

Rural Transport Training Materials

Module 2:

Planning, Design, Appraisal and Implementation

Principles and Techniques for Participatory Rural Transport Surveys

Session 2.7

Presentation 2.7



The World Bank



DFID Department for
International
Development



theIDLgroup 

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

This session enables participants to:

- ③ Explore the principles underpinning Participatory Rural Appraisal (PRA) and participatory techniques
- ③ Examine different PRA techniques
- ③ Assess the best circumstances in which to use PRA and participatory techniques
- ③ Highlight the constraints of using PRA

Session Overview

- ③ Participatory Rural Appraisal (PRA): core concepts and principles
- ③ Participatory techniques for exploring rural transport issues
- ③ 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...

⊙ 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

⊙ 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...

③ Seeking diversity

- looking for, noticing and investigating contradictions, anomalies and difference

③ Triangulating

- using a range of methods to ensure reliability and validity and to enable cross-checking

③ Facilitating by local people

- facilitating, investigation, analysis, presentation and learning by rural people themselves so that they present and own their own outcomes

◎ 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

- © 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:

- ③ Many PRA techniques are **visual** → accessible to larger groups
- ③ **Group debates** → improvisation and discussions beyond that which was pre-planned

PRA techniques

Diagramming

Participatory mapping
Venn diagrams
Time Travel Budgets
Flow diagrams

Scoring

Matrix scoring
Gender Analysis

Ranking

Matrix Ranking
Preference ranking
Card sorting
Wealth ranking

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

More notes on ...

Semi-structured interviews

- ⊙ Conversational but structured
- ⊙ Questions predetermined and formed during interview
- ⊙ Useful in learning from particular community members
- ⊙ Use of open-ended questions
 - Why? Where? What? How? When?

More notes on ...

Triangulation

- ◎ 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

More notes on ...

Observation

- © 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

Practical Exercises

Diagramming Techniques

Mapping

Modelling

Venn Diagrams

Travel Time Budgets

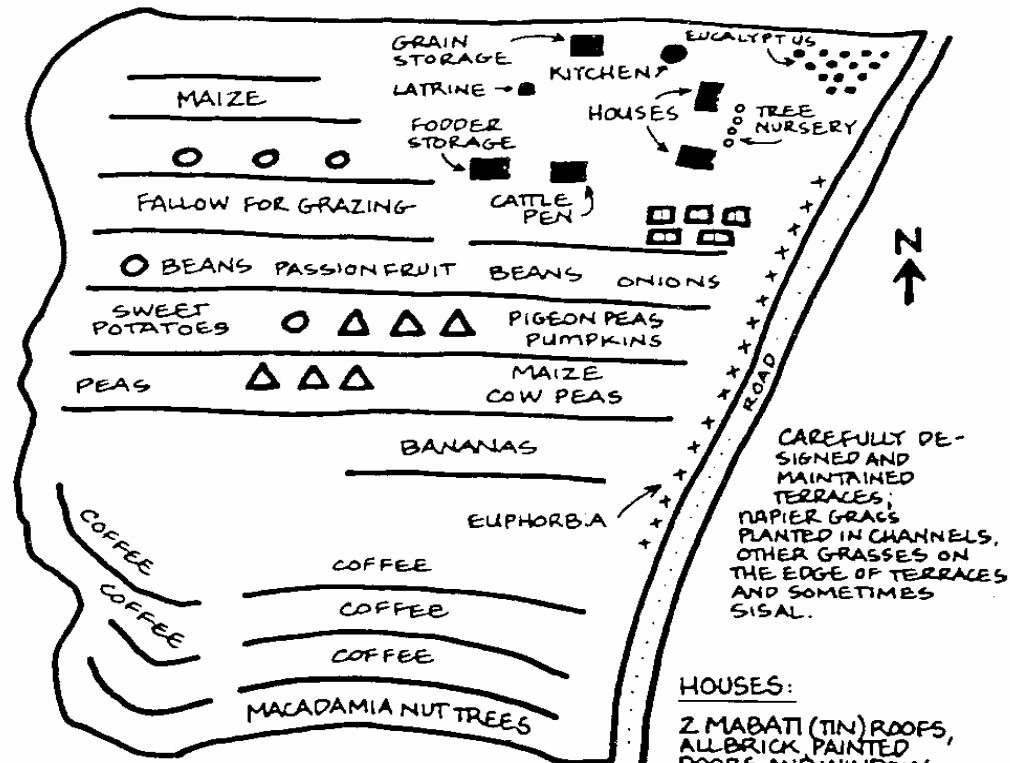
Flow Diagrams

Participatory map, farm sketch from Kyevaluki

(source: NES, 1990)

SIMON MULE: ZONE II 3 ADULTS, CHILDREN GROWN 6-7 ACRES

KEY: ○ MANGO △ PAPAYA □ AVOCADO



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,
 1 HIRED LABORER, WITH 12 EXTRA
 TO PICK COFFEE

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

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

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

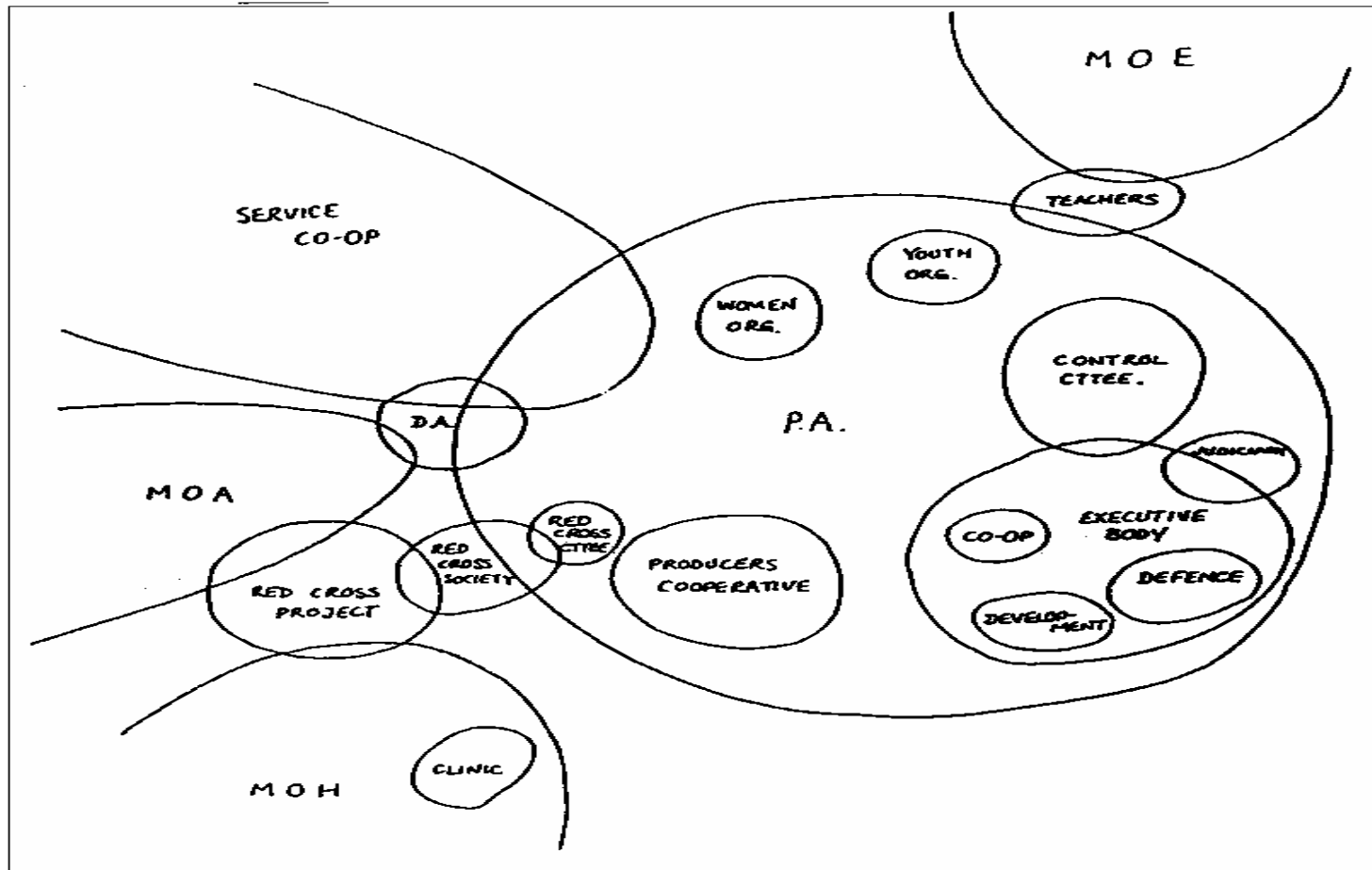
- ③ Used to identify comparative location and importance of different resources
- ③ Highlights
 - relative location of resources
 - important resources – to which socio-economic groups
 - issues which affect or are affected by these resources
 - status or condition of a location
 - create a focus for interest in a discussion over resources

Participatory mapping

- ③ Social maps can be used to locate houses, services and infrastructure within an area
- ③ Mobility maps can be used to indicate travel patterns: origin, destination, mode, land and water transport infrastructure
- ③ 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)



Stakeholders involved in rural transport



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

- ③ Systematic analysis of cause and effect relationships
- ③ Basis for discussion of relationships between different
 - groups
 - individuals
 - issues
- ③ Main issue in central circle with elements radiating from it
- ③ 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

Ranking & 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)


















Elements	Judging criteria				
	Cost	Frequency	Availability	Energy	Time
Walk					
Car					
Bus					
Bicycle					
Cart					

Matrix ranking

- ③ Useful for two dimensional comparisons
- ③ List of elements down one side, criteria on which they are judged across the top

Matrix scoring technique

(source: Action Aid, 1992)

	Egg Plant 	Lettuce 	Toma-toes 	Sorrel 	Barambi green 	Nana 	Bitter Tomato 	Karen Kareng 	Cassava 	Okra 	Onions 	Cabbage 	Hot Peppar 	Mango 	Sweet Peppar 
More durable in terms of storage	3	1	2	1	2	2	4	1	4	10	12	5	10	2	4
More cash yielding	6	8	5	6	7	7	8	9	10	9	10	10	8	10	10
More blood giving	6	8	2		7				8		2	5			
More energy giving	6	7	5	1	8	6	7	6	7	5	6	5	6	3	
Consumed most	6	8	2		10		4	1	8	2	2	5		10	
More marketable	5	6	6	5	8	4	6	6	5	6	5	5	6	10	3
Less water requirement			10		7				8		8	4	4		

Scoring

④ Free scoring

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

④ 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

- ③ Identifies individual or group preferences
- ③ Categories identified, then ranked in order of priority
- ③ Usually entails sorting cards

Gender Analysis Matrix



Group Activity

Prepare a Transport Matrix for a given household

Card sorting


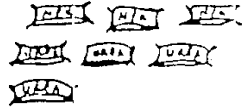
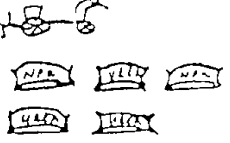

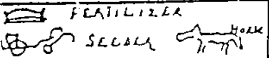
- ◎ Most common ranking technique
- ◎ Informants sort cards into piles
- ◎ Tends to be highly consistent between different informants

Wealth ranking

- ③ 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
- ③ List of households ranked through...
 - card sorting

Wealth ranking

(source: Guijit, 1992)

GRADE	CRITERIA	Compound No.	CASTE DISTRIB.	AATC INPUT ASST.
RICHEST	ELECTRIC FACILITIES (CONDUIT), PRIVATE CAR, B-2 MOTORBIKES, A HERD OF CATTLE, HIGH LABOUR FORCE, ENOUGH FARM IMPLEMENTS, INTERNAL & EXTERNAL ASSISTANCE, BETTER HOUSING FACILITIES, A LOT OF LIVESTOCK, INFLUENTIAL,	32		
RICHER	HERD OF CATTLE, LABOUR FORCE, FARM IMPLEMENTS, GOOD HOUSING FACILITIES, EXTERNAL ASSISTANCE, POPULARITY.	① 2, 3, 4, 5, 6, ⑧, 12, 20, 26, 27, ③③, 35, ④④	GRIOTS - 2 COMP. B/SMITHS - 1 " COBBLAR - 1 "	
POORER	AVERAGE HOUSING FACILITIES, LESS FARMING IMPLEMENTS, LESS LABOUR FORCE, SKILLS,	④, 10, 13, ④④, 15, ④④, 24, ④④, ④④, ④④, 30, 31, 34, 36, 40	B/SMITH - 2 COMP. COBBLAR - 3 " SLAVE - 1 "	
EVEN POORER	POOR HOUSING FACILITIES, HIGH DEPENDENCY RATIO, VERY LITTLE IMPLEMENTS, LOW LABOUR SUPPLY, HUNGER (AND STARVAGE)	⑨, 11, 16, 17, 19, 21, 23, 28, ③⑧, ④④, 41, 44, 45, 46	COBBLAR - 1 COMP. GRIOT - 1 " B/SMITH - 1 "	
POOREST	VERY POOR HOUSING, HIGH DEPENDENCY RATIO, LOW LABOUR SUPPLY, FOOD STARVAGE, NO FARM IMPLEMENTS, LARGE FAMILY SIZE, NO SOURCE OF SUPPORT	④④, ④④, 45, 47	SLAVE - 1 COMP. COBBLAR - 1 "	
		8 GRIOTS COMP. B/SMITHS	④ SLAVES COMP. ④ COBBLARS	

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?*