Module 2: Planning, Design, Appraisal and Implementation

Principles and Techniques for Participatory Rural Transport Surveys

Session: 2.7

Presentation: 2.7
The Training Modules

Module 1. Policies and Strategies

This Module

Module 2. Planning, Design, Appraisal and Implementation

Module 3. Management and Financing

Module 4. Rural Mobility

Module 5. Social and Environmental Issues
Module 2. Planning, Design, Appraisal and Implementation

Session 2.1 Participatory rural planning process
Session 2.2 Design of rural transport infrastructure
Session 2.3 Rural road economic appraisal methodology
Session 2.4 Labour-based works methodology
Session 2.5 Small scale contractor development

This session

Session 2.7 Participatory Survey Techniques for Rural Transport
1. Introduction

Learning Objectives

By the end of the session participants will be able to:

- Describe the principles underpinning Participatory Rural Appraisal (PRA) and participatory techniques
- Demonstrate the use four PRA techniques
- Analyse the best circumstances in which to use PRA and participatory techniques
- Identify the constraints of using PRA
Session Overview

- Participatory Rural Appraisal (PRA): core concepts and principles
- Participatory techniques for exploring rural transport issues
- Constraints of PRA Methods
2. Participatory Rural Appraisal (PRA): core concepts and principles

- PRA used to gather **qualitative** data
  - often to complement quantitative data
- PRA emerged as alternative to
  - questionnaires
  - rushed site visits
- PRA entails
  - substantively involving local people in project selection, design, planning and implementation
  - continuous and comprehensive feedback integral to all development activities
PRA techniques are based on…

๑ A reversal of learning
  - learn with and from rural people, directly, on the site and face to face
  - gaining from local, physical, technical and social knowledge

๑ Learning rapidly and progressively
  - with flexible use of methods, improvisation, iteration and cross-checking
  - being adaptable in a learning process
PRA techniques are based on…

寻求多样性
- 寻找、注意到并调查矛盾、异常和差异

三角化
- 使用一系列方法来确保可靠性和有效性，并且能够进行交叉检查

本地人参与
- 协助、调查、分析、展示和学习由农村人自己完成，以便他们提出和拥有自己的结果
PRA and participatory approaches give vulnerable groups a voice
- E.g. women, the poor

PRA helps answer
- Who requires transport?
- When?
- Why?
- Where to?
- How paid for?
- What mode of transport?
Principles for conducting PRAs

Preparation

- … is essential!
- Facilitators should have realistic objectives for the PRA survey at outset
- Review secondary data on locale and subject
- Select suitable villages
- Enlist external collaborators
  - with detailed knowledge of locale
  - without prejudice or hierarchical position
Facilitation

- Good facilitation enables local people to do most investigation and analysis themselves.
- Use two facilitators:
  - one to facilitate, one to record.
Behaviour and attitudes

More important than methods

Include

- critical self awareness
- embrace error
- sit down
- listen and learn
- don’t lecture
- let villagers/stakeholders be main teachers and analysts
Longevity

Forum PRA most effective when
- part of a long term dialogue
- facilitators live with community
- facilitators earn the trust of the community
Range of Participatory Techniques

PRA techniques have advantages:

- Many PRA techniques are **visual** → accessible to larger groups
- **Group debates** → improvisation and discussions beyond that which was pre-planned
PRA techniques

Diagramming
- Participatory mapping
- Venn diagrams
- Time Travel Budgets
- Flow diagrams

Ranking
- Matrix Ranking
- Preference ranking
- Card sorting
- Wealth ranking

Scoring
- Matrix scoring
- Gender Analysis

Observational
- Transect walks
- Observation of activities – e.g., environment, transport services available...
Framework for using PRA/participatory techniques

1. Semi-structured interviews
2. Visual Techniques
3. Inclusive for Illiterate people
4. Triangulation
5. Fact, Rumour, Opinion?
6. Observation & who's voice?
7. Gender
Semi-structured interviews

- Conversational but structured
- Questions predetermined and formed during interview
- Useful in learning from particular community members
- Use of open-ended questions
Cross-checking information collected by different methods

Particularly useful for group participation exercises
- e.g. mapping, ranking and scoring, diagramming, etc

Triangulation involves validation of both qualitative and quantitative data
Facilitators should recognise intra-community gender, age, wealth, etc. distinctions
  - Whose voice are we hearing?
Observe the environment, housing, fields, transport infrastructure and services
  - Observation aids improvisation
Diagramming Techniques

Mapping
Modelling
Venn Diagrams
Travel Time Budgets
Flow Diagrams
Participatory map, farm sketch from Kyevaluki
(source: NES, 1990)

SIMON MULE: ZONE II 3 ADULTS, CHILDREN, GROWN 6.5 ACRES

KEY:
○ MANGO △ PAPAYA □ AVOCADO

GRAIN STORAGE
LATRINE — B
FOOD STORAGE
KITCHEN
CATTLE PEN

BEANS PASSIONFRUIT BEANS ONIONS
SWEET POTATOES △ △ △ PIGEON PEAS PUMPKINS
PEAS △ △ △ MAIZE COW PEAS
BANANAS
EUPHORBIA

COFFEE COFFEE COFFEE COFFEE
MACADAMIA NUT TREES

CROPS:
1 ACRE OF COFFEE, FERTILIZERS/PESTICIDES/CERTIFIED SEEDS ON CASH CROPS, SOME MANURE ON FOOD CROPS, GOOD TERRACING, FRUIT TREES, NEVER SURPLUS TO SELL, I HIRED LABORER, WITH 2 EXTRA TO PICK COFFEE

HOUSES:
2 MABATI (TIN) ROOFS, ALL BRICK, PAINTED DOORS, AND WINDOW SHUTTERS. RADIO, IMPROVED ROOF CATCHMENT WITH 400 LITRE TANKS

LIVESTOCK:
1 COW, 1 BULL, 1
SPRAY FOR TICKS — DIP TOO FAR FROM PENS

RURAL TRANSPORT TRAINING MATERIALS
Mapping of transport infrastructure and services

Group Activity

*Draw a map showing the transport infrastructure and services for a village and surrounding area*
Participatory mapping

- Used to identify comparative location and importance of different resources

- Highlights
  - relative location of resources
  - important resources – to which socio-economic groups
  - issues which affect or are affected by these resources
  - status or condition of a location
  - create a focus for interest in a discussion over resources
Participatory mapping

- Social maps can be used to locate houses, services and infrastructure within an area.
- Mobility maps can be used to indicate travel patterns: origin, destination, mode, land and water transport infrastructure.
- Maps can be used as a visual stimulant to facilitate discussion about people’s perception of infrastructure provision.
Venn diagram of decision makers in a peasant association in Wollo, Ethiopia
(source: Ethiopian Red Cross Society, 1988)
Venn Diagram

Construct a Venn diagram of the stakeholders involved in Rural Transport, for a given community
Venn diagrams

- Depicts key institutions, organisations, and individuals and their interaction with community
- Both internal (local) and external institutions
- Each institution represented as circle
  - size of circle represents importance, significance, or power of institution
  - degree of overlap between circles represents level of interaction
- E.g. rural transport
  - demonstrates interaction between villagers, transport operators and local government to show marginalisation of rural poor
Time Travel Budget

Group Activity

*Draw a 24-hour clock for a given member of a household*
Flow diagrams

- Systematic analysis of cause and effect relationships
- Basis for discussion of relationships between different
  - groups
  - individuals
  - issues
- Main issue in central circle with elements radiating from it
- Best as retrospective tool
  - e.g. diagram actual impacts of road construction, not perceived impacts
Ranking & Scoring Techniques

Matrix ranking
Preference Ranking
Gender Analysis Matrix
Card sorting
Wealth Ranking
Matrix scoring
To assess expectations, beliefs, attitudes, preferences and opinions

**Ranking** = putting in order

**Scoring** = weighting differences

Useful for obtaining both basic and sensitive information
Matrix ranking

Group Activity

*Rank village transportation options by efficiency*
Matrix ranking exercise
Rank transport options 1-5
(1 being most efficient)

<table>
<thead>
<tr>
<th>Elements</th>
<th>Judging criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cost</td>
</tr>
<tr>
<td>Walk</td>
<td></td>
</tr>
<tr>
<td>Car</td>
<td></td>
</tr>
<tr>
<td>Bus</td>
<td></td>
</tr>
<tr>
<td>Bicycle</td>
<td></td>
</tr>
<tr>
<td>Cart</td>
<td></td>
</tr>
</tbody>
</table>
Matrix ranking

- Useful for two dimensional comparisons
- List of elements down one side, criteria on which they are judged across the top
## Matrix scoring technique

*(source: Action Aid, 1992)*

<table>
<thead>
<tr>
<th></th>
<th>Egg Plant</th>
<th>Lettuce</th>
<th>Tomatoes</th>
<th>Sorrel</th>
<th>Barambi Green</th>
<th>Nana</th>
<th>Bitter bromo</th>
<th>Karen</th>
<th>Cassava</th>
<th>Okra</th>
<th>Onions</th>
<th>Cabbage</th>
<th>Hot Pepper</th>
<th>Mango</th>
<th>Sweet Pepper</th>
</tr>
</thead>
<tbody>
<tr>
<td>More durable in terms of storage</td>
<td>⬬</td>
<td>⬬</td>
<td>⬬</td>
<td>⬬</td>
<td>⬬</td>
<td>⬬</td>
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<td>⬬</td>
<td>⬬</td>
<td>⬬</td>
<td></td>
<td></td>
</tr>
<tr>
<td>More cash yielding</td>
<td>⬬</td>
<td>⬬</td>
<td>⬬</td>
<td>⬬</td>
<td>⬬</td>
<td>⬬</td>
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<td>⬬</td>
<td></td>
<td></td>
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<tr>
<td>More blood giving</td>
<td>⬬</td>
<td>⬬</td>
<td>⬬</td>
<td>⬬</td>
<td>⬬</td>
<td>⬬</td>
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<td></td>
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</tr>
<tr>
<td>More energy giving</td>
<td>⬬</td>
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<td>⬬</td>
<td>⬬</td>
<td>⬬</td>
<td></td>
<td></td>
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<tr>
<td>Consumed most</td>
<td>⬬</td>
<td>⬬</td>
<td>⬬</td>
<td>⬬</td>
<td>⬬</td>
<td>⬬</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>More marketable</td>
<td>⬬</td>
<td>⬬</td>
<td>⬬</td>
<td>⬬</td>
<td>⬬</td>
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<td>⬬</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less water requirement</td>
<td>⬬</td>
<td>⬬</td>
<td>⬬</td>
<td>⬬</td>
<td>⬬</td>
<td>⬬</td>
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</tr>
</tbody>
</table>
Scoring

- **Free scoring**
  - enables participants to score each element against criteria with no limits placed on the scores

- **Closed scoring** (several methods)
  - each box in whole matrix given number score
  - fixed points awarded for each criteria, distributed between boxes
  - fixed points allowed for whole matrix, distributed between boxes
Preference ranking

- Identifies individual or group preferences
- Categories identified, then ranked in order of priority
- Usually entails sorting cards
Gender Analysis Matrix

Group Activity

Prepare a Transport Matrix for a given household
Card sorting

- Most common ranking technique
- Informants sort cards into piles
- Tends to be highly consistent between different informants
Wealth ranking

Participants divide households according to economic and other well-being categories
- identifies target group members for projects
- subdivides larger groups for further household based survey work – along socio-economic lines
- highlights local indicators of wealth and well-being

List of households ranked through…
- card sorting
## Wealth ranking

(source: Guijit, 1992)

<table>
<thead>
<tr>
<th>GRADE</th>
<th>CRITERIA</th>
<th>COUNTRY NO</th>
<th>CASTE DISTRIBUTION</th>
<th>AATC</th>
</tr>
</thead>
<tbody>
<tr>
<td>RICHEST</td>
<td>Electric facilities, private car, B &amp; J, milked, a herd of cattle, good labour force, enough farm implement, internal &amp; external assistance, better housing facilities, a lot of livestock, influential</td>
<td>32</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RICHER</td>
<td>Herd of cattle, labour force, farm implements, good housing facilities, external assistance, popularity</td>
<td>2, 3, 4, 5, 6, 8, 12, 20, 24, 27, 33, 35</td>
<td>Griots - 2 comp, B/Smith - 1 comp</td>
<td></td>
</tr>
<tr>
<td>POORER</td>
<td>Average housing facilities, less farm implements, less labour force, skills</td>
<td>10, 13, 15, 24, 31, 34, 36</td>
<td>B/Smith - 2 comp, Cobolak - 1 comp</td>
<td></td>
</tr>
<tr>
<td>EVEN POORER</td>
<td>Poor housing facilities, high dependency ratio, very little implements, low labour supply, near (3&amp;4 stage)</td>
<td>11, 14, 17, 19, 21, 23, 28, 33, 41, 44, 45</td>
<td>Cobolak - 1 comp, Griot - 1 comp, B/Smith - 1 comp</td>
<td></td>
</tr>
<tr>
<td>POOREST</td>
<td>Very poor housing, high dependency ratio, low labour supply, food shortage, no farm implements, large family size, no source of Griot</td>
<td>47</td>
<td>Slave - 1 comp, Cobolak - 1 comp</td>
<td></td>
</tr>
</tbody>
</table>

RURAL TRANSPORT TRAINING MATERIALS
4. Constraints of PRA methods

- **Successful PRA requires**...
  - sufficient resources
  - sufficient time
  - mutual respect and trust between facilitators and participants
  - understanding of local culture

- **Facilitators should be**...
  - flexible
  - sensitive
  - approachable
  - not dogmatic
Lessons learned from PRA

- Important to secure local government support
- Leave class and gender biases at home!
- Continual qualitative data analysis in field
- Researcher must know context
- Dialogue between target group and facilitators benefits both parties
- Project results should be shared with people who most need them
Lessons learned from PRA cont. …

Participants introduced to a PRA 'code of conduct'

- time suitable to the villagers
- cultural protocol
- avoid raising expectations
- avoid lecturing - listen and learn
- stay in the village throughout the training session
Applying PRA to rural transport

Group Discussion

A. What is the role of PRA in effective rural transport provision?
B. How could PRA techniques be applied to participants areas of work?