Low	High
18	Difference in end product	No difference in comparison to the end product of PRA and RRA. Ex. Social map same as that of PRA social map	No difference in comparison to the end product of RRA. Ex. Social map same as that of RRA social map.

Thus, much of the characteristics are common for RRA and PRA except for a few characteristics which differentiate these two approaches.

Participatory Methods

Important participatory methods used in field situations for probing relationship of local communities with natural resources are described here. The illustrations which accompany the methods and applications relating to PRA & P ANR from the field. The major methods are as follows.

A. Semi-structured interviews
B. Time line
C. Participatory mapping
D. Identification of groups
1. Asking key informants
2. Wealth ranking/grouping
3. Venn diagramming
4. Participatory social mapping
5. Social matrix method
E. Venn or "Chapatti" diagram
F. Joint walk
G. Vector scoring
H. Matrix scoring
I. Participatory seasonality analysis
J. Trend -analysis
K Source diagram
L. Flow chart

These are explained briefly in the text and further high-lighted in the appendix with concrete examples from the field. These examples are self explanatory. But the readers may fill up with information collected from his own field work area.

A. Semi-structured interview

Semi-structured interview is mainly based on open questions. In this method of participation there is a great deal of flexibility. The open questions lead to different kinds of responses based on which further questions are designed on the spot for probing of issues. A sequence of open questions help in conducting an in-depth probing of issues and their cause effect relationship.

Before the beginning of an interview, the interviewer must have a small checklist of issues on which questions can be asked. Once an interview starts, other relevant issues can be added to the checklists. This will help in enriching discussion of a theme by moving from

one aspect to another. It is always better to have a team including a member from each discipline for conducting the interview. It helps in probing the issues from different angles. For eliciting responses on various issues, questions may be framed based on six words i.e. why, how when, where, who, and what questions asked during the interview and respective responses from community member should be noted down. It is better to have the inter-viewer and the recorder different persons. From the side of an interviewer impatience and interruptions need to be minimized so as not to block or disturb the processes of community analysis. The interviewer should have capacity to judge the behavior and attitude of community members. If he feels that members are not taking interact in answering the questions. interview should be postponed.

B. Time line

Degradation of natural resources is an age old phenomenon, associated with the community development. It is important to know the historical profile of natural resources and their relationship with people. Time line is a major participatory method which can be used in probing of this relationship. The major issues in probing may include historical impact of resource degradation, community efforts to preserve natural resources, impact on livelihood changing habits, food pattern, quality of life etc. Any analysis of event remains incomplete without proper understanding of its past context.

In order to construct a time-line one should sit with elderly people in a community. These people will trace historical patterns of change in their locality and community. They may not be able to trace the exact time, date or year. But they will connect some major historical event whether political, economic or social.

Time line is the best participatory method to collect information pertaining to changes in forests, land use, community preferences, community problems, socio-economic aspects, bio-diversity and other developmental activities. Historical narration of events, their impact and changes can differ from one informant to other depending on their perceptions. It is useful to keep track of the broad time period to which they refer to rather than looking for specific data. From a time line important changes or events may be selected for further probing.

C. Participatory mapping

Participatory mapping is a blue print of the area where local communities are living and from where they are earning their lively hood. It includes details and locations of house-holds, livestock, farm size, water bodies, field, forest, trees, road, literacy, disease, etc. depending on the theme under discussion. There may be different maps for different theme such as resource map, social map, literacy map, etc.

In the process of participatory mapping, few (two or three) persons take lead m drawing the map. Other members; of the community help them in cross checking the locations and details which are forgotten by leading persons. Different maps may be drawn by different group of the people. In the resource map details like forests, lands, fields, cultivated and barren, irrigated and un irrigated area, orchard, etc. may be depicted. Social

mapping may include households and other buildings in the area etc are also depicted. An example of the participatory resource map is given in Appendix II.

1. Others

Other areas which can be shown in participatory mapping are the following.

a. For showing community habitat, forest land and their area,
b. Households, trees, water bodies, soil, farms, hand pumps, schools and other things in the locality,
c. Land use in a locality,
d. Boundaries of locality and forests,
e. Spatial areas of people-forest conflict cooperation,
f. Grazing areas,
g. Areas for social forestry,
h. Common property resources (CPR) and wastelands,
i. Areas for collection of fuel wood and
j. Water bodies.

2. Significance

Participatory Mapping Method of PRA is having great significance. Some important points of significance are the following.

a. On many occasions, mapping helps in rapport building with local communities. It helps an outsider to learn from a community and furthers mutual interaction.
b. It involves local communities/ groups and empowers them to map, illustrate and explain their own locality.
c. It enhances group participation especially when maps are drawn in open spaces and common meeting grounds.
d. It helps in projecting spatial view of localities and related natural areas.
e. Forest maps help in clarifying extent of accessibility of local communities of local forests.
f. Mapping helps in cross checking by individuals and groups for errors and omissions.
g. It helps in arriving at group consensus.
h. It provides a basis for further probing undertaking joint walks and applying other methods.
i. It helps in generating a wide variety of data in a relatively short period of time.
j. It provides an overview and background material data important for probing into any relevant theme.

D. How to identify groups

Community is composed of many groups and sub-groups. Communities need not to be and are not socially homogenous. For smooth conduct of PRA, it is important to recognize the identity of groups and sub-groups. For identification of these groups' there are different way some of which are explained here.

1. **Key informants**

Key informants can be asked about socio-economic relationships and existing groups in a community. The groups which needs special attention are poorest of the poor, women, scheduled caste, scheduled tribes. Information provided by key informants can be cross checked by other sources.

2. **Participatory social mapping**

Participatory social mapping is another method which can indicate existence of different socio-economic groups in an area or community. Such mapping can be of significant use in identifying different social groups. There may be several groups depending on the social composition and control of resources in the village. In general groups may include poorest of the poor households as groups, house holds above the poor as group-2. House-holds above group-2, group-3 and households above group-3 as group-4.

3. **Wealth ranking or grouping**

Wealth ranking or grouping is another method which can be used for group identification. Wealth ranking helps in understanding socio-economic disparities amongst households and reveals local criteria for wealth classification.

4. **Venn-diagramming**

Venn-diagramming session on groups and their relationships helps in identifying groups. This method is explained below under heading 'E'. Venn diagram can be used as a tool to show the existence and importance of different groups in a community.

5. Social matrix

Social matrix is yet another method for identifying. groups and their characteristics. In a grid-like-set-up, different criteria of different groups can be listed by key informants, which can then be scored. This would provide a rough idea of the existence of different groups which may be cross checked further.

E. Venn or "Chappati Diagram"

Venn or Chappati Diagram is a visual method to represent the role of individuals or institution in the process of decision making. It also measures degree to which decision is influenced by the groups or individuals. Circles of different size representing different individuals institutions/groups show their importance in decision making. Such circles can be drawn on ground/paper, or alternatively, circular shaped papers of different size can be used for symbolizing such relationships. The distance of circles (diagram) indicate the relationship of individuals/ institutions/ groups which such circles represent Overlapping of circles indicate their over lapping in decision making.

For rural people in a village community Venn diagrams would reflect the kind of communication between them and the rest of the village community and their

governmental organizations and NGOs. Different aspects of their life can be taken up to see their interaction and their role in decision making involving village planning in running of projects, ini distribution of land, credit, water and other assets and in construction of roads, school building, dams, etc.

E. Joint walk

In the method of joint walk villagers and project implementing agency members walk through a selected area. During walk, they discuss about different aspect of land-use and agro-ecological zones in the village. For example, a degraded forest area, identified through a map can be jointly surveyed by community members and outside agencies for discussion in terms of causes, nature and action for regenerating such forest area. The walk may be summarized as per land use describing soil conditions, trees, crops, animals, birds, kind of soil erosion, water sources, fodder species, problems and opportunities. Such joint walks involve detailed under- standing of issues related to selected areas from local people. A sequence of such joint walks can be organized depending on locations in question. The areas for joint walk is generally selected in consultation with local community, either on the basis of group discussion, semi-structured interviews or on the basis of participatory mapping.

F. Vector scoring

Vector scoring is a visual method and involves scoring .of criteria items for assessing their relative importance so as to prioritise problems/benefits/ dangers/ damages/ opportunities, etc. This method can be used by individuals as well as groups. At the beginning, the agency's team intervening with local community, generally take help of semi-structured interviews with groups of local people who generate different criteria item which they think are important for consideration by groups. Such criteria can be either a set of problems, a set of benefits, a set of preferences, a set of activities/ items etc. Such a list of criteria can be placed before the group members who are concerned with such scoring. They can make further deletion or addition to the list of criteria according to their views. Hence, the method of vector-scoring involves considerable flexibility in generating criteria and also flexibility in terms of scoring.

Once there is consensus on the list of criteria, it can be transferred to the ground, in a column. or a row, either on small pieces of paper or with the help of different indigenous symbols. It is important to have agreed symbols for representing criteria especially where group members are illiterate or semi-literate. This would empower them to understand each criterion on their own and think about it before scoring.

Scoring of the criteria may be done individually first and then in groups. It is essential to train the group members about rate of scoring. The individual scoring is just a thought provoking exercise. This also helps in warming up for group scoring. Individual scoring can be followed by group scoring. The individuals may be requested to perform group-scoring of criteria, either by falling into one group or in different small groups as per their preference. Much depends on how the community wishes to fall into groups. In any

case, it is important to encourage group interactions and discussions before group scoring takes place. An illustration of vector scoring is given in Appendix VI which shows scoring of a women group on benefit criteria from social forestry and flood protection measures in village Bhagwanpur Jullon near Dehradun. The women group used fixed scoring for 10 criteria. The most important criterion as per the women group was that of bank erosion getting stopped through embankment, which was considered to be the foremost benefit

Scoring by seeds, stones, pebbles or other indigenous material can indicate the relative importance of a criteria. Scoring of criteria can be free or fixed. In fixed scoring, a fixed number of scores say ten scores are used. So scoring is fixed in terms of the number of scores used and also shows relative importance of criteria. While free scoring has no limit on scores used for each criterion. Greater scoring indicates relatively greater significance of a criterion under consideration. Style of scoring much depends on choice and convenience of the local people.

Vector scoring strengthens base for prioritization and anlysis of problems in a local community. It helps in arriving at ways to handle such problems. The output of the method when involving a small group for vector scoring can also be a basis for starting or strengthening appropriate actions in a community. Such output can be referred back to the community for additions and alterations and for resolving conflicts.

G. Matrix scoring

Matrix scoring is concerned with scoring of a range of criteria against a range of comparable items. For scoring items can be selected by local community members. They can be a set of trees, a set of animals, a set of crops or different varieties of the same crop, a set of cooking devices, a set of trees in a home garden, a set of vegetables, etc. Matrix scoring is a method of relative scoring of items in relation to a set of criteria. It is important that the criteria to be scored should be worthy of comparison and it should lead to some meaningful analysis. The scoring takes place in a grid like set-up, with items on one side and criteria on the other (Appendix VII). This can be treated as an extension of the method of vector scoring. The chart shows matrix scoring of wild trees. Appendix VIII utility scoring of minor forest produce by a village group where eleven tree species have been compared against eight utilities.

1. Participatory seasonality analysis

Seasons tend to influence lives and livelihoods of local communities. Hence, it is important to appreciate and learn 1about seasonality dimensions in lives of local people. The seasons bring changes in climate and rainfall, agro-ecological conditions, natural and extent of job availability, soil conditions, days of labour, wages, food patterns, disease vectors, disease incidence, income expenditure, consumption patterns etc.

In this method, the local people are asked to describe and compare their activities, livelihood patterns, food, debt, disease patterns, rainfall, etc. as per seasons and construct such seasonal calendars by using indigenous material. At first such seasonal changes are verbally described by them which can then be followed by visual illustrations by local people using indigenous materials.

Any seasonal analysis generally starts with a semi-structured interview on season and a discussion of their impact on community lives. It is generally convenient to start by a discussion of the prevailing season and then the other seasons tend to get included in the analysis. Once the purpose and nature of probing are made clear to local groups, they are asked either to explain verbally each season and its impact or illustrate seasonality, visually on the ground. This is illustrated in Appendix IX.

H. Trend analysis

Happenings of the history are described by the people in the method of trend analysis. Trend in ecological surroundings can also be demonstrated through this method. For instance the method can be used to show past trend in the number and density of trees, selected species of trees, water resources, bio-diversity etc. This method helps in providing a back ground to any issue through trend analysis. The community members can be requested to show such trend visually, preferably on the ground with indigenous materials such as sticks/seeds, stones, leaves etc. and then asked to explain such trend. For example the decrease in the number of trees year by year may shown in Appendix X.

I. Flow chart

In this method, the local people describe cause effect relationship, whether verbally or visually and explain linkages amongst different factors. Each problem would have its determinants as perceived by local communities and a flow chart can link problems with their perceived caused and help in arriving at possible solutions to such problems. Flow chart can give trends like years of crop failure, number of trees in a particular area, incidences and occurrences of pests and diseases etc.

J. Source diagram

This method helps in identifying sources of any activity, item, issue, etc. and also ranks such sources according to their importance. Like sources of fodder, fuel, food, fibre, etc. can be identified in village area and may be ranked.

V. Sequencing of PRA Methods

PRA methods can be used in different sequences for appraising different aspect of rural perceptions. Much depends on the objectives at hand, the kind of data required and the use to which the data would be put. One method leads to another depending on the topic being probed. A social map and wealth ranking can be followed by ~ joint walk in

those areas of the village where the poor people are concentrated in order to learn about their problems, opportunities and limitations. This can be followed by farm maps and livelihood analysis so as to know more about the crop grown and the soil conditions and the technology used by rural poor and the kind of livelihood they have. This can be followed by seasonality diagrams to have information about various related aspects. The sequence can take a couple of days depending on the convenience of the villagers, the rapport building and the facilitation skills of outsiders. Sequencing of PRA methods can help in appropriate interventions by state or NGOs through project formulation and planning.

Likewise there may be several sequence combinations of the PRA method, depending on the local situations and conditions. A resource map can be followed with a food calendar and a matrix scoring and ranking of wild trees. This can lead to placing of wild trees on the resource map so as to locate them in a village. In case of planning and implementing programs for poorest of the poor; the villagers can participate in wealth ranking to identify the groups involved. A social map can be drawn followed by wealth ranking so as to know the poor people, their assets and characteristics. The individual households of the poorest of the poor can be approached for their livelihood analysis and the kind of support they look for in terms of the program to be implemented.

Sequences can be both short and long. The length of the sequences would depend on the topic at hand, the willingness, energy and time of the villagers and the information generated. Some topics can take more time than others and can involve sequencing of several PRA method to reach the core. However, there can never be any hard and fast rule on sequencing since much depends on the situation at hand, the objectives of a PRA exercise and the way in which it takes shape. This is the novelty of PRA where it differs from situation to situation. It is a creative activity whose form and process are difficult to predict beforehand.

Conclusion

The process of rapport building, identification of key informants and different PRA methods are discussed in this booklet. Indigenous knowledge sources in rural areas can help the project implementing agencies in proper planning and implementation developmental programs. Local histories, stories, folklore, practice, beliefs, traditional management systems and village analysis can provide materials for having a better understanding of rural communities from diverse angles. Such sources can provide background information about a rural community in terms of its culture, socio-economic political and ecological trends. The PRA methods described in this booklet, include both indirect methods supportive of PRA and those that involve direct participation of rural people. Each method whether visual or verbal can be used in its own way to approach rural issues.

References

Annoymous (1996), Participatory Development, PLA Notes, Number, 25, February 1996 Inside Front Cover, Sustainable Agriculture Programme, IIED 3 Endlergh Street, London, WCH ODD. UK, London.

Anonymous (1997) Participatory Rural Appraisal and South Africa: an Interview with Robert Chambers, Background papers for training on participatory Technology Development, Biotechnology Unit, Institute of Public Enterprise, Osmania University Campus, Hyderabad-500007 P. 63.

Chambers Robert (1992), Rapid, Relaxed and Participatory Rural Appraisal, Discussion paper 311, Institute of development studies, University of Sussex pp. 11-14.

Chambers Robert (1992), Rural Appraisal : Rapid Relaxed and Participatory, the institute of Development studies, Discussion Paper 311, Brigton, U.K.P.I

Fussell W, (1990), Participatory rural: Is it culturally neutral? Throughts from PRA in Buinea, Bissau, London, IIED, Sustainable Agriculture Programme, RRA Notes No.9. Pp. 31-33.

Gosselink Paul and Strosser pierre (1995). Participatory rural appraisal for irrigation management research: Lesson from IIMI's experience. Colombo, Srilanka: International Irrigation Management Institute, IIML. Working Paper no.39.P.13.

Gosslink Paul and Strosser Pierre (1995), Participatory Rural Appraisal for Irrigation management Research- working paper No.38 p.10.

Kate Kirsopp-Reed (1994). A Review of PRA Methods for Livestock Research and Development, IIED, London, pp.11

Narayanaswamy, N and Boraian, M.P. (1993), Community participation in small and big villages, RRA Notes No. 18 June 1993, IIED, London,

PLA Notes (1996), Participatory Development, Notes on Participatory Learning and Action (Formerly RRA Notes), Number 25, February 1996, Front cover, inside, IIED, London.

Richards, P (1994) Local knowledge formation and validation. The case of rice production in Central Sierra Leone. In I. Scoones and J. Thompson (eds.) Beyond farmer first. Rural People's knowledge, agricultural research and extension practice. Pp 165-170, London: Intermediate Technology Publication.

Theis and Joachin and Grady Heather M (1991), Participatory Rapid Appraisal for Community Development, IIED, London, p. 24-28.

Watson Cathy and Cullis Adrian (1994) PRA and Livestock Development: Some Challenges, PRA Notes, Number, 20, IIED, London pp. 5-6

Beebe, J, 1987, 'Rapid Appraisal: The evolution of the concept and the definition of issues, in KKU Proceedings, PP. 47-68.

Belshaw, D, (1981), 'A theoretical framework for data economizing appraisal procedures with applications for rural development planning' in R. Longhurst (ed) IDS Bulletin Vol 12 No.4, PP. 12-22.

Brokensha, Dravid W, Warran D.M. and Werner (1980). Indigenous Knowledges Systems and Development, University Press of America, Lanham, Marryland.

Carruthers, Lan and Chambers, Robert, 1981. 'Rapid Appraisal for Rural Development', Agricultural Administration Vol.8 No.6, PP. 407-422.

Chamber, Robert, Faccy, Arnold and Thruppl, Lori Ann, (cds), (1989). Farmer first: Farmer Innovation and Agricultural Research, Intermediate Technology Publications London.

Chambers Robert (1992), Rural Appraisal: Rapid, Relaxed and Participatory, Discussion Paper: 311, Institu of Development Studies, University of Sussex, Brihton, BNI, 9R, UK 99. 6-10.

Collinson, Michael (1981). A low cost approach to understanding small farmers, Agricultural Administration, Vol.8 No.6, PP. 433-45

Gibbs, Christopher, (1987), 'Rapid Rural Appraisal:' an overview of concepts and applications' in KKU Proceedings, PP. 193-206

Saha H.K G.S, Chandran R and Vipinkumar V.P 2008 New Initiatives in Fisheries extension, Agriculture Asia Magazine Pp 16-19.

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