



INCO : International Scientific Cooperation Projects (1998-2002)

Contract number : ICA4-CT-2002-10020

Aquatic Peri-urban Systems Rapid Appraisal (APSARA)Toolkit

Keywords: APSARA; RRA; PRA; participatory community assessment; peri-urban aquatic food; Southeast Asia

Project homepage: <http://www.ruaf.org/papussa>

Contract number : ICA4-CT-2002-10020

TITLE : PRODUCTION IN AQUATIC PERI-URBAN SYSTEMS IN SOUTHEAST ASIA

COORDINATOR

University of Stirling
Institute of Aquaculture
FK9 4LA Stirling
Scotland

DR. David Little
E-M : d.c.little@stir.ac.uk
TEL : +44 01786 467923
FAX : +44 01786 451462

CONTRACTORS

Royal Veterinary and Agricultural University
Department of Veterinary Microbiology
Bulowsvej 17
1870 Frederiksberg C
Denmark

DR. Anders Dalsgaard
E-M : ad@kvl.dk
TEL : +45 35282720
FAX : +45 35282757

National Institute of Hygiene and Epidemiology
1 Yersin Street
4000 Hanoi
Vietnam

PROF. Phung Dac Cam
E-M : cam@ftp.vn
TEL : +84 4 8219074
FAX : +84 4 9719045

University of Durham
Department of Geography
South Road
DH1 3LE Durham
England

DR. Jonathan Rigg
E-M : J.D.Rigg@durham.ac.uk
TEL : +44 0191 374 7305
FAX : +44 0191 3742456

Research Institute for Aquaculture No. 1
Binh Bang
Tu Son, Bac Ninh
Vietnam

DR. Pham Anh Tuan
E-M : patuan@fpt.vn
TEL : +84 4 8781084
FAX : +84 4 8785748

University of Agriculture and Forestry
Faculty of Fisheries
Thu Duc
Ho Chi Minh City
Vietnam

DR. Le Thanh Hung
E-M : lthungts@hcm.vnn.vn
TEL : +84 8 8963343
FAX : +84 4 7220733

Royal University of Agriculture
Faculty of Fisheries
Chamcar Daung, Dangkor District
PO Box 2696 Phnom Penh
Kingdom of Cambodia

DR. Chhouk Borin
E-M : 012898095@mobil.com.kh
TEL : +855 12 898 095
FAX : +855 23 219 690

Kasetsart University
Department of Aquaculture, Faculty of Fisheries
Bangkhen, Chatujak
10900 Bangkok
Thailand

DR. Ruangvit Yoonpundh
E-M : ffrisrvy@ku.ac.th
TEL : +662 579 2924
FAX : +662 561 3984

Acronyms and terms

AIT	Asian Institute of Technology, Bangkok
KU	Kasetsart University, Bangkok
<i>klong</i>	Thai name for canal
KVL	Kgl. Veterinær-og Landbohøjskole
NIHE	National Institute of Health and Epidemiology, Hanoi
PAPUSSA	Production in Aquatic Peri-Urban Systems in Southeast Asia
PAFPS	peri-urban aquatic food production systems
PCA	participatory community assessment
PRA	participatory rural appraisal
PS	production system
PU	peri-urban
PUI	peri-urban interface
PUAFPS	peri-urban aquatic food production system
RIA1	Research Institute for Aquaculture No. 1, Hanoi
RRA	rapid rural appraisal
RUA	Royal University of Agriculture, Phnom Penh
SOS	State of the System
UAF	University of Agriculture and Forestry, Ho Chi Minh City
UD	University of Durham, UK
UOS	University of Stirling, UK

Table of Contents

Aquatic Peri-urban Systems Rapid Appraisal (APSARA)Toolkit 1

Acronyms and terms 5

Table of Contents 6

Introduction 7

Organizing PCA Implementation 7

Day 1 7

- 1.1. Key Informant Interviews 7
- 1.2. Wealth/Socio-economic Ranking 9
- 1.3. Community Mapping 11
- 1.4. Timelines 11

Day 2 13

- 1.5. Focus groups discussions 13
- 1.6. Seasonal calendars 15
- 1.7. Activity Matrix 16
- 1.8. Food consumption 18
- 1.9. Preference Ranking of problems and priorities 18

Day 3 20

- 1.10. Resource Mapping 20
- 1.11. Problem Ranking 21
- 1.12. Summary 23

Day 4 23

Day 5 23

Bibliography 23

Introduction

The participatory community appraisal (PCA) is an important phase in Work Package 1. This is the time when we will gather information about the selected communities we planned to have a more direct intervention later. The primary aims of this activity are:

- ✓ to identify well-defined “groups” within each community and get an overall picture of their livelihoods, environment and socio-economic structure;
- ✓ to identify the problems and constraints these groups encountered in relation to their peri-urban aquatic livelihood; and
- ✓ to identify strategies or recommendations for future interventions.

At least 4 communities should be selected for each city. These selected communities should represent the nature and characteristics of peri-urban aquatic production in each of the cities.

Organizing PCA Implementation

The PCA is a 5-day process. The first day is the initial visit, meeting or courtesy call with the head of the village, commune or district to introduce the objectives of the project, activity and the people who will be involved. Some secondary information may be also sought during this stage. If possible, key informants shall be identified during the initial visit or meeting. The process of conducting key informant interviews is described in the next section. During day 1, we should be able to conduct well-being ranking, community mapping and community time-line. On day 2, there will be at least 4 focus group discussions. These groups shall be composed of members with different ages, gender, migrant status, ethnicity or PUAFPS livelihood. These groups will develop seasonal calendars, activity matrices, and food consumption matrices.

Day 1

1.1. Key Informant Interviews

These are interviews conducted with individuals who are thought to have special knowledge concerning a particular topic related to PUAFPS. These may be old people, community leaders, doctors, teachers, fisheries/aquaculture extension officers, fish farmers, fish traders, fish fry collectors, etc. The selection of key informants must be systematic and strict so that reliable informants are selected. Also, it is important that a checklist of questions is prepared and reviewed before carrying out the interviews.

Purpose

- To obtain specific information on the nature of their production systems, livelihoods, problems, priorities etc.
- To give local people opportunity to interact with the researchers

- To create forum for more general discussion from which new issues and topics for research can arise
- To create a forum for use of appraisal communication tools

Process

- Identify the type of information that you need.
- Identify the village leader and arrange for a meeting to explain what you would like to do
- Ask the village leader to identify individuals in the community that hold key positions or are widely respected. These include religious leaders, heads of fishers or other community groups, health workers and teachers. This should include all major sectors of the community. Interviews should be carried out to a range of people in different situations.

Note

- ✓ Use visualization techniques to clarify ideas. Use drawing, illustrations or graphs
- ✓ Triangulate if possible. Ask the same question to different sets of people.

- Choose who among these people can provide relevant information based on your objectives. Find out where they live or how you can contact them so you can arrange for a meeting or an activity.

- ❑ After identifying primary key informants, ask them who else could be of help in giving information about a particular topic.

1.2. Wealth/Socio-economic Ranking

This is a tool used to assess and rank how households involved in PUAFPS stand among each other in terms of their socio-economic status (i.e. relative poverty/prosperity) as perceived by selected key informants. The informants determine the criteria for describing socio-economic classes or groups, decide how many different classes or groups exist in the village, and then assign village families to each defined class or group. If the community is large, this activity might become impractical and time consuming. Instead, representative of each class or groups will be identified and asked to participate in subsequent activities in Days 2, 3 and 5.

Purpose

- ❑ To characterize the perceived socio-economic status of households involved in PUAFPS
- ❑ To understand the indicative socio-economic importance of PUAFPS as a livelihood
- ❑ To collect data on the

Materials

- ❑ Paperboards cut into 3x5 inches cards (one for each household in the village)
- ❑ Paper cut into larger pieces (6x10 inches)

Note

- ✓ Limit number of variables to be used.
- ✓ Trying to get too much information at one time is not advised.
- ✓ Decide on a reasonable interval between the years to be observed in order to establish a trend. It does not have to be a ten-year interval.
- ✓ The activity does not usually exceed an hour. But if the participants are enthusiastic, be flexible and allow them more time.
- ✓ Include one important event from the historical line to the time periods to help participants think about the conditions at that time.

Possible Questions

- ✓ Describe the status of the resource systems at different years.
- ✓ Identify the dominant livelihoods in the past.
- ✓ What events in the past led to the emergence of PUAFPS?

- ❑ Cleared area (table, floor or ground)
- ❑ Felt marker (fine tip), pencil or pen

Suggested approach

1. Get a list of village residents from the village government office, census list or through a social mapping exercise.
2. Write the name of each family on a card (one card for one family). In some cases, a nickname will be more appropriate than the formal family name.
3. Identify and list key informants.
4. Schedule a meeting with each informant. Explain that the purpose of the activity is to gather information on the socio-economic status of village families.
5. Invite each informant to suggest criteria that could be used to describe a socio-economic class. Typical variables include: income level and sources of income; assets such as land, housing, boats, other vehicles; educational attainment; ability to send children to school; quantity and quality of daily food.
6. Ask the informants to identify the different socio-economic classes in their community or those involved in PUAFPS (will further refined!). Define each socio-economic class by using indicators such as income bracket and type of boats. Use these as categories. Note down the criteria used by the participants to define each category.
7. Write the name of each category on a large card and display them all on the table or floor.
8. Give the informants the cards on which each family's name is written. Ask each participant to identify under which category each family belongs. Place the cards next to the appropriate category. If there is hesitation, remind the participants of the criteria.

Analyzing the data from key informants

1. If different informants have used different numbers of categories, their information must be standardized. If most or all informants have distinguished five categories, assign a score to each family as follows: very poor-20; poor-40; average-60; rich-80; very rich-100. If standardization is required, then the informants will have to do it all over again.
2. Compile the results of the ranking, showing the scores given to each family by each informant.
3. Calculate the average score for each family.
4. Group the average scores into brackets or ranges, e.g., for a five category system:

Very rich (90-100)
 Rich (70-89)
 Average (50-69)
 Poor (30-49)

Very poor (less than 30)

5. Calculate the percentage of families in each category and present this using a pie chart. This will give an overall view of the perceived socio-economic status of families in a particular community.

1.3. Community Mapping

Purpose

- ❑ To define the geographical limit of community
- ❑ To identify distribution and ownership of important resources
- ❑ To understand spatial distribution of aquaculture related factors – especially water
- ❑ To understand local people’s priorities and understanding of their environment

Materials

- ❑ Pentel pens
- ❑ Colored paper
- ❑ Past/glue
- ❑ A4 paper
- ❑ Craft paper
- ❑ Scissors
- ❑ Masking tape

Suggested Approach

1.4. Timelines

These are key events or changes along a period of time up to the present in the area that led to settlement and livelihood changes. For instance, timelines of changes in water use, aquaculture development, fish availability and demand, land use, floods, road building, canal construction, industrial development, urbanization etc. In the case of PUAFPS, for instance, it is important to identify key historical events that led, or will lead, to the uptake or loss of PUAFPS.

Purpose

- ❑ To understand the processes leading up to current conditions and identify trends for the future

- ❑ To understand the community's history
- ❑ To understand the changes in their livelihoods and resources

Key features

- ❑ It makes use of graphics to clarify processes.
- ❑ It establishes connections between different sets of factors and conditions.
- ❑ It takes account of past changes, current conditions and predicts future trends.

Materials

- ❑ Pentel pens
- ❑ Craft paper
- ❑ Masking tape
- ❑ Crayons
- ❑ A4 paper
- ❑ Scissors
- ❑ Paste or glue
- ❑ Available historical documents or write ups

Suggested approach

1. Organize the participants composed of elders, males, females and young adults (maximum 20). Have each group (of five or six people) construct time lines.
2. Rather than defining what is important for them, ask the participants to identify the events that shaped and influence individual and community activities.
3. Let the groups use large sheets of paper and permanent markers to write in large letters.
4. Ask each participant to list one event for each sheet of paper. Ensure that these are written large enough to be seen at some distance. After doing so, let the participants group the events in their respective years. After which, present the results to other participants for validation.
5. When the timeline is established and agreed upon, determine whether one or another type of event is increasing in intensity and frequency. Discuss the trends and how the community has adjusted to these changes. Discuss also their responses as well as that of the government and other organizations.

End of Day 1. Following from Day 1's activities, inform and invite wider groups to be prepared to come for Day 2.

Day 2

The maps and time-lines prepared during Day 1 should be displayed in a prominent position and the facilitator should encourage discussion and if necessary modification of the maps throughout Days 2 and 3. Day 2 will be focus group discussions and the administration of the seasonal calendars, activity matrix and food consumption.

1.5. Focus groups discussions

These are discussions held with a selected group of individuals (usually between 4 to 8 persons) who have special interest or knowledge of PUAFPS. These could be fish farmers, housewives, fish traders, fish fry sellers/collectors, consumers, district officials, village officials etc. These discussions do not need to be very long. Participants should be systematically selected (similar to the selection of key informants) involving proportional representation of men and women. There should be a facilitator to facilitate the discussion and a documentor to document the process. Both of them should review the result of the discussions immediately after it is finished to ensure that they have properly captured what was discussed.

Purpose

- ❑ To generate information, build consensus, clarify information in documents lacking details or gather different opinions on certain issues.
- ❑ To gather information on certain issues in fishing, farming and other livelihood practices, leadership structures and other livelihood practices, leadership structures and decision-making patterns, health practices and delivery systems, labor sharing arrangements, local indicators of poverty and socio-economic standing, indigenous taxonomies (e.g. how people group or categorize fish, seaweed, etc.) and other information.

Requirements

Human resources

- ❑ Trained facilitator/moderator
- ❑ Note taker/documentor

Materials

- ❑ Note pad
- ❑ Pencil or pen
- ❑ Chalk/marketing pens
- ❑ Poster paper/chalk board/white board
- ❑ Guide questions or guidelines for the focus group discussion
- ❑ Attendance sheet
- ❑ Cassette recorder and blank tapes (optional)

Possible Approach

Preparation

- ❑ Set and discuss with the community the objectives of the discussion
- ❑ Determine target participants (e.g., fishers, farmers, women, etc) and discuss with community leaders and various sectors of the community, the criteria for group selection. Ideally, group members come from various walks of life and socio-economic categories, representing formal and informal community organizations

Possible criteria in selecting target participants

- ✓ Age
- ✓ Educational level
- ✓ Ethnicity/race
- ✓ Language
- ✓ World views
- ✓ Marital status
- ✓ Socio-economic status
- ✓ Religion
- ✓ Work experience
- ✓ Sex
- ✓ Residency (urban/rural)
- ✓ Length of local residence

- ❑ Let the community leader identify people in the community who fit the criteria. Be aware of their biases.
- ❑ Plan the time frame and schedule of the session
- ❑ Design the focus group guidelines

Designing the FGD guidelines

- ✓ Guidelines are open-ended questions used by the facilitator to initiate discussion of a particular topic. The objective is to encourage FGD participants to discuss target concepts and express their opinions, experiences and memories. Open-ended questions are those that require information other than a simple “yes” or “no” for an answer. Avoid these types of questions because they do not lead to new ideas.
- ✓ Phrase questions in a way that seeks to discover prevailing attitudes and practices, not just those of group participants, e.g., use “In general...” as a starting phrase.
- ✓ Guidelines should be brief.
- ✓ Guidelines should provide only the opening questions for key topics and a reminder to probe certain aspects.

- ❑ Train the facilitators and note taker.
- ❑ Ask the groups to discuss or prepare seasonal calendars, activity matrices and food consumption matrices.

During the session

Guide for the facilitator

- ❑ After the introductions, start with a warm-up topic (non-controversial but related)
- ❑ Request permission to record the discussion
- ❑ Go through prepared guidelines for seasonal calendars, activity matrices and food consumption matrices. Feel free to jump back and forth, be flexible
- ❑ Keep track of every topic by putting check mark next to each topic as it is discussed
- ❑ At the end of the discussion, give a brief summary of the topics that have been discussed by the group.

Guide for the note taker

- ❑ Write down key words in the statement or question. If possible, enough should be written to get the essential meaning.
- ❑ Provide participants a copy of the highlights of the discussion after the FGD.

1.6. Seasonal calendars

This is a tool to understand the seasonality of demands for labor, PUAFPS products, consumption, income and expenditure of PUAFPS households. This provides a general picture of the different aspect of PUAFPS through the year. It is best that this activity may be conducted during the early stages of APSARA but after the preparation of the resource map and transects, as the features on the map and transect may serve as useful guides. The focus of this activity is on the periods from the previous year.

Purpose

- ❑ To identify seasonal variation/history of activities happenings throughout the community

Key features

- ❑ It makes use of graphics to clarify processes.
- ❑ It establishes connections between different sets of factors and conditions.

- ❑ It takes account of past changes, current conditions and predicts future trends.

Suggested approach

1. Prepare for the activity by having participants draw an outline of the local annual calendar on craft paper
2. Ask the participants to identify important environmental, cultural, or socio-economic periods in a year that influence their activities or condition. These include:
 - ❑ Environmental conditions (e.g., floods, weather)
 - ❑ Aquaculture activities (e.g., restocking)
 - ❑ Economic aspects (e.g., household expenditure, market values)
 - ❑ Social aspects (e.g., health, education)
 - ❑ Other livelihood activities (e.g., agricultural crops, tourism, handicrafts)
 - ❑ Socio-cultural activities (e.g., religious events, holidays)
3. Use symbols or drawings to add interest to the activity. Let the group decide what symbols they want to use.
4. Repeat the process for other periods.
5. After the activity, transfer the output from craft paper to an A4 paper. Leave the original with the community.

1.7. Activity Matrix

This activity will highlight the activities performed by PUAFPS involved households. This tool can complement other tools that look at time such as timeline and seasonal calendar. An understanding on how these households use their time will have important implications for participatory activities in succeeding work packages as this will enable us to properly time our activities so as not clash with important livelihood-related tasks. This will also help us identify stakeholders who may have the time, skills and interests for later work.

Purpose

- ❑ To identify the activities performed by PUAFPS households
- ❑ To get a gender perspective of livelihood activities
- ❑ To understand the constraints that local people have regarding their time

Materials

- ❑ Crayons
- ❑ Pencil
- ❑ Pentel pen (assorted colors)

- Craft paper
- A4 paper
- Masking tape

Prerequisite

Daily activities should be conducted after the initial participatory assessment activities have been introduced such as timeline, resource mapping, transect and seasonal calendar. At this stage, the participants are already familiar with the participatory nature of the tools/activities.

Suggested Approach – Prior to the Meeting

1. Invite participants (10 to 20 members) from the community with a balanced representation of men and women.
2. Explain to the participants the nature and purpose of the activity. Clarify with the schedule and venue.
3. Prepare a blank 24-chart on a sheet of poster paper for each group (e.g., men, women and children).

Suggested Approach - During the Meeting

1. Explain the activity, purpose, use of the information, general flow and expected output.
2. Provide each participant with A4 paper and pencil and ask them to write/list down the activities they do in a typical day, from the moment they wake up until they retire.
3. Divide into sub-groups (especially according to gender) depending on the objective of the activity. Ask each individual in the respective sub-groups to share his or her typical daily activities.
4. Ask each sub-group to prepare a daily activity chart representing the typical activities of that sub-group. If possible, draw or symbolize each activity. Then rank each activity according to importance using locally available items such as beans or stones.
5. Ask each sub-group to choose among themselves a group leader/facilitator and a rapporteur. Ask the different groups to share/present their work to the rest of the participants.
6. Ask the participants to share their personal insights/feelings about the information that came out of the whole process or activity.

Note

- ✓ Be prepared to conduct daily activity at night especially when this is the only time available for the participants.
- ✓ Sub-grouped results must have the consensus of all the participants.
- ✓ Encourage the participants to present the data/group work.

1.8. Food consumption

This activity is best carried out after lunch!

Purpose

- ❑ To describe the availability, range, sources and importance of food items consumed within the community

Materials

- ❑ Crayons
- ❑ Pencil
- ❑ Pentel pen (assorted colors)
- ❑ Craft paper
- ❑ A4 paper
- ❑ Masking tape

Suggested approach

1. Ask participants in groups what food they eat - either list down articles on large sheet of paper or get groups to write articles on individual cards. Again different coloured cards can be used to denote food items produced within and outside community.
2. They are then asked to rank order of food items in terms of importance. This can be done with beans or other method as above if discovered more effective.
3. Once completed, ask members of group where food items come from – to illustrate go back to coloured cards if necessary.
4. Using the annual time line chart divided into months, get participants to draw lines showing availability of each food item. This can also be done more simply, if required, with beans with groups indicating availability in months by number of beans for each item. However, annual time-line shows specific months when food item available.
5. The findings from this activity in the urban context *might* not necessarily be that relevant – teams might wish to substitute another activity relating for example to education/training, social prestige which haven't been previously covered in Well Being Ranking and Key Informant interviews.

1.9. Preference Ranking of problems and priorities

Preference ranking is a useful tool in helping the community prioritize different issues or problems concerning PUAFPS. It is usually administered when an area of interest or set of options are already identified from earlier tools. Local materials such as stones or beans can be used to quickly indicate proportions or numbers in a more concrete fashion. For instance, we might want to ask PUAFPS producers to rank their current livelihood options

according to most profitable to the least using number of beans as indicator of higher ranks. Or we might want to ask them to rank in a matrix form the relative amount changes of PUAFPS production resulting from land or water use changes.

Purpose

- ❑ To highlight the importance or preferences for certain livelihoods, fish species, or PUAFPS products
- ❑ To understand local people's priorities
- ❑ To understand why certain choices are made
- ❑ To understand the local environment and people's knowledge of it
- ❑ To understand local terminology and classifications

Key features

- ❑ Can be used as a formal exercise or as an aid in interviewing
- ❑ Provides for a focus during discussions
- ❑ Can be carried out with individuals or with groups
- ❑ Provides a clear, graphic form of presentation of local people's ideas
- ❑ Adaptable to local circumstances and can use materials readily understood and manipulated by local people

Materials

- ❑ Chalkboard, flipchart paper or other material for producing a matrix and recording data
- ❑ Pentel pens
- ❑ List of options (if already determined)

Suggested approach

6. Select and clarify the topic (e.g., most serious problem affecting wastewater reuse and recovery; most serious health impact of wastewater reuse and recover)
7. Gather a relevant group of stakeholders (see stakeholder analysis)
8. List the options that are relevant to the topic. Ask the participants to add additional options that they feel exist but have not been covered. Write these on a large sheet of paper.
9. Ask community members to think of criteria that can be used to analyze the potential value of each option. Write the criteria on a large sheet of paper.
10. Ask each participant to give a score to each of the options based on the criteria set with the most preferred option receiving the highest score.
11. Repeat the steps for each different person and tabulate their responses.

Note

- ✓ Use a scale to do this ranging from 5 as the highest and 1 as the lowest. It is important to always clearly define the scale to be used.
- ✓ Make sure the scale is recorded on the final document.
- ✓ Be consistent in scoring options.
- ✓ Clarify if the participants must use each score only once, or if the same score can be repeated.

12. Add up the scores given to each option. The highest score should be given the highest rank and the least score should be given the lowest rank.
13. Build consensus based on the results of the preference ranking.

From findings and impressions of Day 2 identify and select persons and groups who have more direct connection with and impact from aquatic production systems – not necessarily just producers- could be health related issues, market traders, local regulatory officials, extension officers etc. This choice realistically should be decided by the afternoon of Day 2 so that they can be invited and given enough time to make arrangements for coming to Day 3.

Day 3

Day 3 will be spent for more in depth analysis of make up (incomes, gender, age, migrant workers etc) of specialised groups, for example, seed producers, aquatic plant producers, collectors etc. Initially, divide up into specialised groups – if considered necessary carry out more in depth Well Being Ranking and Key Informant Interviews – using indirect measurement of income status – type of housing, possession of motorbike, household goods etc but be careful not to repeat activity and information collected on Day 1 - moving on towards the afternoon with more SWOT type activities, future aspirations, possible (alternative) strategies for coping, recommendations from each of the groups.

1.10. Resource Mapping

This can be carried out with fish and aquatic plant producers groups. This activity will refer to the maps prepared during Day 1 and modified during Day 2.

Purpose

- To define different local systems, land, and resource use and their interactions

Materials

- Flip chart

- ❑ Marker pens
- ❑ Masking tape

Suggested Approach

1. Using large sheet of paper and pens ask persons to show how their own system looks like – position and size of ponds – water flows and sources.
2. Once people have finished facilitator using one example map from group asks person to show how resources come in and out of system using different coloured arrows going on to show directions and connections within the system.
3. The facilitator then asks rest of group to complete their maps likewise. This activity can be modified for market traders and more senior regulatory officials to show not just flow of resources but also perhaps simple hierarchies of responsibility and commodity chains with resulting information being useful to crosscheck previous marketing and institutional analysis.

1.11. Problem Ranking

Problem ranking is a tool used to identify and rank problems associated with PUAFPS and wastewater reuse and recover in order of priority by assessing their relative importance using a set criteria. It is often followed by an analysis using either a problem tree or a web chart.

Purpose

- ❑ To highlight the importance or preferences for certain livelihoods, fish species, or PUAFPS products
- ❑ To understand local people’s priorities
- ❑ To understand why certain choices are made
- ❑ To help the project understand the problems of PUAFPS as a livelihood from the perspectives and priorities of the community who are directly involved

Materials

- ❑ Small cards/pieces of paper
- ❑ Flip chart
- ❑ Marker pens
- ❑ Masking tape

Human resources

- ❑ Facilitator
- ❑ Record keeper

- Participants

Suggested Approach

4. Ask the community to brainstorm and list down identified problems or issues. Ask them to write these on small pieces of paper and place these in a vertical column on the floor or board.

Note

- ✓ This activity often takes two to three hours. However, time should not be limited if discussion is not yet complete after this time.
- ✓ The facilitator should be able to distinguish between core (or underlying) problems and symptoms/effects.

5. Suggest and explain possible criteria for ranking the problems:
 - a) Extent or scope (number of people or areas affected by the problem)
 - b) Degree of impact on a particular resource (how serious are the effects of the problem on the resource)
 - c) Occurrence or regularity (how frequent does the problem occur, during what season, etc.)

Participants may suggest other criteria in addition to those mentioned above.

1. Let the participants analyze each problem according to the criteria set.
2. Ask the participants to compare each problem. Score each problem using a predetermined scale (e.g. 1-5 with 5 representing the highest number, severity or frequency). Use drawings, seeds or other local materials to record each score.
3. Add the total score for each problem and place the sum in the second to the last column. The sum reveals the relative importance of the problem across all criteria and determines how it ranks compared to the other problems.
4. Use the last column to rank the problems based on their respective score. The problem with the highest number of total marks is considered the number one problem. If two problems have the same number of marks, they are considered to be of equal importance.
5. Some of the descriptions may be qualitative, e.g., degree of impact and occurrence. In this case, ask participants to explain and clarify the meaning of the marks made. The documentor should note down the key points mentioned.
6. Copy the entire matrix. If time permits, present it to a larger group for further discussion and analysis.

1.12. Summary

The facilitator will go through the result of the activities during Days 1, 2, and 3 showing the charts, matrices or drawings that they produced so that each group can be aware of output from others. Explain format of next two days and stress the importance of people being present on Day 5, perhaps hinting about possible further contacts with community for next year. Encourage groups to go away and talk and interact over previous 2 days discussions.

Day 4

Analysis of Data – away from community During analysis think of make-up of community and people in the last 3 days and try to suit format of presentation of findings so that it is interesting and stimulating for them whilst also provoking further discussion.

Day 5

Back to community to present and summarise findings of analysis – triangulate and check findings. Finish day open ended to allow for further interactions and possible interventions within the community for subsequent work packages.

Bibliography

AGRITEX (1998) *Learning together through participatory extension*. Department of Agricultural, Technical and Extension Services (AGRITEX), Integrated Rural Development Programme and Intermediate Technology Development Group, Zimbabwe, Harare, 59 pp.

Environment and Resource Management Project (ERMP) (1992) *Training in rapid rural appraisal in the Philippines: the process in Guimaras Island*. Environment and Resource Management Project (ERMP), College, Laguna, Philippines.

IIRR (1998) *Participatory methods in community-based coastal resource management*. 3 volumes. International Institute of Rural Reconstruction, Silang Cavite.

Townsley, P (1996) *Rapid appraisal, participatory rural appraisal and aquaculture*. FAO Fisheries Technical Paper 358. Food and Agriculture Organization of the United Nations, Rome, 109 pp.