Participatory Disease Searching for Rinderpest

Training of Trainers Course

24th to 26th February 2003
Nairobi, Kenya
## Contents

### Introduction
Background to the PDS Training of Trainers Course 1
About this guide 2
Training approach and methods 3
Training programme 3

### Part One
Principles of adult learning and participative training approaches 5

### Part Two
Ideas for Training Sessions in a PDS Training Course 6

- **Welcome and introductions session**
  - Expectations and fears of participants 7

- **Training sessions on community participation**
  - Reviewing past experiences 9
  - Why is participation important? 10
  - Different types of community participation 10

- **Training sessions to introduce participatory epidemiology and participatory disease searching**
  - What is ‘participatory epidemiology’ and ‘participatory disease searching’? 12
  - What is ‘triangulation’? 12
  - Attitudes and behaviour for participatory epidemiology 13
  - Non verbal communication 14
  - Managing ourselves 17
  - Managing groups and giving clear explanation of tasks 18

- **Training sessions on participatory disease searching in relation to national surveillance needs**
  - Ensuring that trainees understand the national rinderpest eradication strategy 20
  - Analysing the current surveillance system 20
  - PDS and the concept of the veterinary detective 22

- **Training sessions of methods for participatory epidemiology**
  - Semi-structured interviews 25
  - Time-lines 26
  - Participatory mapping 27
  - Proportional piling 28

Handouts for a PDS Training Course
Background to the PDS Training of Trainers Course

In June 2002 the African Union/Interaficr Bureau for Animal Resources (AU/IBAR) and the Kenya Department of Veterinary Services co-hosted a workshop in Nairobi to review strategies for the eradication of rinderpest in Eastern Africa. The workshop focused on mild rinderpest in the Somali ecosystem. Country representatives met with regional and international specialists to discuss the problem and jointly devise improved strategies. More precisely the objectives of the workshop were to:

- develop surveillance strategies for more effective and rapid detection of mild rinderpest;
- develop practical strategies for the eradication of mild rinderpest infections;
- define more clearly the role of wildlife in rinderpest persistence;
- identify critical information gaps.

The primary participants of the workshop were PACE Co-ordinators, epidemiologists and laboratory specialists from the countries concerned, who were expected to make situation reports. Additionally selected co-workers of the PACE Programme from other countries and from field level were invited as observers. Experts and representatives of major stakeholders from the European Union (EU), Food and Agriculture Organization of the UN (FAO), Institute for Animal Health, UK (Pirbright), Centre de coopération internationale en recherche agronomique pour le développement (CIRAD), International Atomic Energy Agency (IAEA), University of California, Davis and the Office International des Epizooties (OIE) participated and made presentations.

One of the recommendations of the workshop was:

‘PACE Common Services and national PACE programmes endeavor to train veterinary professionals in participatory disease searching (PDS) in Somalia, Kenya and Ethiopia, followed by co-ordinated application with frequent follow-up workshops and coordination meetings in key border locations.’

The Community-based Animal Health and Participatory Epidemiology (CAPE) Unit of AU/IBAR supports the further development of participatory approaches and methods by veterinarians, particularly those working in pastoralist areas.

As a direct follow up to the recommendation from the Nairobi workshop, CAPE organised a training course in PDS in Griftu, northeast Kenya in November 2002. This training was attended by 19 veterinarians from PACE Common Services and national PACE programmes for Somalia, Kenya and Ethiopia.

One outcome of the Griftu PDS training was recognition of the need for further practice in PDS for trainees plus training of more veterinarians in the methodology. To achieve further training at country level, it was proposed that a Training of Trainers (TOT) course for PDS was required. PACE personnel
attending the TOT would then be responsible for training other veterinarians within their national PACE programmes.

**About this guide**

This guide contains training notes for use during the TOT course to assist participants to learn about participative training techniques and design PDS training courses within National PACE Programmes.

The objectives of the TOT are:

1. Review knowledge of participative training techniques for professional workers and principles of adult learning; practice participative training methods as necessary.

2. Identify the topics to be covered in a PDS training course and produce a detailed course timetable and lesson plan, including methods to be used for each learning objective.

3. For each national PACE programme, formulate a plan of PDS training events required to met the surveillance needs of each programme and the Somali ecosystem as a whole.

**Part One**

Part One of the TOT covers the general principles of adult learning and introduced participants to participative training approaches and methods. This component of the training will draw heavily on the book *Participatory Learning and Action: A Trainer’s Guide* (Jules Pretty, Irene Guijt, John Thompson and Ian Scoones, International Institute for Environment and Development, 1995). Each participant will be given a copy of this book as a training aid.

Part One of these notes briefly summarises the main topics covered during this introductory session of the TOT course.

**Part Two**

The second and main component of the TOT course will focus on participatory learning methods that are particularly useful for training veterinarians in PDS.

This section of the guide includes notes for PDS trainers, and includes a series of training handouts for use during PDS training. The handouts are also supplied on CD-ROM, together with photographs and cartoons for training materials.

This section of the guide is based on two previous training courses run by the CAPE Unit. The first course was a general introductory course on participatory epidemiology held in Arusha, Tanzania in April 2002. The course was attended by 26 veterinarians from seven countries – Eritrea, Ethiopia, Kenya, Somalia, Sudan, Tanzania and Uganda. Course participants included National PACE Programme Coordinators and epidemiologists from PACE, veterinary schools and research institutions. The second training course was the specialised PDS training course conducted in Griffu, Kenya, and this was attended by 19 veterinarians for the
Training approach and methods

The TOT course will be run using a participative training approach. Participative training courses recognize the limitations of lecture-based learning and therefore very few, if any, lectures are given. Instead, participative learning uses methods such as:

- group discussion (in large and small groups)
- brainstorming
- practical demonstration followed by question and answer sessions
- practical sessions in the classroom followed by question and answer sessions
- group and individual exercises
- presentations by participants
- role plays followed by discussion and questions

The justification for using these methods is that participants will learn from each other. Examples of these methods are provided in Part Two of the guide, based on experiences from the Arusha and Griftu trainings.

A participative training course also tries to create a relaxed and open working environment in which participants feel confident to share their experiences without being criticized. Methods such as energizers and icebreakers are used to create a friendly and enjoyable atmosphere during the training. Again, examples are provided in the guide.

Training programme

Day 1 Monday 24th February

8.30-9.00 Welcome and introductions
9.00-9.30 Expectations
9.30-10.00 Background to the training course, course objectives & timetable
10.00-10.30 Coffee break
10.30-12.30 Principles of adult learning and participative training techniques
12.30-2.00 Lunch
2.00-3.00 The role of the facilitator: creating an appropriate training environment
3.00-3.30 Teabreak
3.30-5.00 Key participative methods for training others in PDS
  - Method: Discussion groups
  - Example: Exploring attitudes to indigenous knowledge
  - Method: Role play
  - Example: The importance of non-verbal communication
Day 2 Tuesday 25th February

9.30-12.30 Key participative methods for training others in PDS
- Method: Treasure hunt
  Example: Understanding the difference between a search and a survey
- Method: Brainstorming
  Example: Understanding different types of questions
- Method: Pictures and posters
  Example: Understanding good and bad interview technique

12.30-2.00 Lunch break

2.00-5.00 Key participative methods for training others in PDS
- Method: Practical demonstration
  Example: Proportional piling of livestock diseases
- Method: SWOT analysis
  Example: Assessment of existing disease surveillance systems
- Method: Field practice
  Example: All PDS methods

Day 3 Wednesday 26th February

8.30-9.30 How to design a training course in PDS
  - setting the course objectives
  - setting the lesson objectives
  - writing lesson plans and choosing methods
  - timing

9.30-12.30 Designing the PDS training course

12.30-2.00 Lunch

2.00-3.00 Designing the PDS training course

3.00-3.30 Teabreak

3.30-4.30 Outline plan of further PDS training event for each country programme

4.30-5.00 Workshop evaluation and close
This component of the TOT course follows the guidelines in the book *Participatory Learning and Action: A Trainer’s Guide*. Each participant will receive a copy of the book and the key topics to be covered are listed below.

The book is not about PDS. It is a general trainer’s guide and provides all the key information required to become an effective trainer.

The listed sections of the book are crucial background reading for course participants. In addition, the book contains 100 training methods and exercises, many of which can be adapted by trainers for PDS training courses.

### Key topics – all participants should read these sections!

<table>
<thead>
<tr>
<th>Key topics</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Chapter 1: Adult Learning</strong>&lt;br&gt;This chapter describes the theory of adult learning, how adults are motivated to learn and the characteristics of a good trainer</td>
<td>1-12</td>
</tr>
<tr>
<td><strong>Chapter 2: You, The Trainer and Facilitator</strong>&lt;br&gt;This chapter describes how to prepare for training and create a good learning environment. It also outlines important training methods and how to work effectively as a trainer</td>
<td>13-37</td>
</tr>
<tr>
<td><strong>Chapter 6: The Challenges of Training in the Field</strong>&lt;br&gt;<em>Fieldwork is vital for effective PDS training.</em> This chapter give advice on how to prepare for field training.</td>
<td>90-110</td>
</tr>
<tr>
<td><strong>Chapter 7: Organising Workshops for Training, Orientation and Exposure</strong>&lt;br&gt;The sections on setting training objectives and designing the content and structure of a training course are very important.</td>
<td>111-129</td>
</tr>
</tbody>
</table>

Each of these topics will be covered during the TOT course. However, background reading will help to reinforce lessons learned during the main workshop.
Part Two
Ideas for Training Sessions in a PDS Training Course

These notes should be treated as a guide only. The aim of the notes is to provide trainers with ideas not a rigid set of methods that must be followed. Trainers can select methods from the guide as they wish, use alternative methods or develop their own methods.
Welcome and introductions session

Outline lesson plan:
- General welcome
- Getting to know you icebreaker
- Participants’ expectations and fears

Time required – up to about 2 hours

The opening of a PDS training course can be conducted in a formal or informal manner. If officials are invited to open a training course, government protocol is usually appropriate. Typically, this involves formal seating arrangements and a speech by one or more senior officials or invited guests.

After an official opening, it is usually necessary to reorganize the meeting room into a more informal arrangement that is better suited to a participative training environment. For example, seating patterns should be organized to maximize communication between participants.

Getting to know you – an icebreaker

Icebreakers are used to help to create a relaxed, open and informal training atmosphere.
In this icebreaker, a blank piece of card is given to each participant. Ask the participants to write three things about themselves on the card but not their names. The three things should be slightly cryptic or unusual so that to someone reading the card, it would not be obvious who has written it.

The facilitator collects all the cards and places them on a table at the front of the room. Everyone is then asked to come and chose any card other than their own and then using the card, find the person who wrote it.

Once everyone has found the owner of the card, the group is asked to take their seats again. Everyone is then asked to introduce the owner of the card they selected, using the information on the card.

More examples of icebreakers can be found in Participatory Learning and Action: A Trainer’s Guide.

Expectations and fears of participants

In a PDS training course, it is useful for the facilitator to understand the expectations of participants at the beginning of the course. This helps to identify any expectations that will not be covered by the course and advise people accordingly. In other words, false expectations are addressed at the beginning.

Listing people’s expectations also helps to ensure that everyone is clear about the objectives of the course and which topics will be covered.

After discussing the expectations of participants, it is usual to then list and if possible, address any fears that people think will disrupt the course.

Example

Expectations and fears in the Arusha PE Training

This session was conducted with the whole group of participants. The facilitator simply asked people to offer their expectations, and these were written on a flipchart. After the
expectations had been discussed, the fear were then listed and also discussed.

In order to overcome some, or even all of the fears, the facilitator can then propose some ‘ground rules’ for the training. The ground rules usually cover issues such the timing of each session (when it will start and finish), breaks for tea and coffee, smokers’ breaks and punctuality. The participants can also select a group representative to organize social events and present any problems to the course organizers.

**Expectations**

- To learn the practical use of PE in the field
- Acquire techniques to help farmers investigate livestock problems
- Establish regional contacts with people interested in PE
- Share experiences with colleagues in East Africa
- Be able to pass on knowledge to colleagues who are not here
- Integrate PE into national surveillance networks
- Learn the latest developments in PE
- Adopt PE as the main approach for working with pastoralists
- Know how to integrate PE into the epidemiology curriculum in veterinary schools
- Know how to combine PE with conventional epidemiological approaches

**Fears**

- Not enough time for practical work
- Wasting time during the course
- Malaria
- Change of environment and culture during the fieldwork
- A tight timetable – will there be time for socializing?
- Poor co-operation from other participants
- Language barriers in the field
- Attitude of some of us towards PE
- Language problems internally in the group
- Lack of harmonization regionally after the training
- Bad weather (heavy rain)

Note that these activities can be time-consuming. However, they help to ensure that participants feel that their opinions are influencing the design and atmosphere of the training. These initial stages of a PE training course differ from conventional teaching approaches, which usually begin with (and continue) with lectures right from the start of the training course.
Training sessions on community participation

Outline lesson plan:
- Reviewing participants’ experiences of participation and constraints – whole group session
- Why is participation important? – whole group session
- Different types of participation – presentation and discussion

Time required – about 3 hours

Reviewing past experiences

The term ‘community participation’ means different things to different people. During a PE training course, discussion on community participation can be developed by asking people to think about their past experience in trying to encourage participation and the problems they faced.

Example

Reviewing experience with community participation in the Arusha PE Training

The trainer divided participants into groups by country and asked them to consider two questions as follows:

1. How have you promoted the participation of local people in your work?

2. What are the main constraints that you’ve faced?

(see Tables opposite)

How have you promoted participation?

<table>
<thead>
<tr>
<th>Activity</th>
<th>Number of groups citing activity (total 7 groups)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Disease surveillance using interview/questionnaires</td>
<td>4</td>
</tr>
<tr>
<td>Community dialogue or village meetings</td>
<td>4</td>
</tr>
<tr>
<td>Sensitisation/working with local administrations</td>
<td>4</td>
</tr>
<tr>
<td>Vaccination campaigns</td>
<td>3</td>
</tr>
<tr>
<td>Implementing CAHWS projects</td>
<td>3</td>
</tr>
<tr>
<td>Sero-surveillance</td>
<td>2</td>
</tr>
<tr>
<td>Providing disease information to farmers</td>
<td>2</td>
</tr>
<tr>
<td>Developing communication materials</td>
<td>2</td>
</tr>
</tbody>
</table>

What are the main constraints that you’ve faced when using participation?

<table>
<thead>
<tr>
<th>Constraints</th>
<th>Number of groups citing constraint (total 7 groups)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of skills or sufficient staff trained in PE</td>
<td>5</td>
</tr>
<tr>
<td>Socio-cultural barriers</td>
<td>3</td>
</tr>
<tr>
<td>Language barriers</td>
<td>3</td>
</tr>
<tr>
<td>Lack of support from superiors/approach not accepted</td>
<td>3</td>
</tr>
<tr>
<td>Poor access to communities due to bad roads</td>
<td>3</td>
</tr>
<tr>
<td>Insecurity</td>
<td>2</td>
</tr>
<tr>
<td>Drought</td>
<td>2</td>
</tr>
<tr>
<td>Community has other priorities</td>
<td>2</td>
</tr>
<tr>
<td>Conflicting interests or manipulation</td>
<td>2</td>
</tr>
</tbody>
</table>
Why is participation important?

Trainers can expand discussion on community participation by encouraging participants to reflect on why participation is important.

Examples of ‘failed’ projects due to poor participation can be provided and participants can be asked to offer their own examples.

Example

A livestock project in Papua New Guinea– the 100 to 1 Cow Project - was used as an example of a project that failed to meet its objectives. Participants were given a brief handout about this project and asked to read the handout (see Handout). They were then asked for examples of projects that failed due to poor participation.

Examples from participants at the Arusha PE Training

I know of a project that tried to improve wells. The new wells meant that people no longer had to work together to draw the water and could collect water individually, any time they liked. But, people still preferred the old wells - they liked the fact that water collection was partly a social activity and this was lost with the new wells.

I was studying in the US and saw old library books being thrown away. I thought the books could be used in my own community back home in Uganda, and I tried to set up a library there. But for the people, a library wasn’t a priority - they wanted a clinic not books.

I know about a project around Dar es Salaam that was donating animals to people living near the city. But these people had no knowledge of livestock rearing and the project failed.

I remember visiting sites where new housing had been constructed for returnees coming back to my country from Sudan. The area was a hot, lowland place and the new houses were designed with no ventilation and low, iron sheet rooves. Of course, the returnees families refused to live in the new houses and they remained empty.

The trainer then asked participants to review the discussion so far and summarise the main the reasons why participation is important. The reasons are listed below.

⇒ To avoid failure of projects/activities.
⇒ To improve effectiveness of our works and inputs
⇒ To ensure local commitment
⇒ To enhance local ownership
⇒ To recognise cultural sensitivity
⇒ To improve sustainability
⇒ To ensure that outsiders do not misunderstand needs.
⇒ To avoid duplication of activities.
⇒ To avoid wastage of resources.

These experiences show how participants are usually very aware of the rationale for encouraging participation in development. But are there different kinds of participation and if so, how can participation vary in different projects?

Different types of community participation

The trainer can use the typology of participation (see Handout) to prepare a short presentation on different types or levels of participation.

Participants can then be asked to think of examples to illustrate these different types of participation from their own work or knowledge of other projects or sectors.
A discussion can then be developed around the question: ‘Why was such and such a project characterized by this type of participation?’

A key point for the trainer to bring out is that the type of participation in a particular project or system probably has a strong influence on the sustainability of the system. The greater the involvement of local people and contribution of resources, the better the sustainability.
Training session to introduce participatory epidemiology and participatory disease searching

What is ‘participatory epidemiology’ and ‘participatory disease searching’?

Outline lesson plan

- Brainstorming session ‘What is Participatory Epidemiology?’
- Brainstorming session ‘What is Participatory Disease Searching?’

Time required – about 40 minutes

A brainstorming session can be used to gauge participants’ understanding of the term ‘participatory epidemiology’. The facilitator can write two questions on a flip chart and invite participants to offer their answers.

What do you understand by term ‘participatory epidemiology’?

How does it compare with other approaches e.g. PRA?

The key learning point is that participatory epidemiology is a general term encompassing the use of participatory approaches and methods to improve understanding of animal health issues.

When everyone understands this point, a second brainstorm can be conducted, using the question:

What is participatory disease searching?

Again, all ideas are written quickly on a flipchart.

The key learning point is that disease searching is one component of participatory epidemiology. The handout called Participatory epidemiology and participatory disease searching: What’s the difference? can then be used. This handout outlines meanings of participatory epidemiology and shows that disease searching is among the many applications of participatory epidemiology.

What is ‘triangulation’?

Outline lesson plan:

- Brainstorming session ‘What is triangulation?’
- Examples of triangulation from everyday life and veterinary practise

Time required – 15 minutes

The trainer can run a brainstorming session around the question ‘What is triangulation?’ to gather participants’ existing knowledge.

A definition of triangulation in PE is ‘the process of cross checking information using various methods and sources.’

To ensure that participants have understood this concept, the trainer can ask people to offer examples of triangulation as follows:

Think of one example from everyday life where you use triangulation

Think of one common veterinary use of triangulation

Examples from everyday life:

‘Before buying an important item, I check the price in different shops’
'I compare the news on the radio with the news in a newspaper'

'When my children break something in the house I have to be a detective to find out who was responsible. I ask different people to try to get the culprit'

Examples from veterinary medicine:

'During diagnosis you triangulate because you use different methods, such as clinical examination and interviewing'

The handout called **Triangulation in Participatory Disease Searching** can be used to reinforce the concept of triangulation.

**Attitudes and behaviour for participatory epidemiology**

Outline lesson plan:

- Introductory presentation
- Discussion session on traditional beliefs and practices
- Presentation and discussion on ‘validated indigenous knowledge’

**Total time required** – about 45 minutes

This is a crucial part of the training and should not be rushed or overlooked. Trainers should refer to the handout called **Notes on attitudes and behaviour in participatory epidemiology** and prepare a 10 to 15 minute presentation on attitudes and behaviour.

An important aspect of participatory approaches is the way we interact with other people. This interaction determines the relationship and trust that develops between researchers and local people, and affects the types of issues and information that people are willing to discuss in an open manner.

If we look at this issue from an epidemiological perspective, the relationship between researchers and livestock keepers is a key factor affecting the reliability and validity of data. If informants are concerned that researchers have a ‘hidden agenda’, will use the information solely for selfish purposes or may pass information to authorities, then their participation will be poor. Also, if informants consider outsiders to be rude or arrogant, or only interested in their own opinions, the discussion will not be very constructive.

Therefore, a crucial feature of participatory epidemiology is that outsiders must be constantly aware of their own attitudes and behaviour.

From the perspective of meaningful interaction, researchers must believe that an informant has something useful to say. This means respecting local views and opinions, and being open to ideas that may not necessarily agree with modern science. This does not mean that as veterinarians, we must automatically accept all indigenous knowledge as valid and useful. The idea is to identify local knowledge and skills that seem to agree with our professional know-how, and explore this local knowledge.

A participative training method for raising awareness of the participants’ personal attitudes towards indigenous knowledge is to use an exercise called ‘Traditional beliefs and practices’.
How to run a discussion session on Traditional Beliefs and Practices

Ask the participants to think about their home areas and communities. In these communities, ask them, as individuals, to describe traditional beliefs or practices that fit into the following categories:

1. Are popular but cannot be explained scientifically. Local people insist that these beliefs or practices are valid.
2. Are popular and agree with scientific knowledge.
3. Are used and may even be popular, but according to western science, would be harmful.

This exercise usually requires 30 to 45 minutes. Run the exercise as a whole group session. Give participants 5 to 10 minutes to think of examples and then encourage people to call out their examples. List the examples on three flip charts sheets, one for each category.

The point of this exercise is that although some traditional practices defy scientific explanation, we should automatically reject these local perceptions.

There are many examples of hypotheses about animal diseases arising from observations made by, and well known by livestock keepers. The trainer can present some of these examples to participants and prompt further discussion regarding the dangers of overlooking local knowledge.

Examples of indigenous veterinary knowledge validated by veterinarians:

- Maasai knowledge on links between malignant catarrhal fever and wildebeest (Barnard et al., 1994)
- Dinka diagnosis of CBPP (McDermott et al., 1987)
- Somali diagnosis of CCPP (Baumann, 1990)
- Somali diagnosis of surra in camels (Edelsten et al., 1973)
- Maasai diagnosis of rinderpest (Plowright, 1998)
- Orma diagnosis of bovine trypanosomiasis (Catley et al, 2002)

Non verbal communication

Outline lesson plan

- Brief presentation on non verbal communication (10 minutes only)
- Plays to show different behaviours
- Whole group discussion

Time required – about 90 minutes

Example

Using plays to demonstrate non verbal communication in the Arusha PE Training

Participants were divided into four groups. Each group was asked to move away from the other groups and was visited in turn by the trainer.

The first group was asked to think of three ways to demonstrate submissive behaviour
without talking. It was explained that they would be required to act out three types of submissive behaviour to the other groups, who would then have to guess what was being demonstrated.

A similar task was given to the other three groups, who had to demonstrate three ways of showing boredom, arrogance and friendliness. In all cases, the groups were not allowed to speak during the demonstration.

After each play, the trainer asked the group to call out the behaviour they observed. These behaviours were written on a flip chart. Finally, the group was asked to explain which behaviour they were trying to show.

Following these plays, other issues related to non-verbal and verbal communication were discussed with facilitation by the trainer. These issues included:

- **Gender and culture**
  How is it best to approach women?
  How can we include women in cultures where it is difficult for outsiders to talk to women?
  If women are often busy, when is the best time to talk to them?

- **Seating arrangements**
  How can we avoid being seated as though we are officials, behind desks or at a level higher than everyone else?
  How can we understand local customs or arrangements for seating?
How can we rearrange seating to avoid causing offence but also improve communication within the group?

- **How to handle food and drink**
  Should we always share our own food and water with people in the village?
  How do we handle offers of food or drink if we don’t like what they offer us?
  If you go to some communities, you must drink milk with them if you want to be accepted

- **The importance of eye contact in communication**
  Make eye contact except when talking across gender.
  When talking to the whole group, engage all the group rather than individuals.
  Sometimes eye contact is interpreted as a challenge.
  In different cultures, eye contact means different things

![Woman slaps man for staring at her daughter](image)

*By Jonathan Akweteireho In Mbarara*

A woman passenger caused drama in an Ikanda-Mbarara bound taxi on Saturday when she slapped another passenger identified as Peter for gazing at her daughter: “You! You want to spoil my daughter. You can really stare. I have all along been seeing you pretending,” she said in Luganda after slapping the man. The woman later said she became uncomfortable when the man started making gestures and saw the girl was about to respond.

- The passengers attacked and demanded that he apologises but he denied having had any intentions of wooing the girl.

- **The way we dress**
  Be aware that men tend to overdress, too formally, and this intimidates. Middle ground is best – not too scruffy and not too formal.

---

**Using photographs to show different types of non-verbal communication**

The trainer can prepare a set of photographs showing different types of interviewing, seating arrangements or interactions between people.

The photographs should be large, A4-sized, and can be handed around the group so that everyone can view them (you will need to have enough copies).

When everyone has the photos, ask the question ‘What do you see in the picture?’ and encourage people to observe good and bad points.

This exercise makes the participants look very closely at the pictures and think about how communication can vary. The exercise is also a good way to energise the group and can be used spontaneously throughout the training to remind people about communication skills.

Examples of photographs used in the Arusha PE Training are copied below and electronic copies are available on the CD-ROM.
Managing ourselves

Outline lesson plan

- The rope square exercise

Time required – about 15 minutes

The trainer should refer to Handout 8.

An energizer such as the rope square game can be used to introduce this session.

► The rope square game

The trainer uses a rope, about 2m in length and tied once to form a loop. The rope is placed on the floor.

The trainer then asks for 5 volunteers and tells them to stand in a circle around the rope. The trainer then gives the following instructions:

1. Close your eyes and do not open them during the game.
2. Bend down and touch the rope.
3. As a group, make a square.

The other participants are asked to observe what happened during the exercise. The following behaviour is often noted:

- Initially, the 5 group members do not speak to each other. They either forgot to speak or assume that they were not allowed to speak.
- When they do start talking to each other, their task becomes easier. However, everyone talks at once and there is confusion.
- Eventually, one person may take the lead and the other group members
followed this person’s instructions. From then on, the group is better organized and able to complete the task.

This exercise illustrates the importance of group organization and leadership when working as a team.

Each person in a team must have assigned roles and during the exercise, adhere to these roles. If a team is poorly organized and confused, onlookers will observe these weaknesses easily and lose confidence in the team.

**Managing groups and giving clear explanation of tasks**

**Outline lesson plan**

- Introduction by trainer
- The folding paper game
- Handling dominant talkers
  - Introduction by trainer
  - Brainstorming session

**Time required – about 30 minutes**

Many PE methods are used with groups of informants. Therefore, PE practitioners need to be skilled at organizing group work and managing groups. They also need to explain clearly what they want people to do when using methods such as matrix scoring, mapping and other methods.

► **The folding paper game**

A session on managing groups and giving clear instruction can be introduced using the folding paper game. The facilitator asks for 4 volunteers and positions them facing the rest of the group.

Each volunteer is given a blank, square piece of paper around 20cm square. They are then given the following instructions:

1. Close your eyes.
2. You may not ask questions.
3. Fold the paper in half and tear off the bottom right corner.
4. Fold the paper in half again and tear off the top right hand corner.
5. Fold the paper in half again and tear off the bottom left corner.
6. Open your eyes, unfold the paper and show it the rest of the group.

All the pieces of torn paper are completely different shapes.

This game shows that although instructions may appear simple, they can easily be misinterpreted.

Guidance on how to conduct a particular exercise needs to be very clear and practiced beforehand to check that instructions are easy to understand. This ‘testing’ the instructions is even more important when using a translator.
Handling dominant talkers

One of the most common challenges during group sessions is the handling of ‘dominant talkers’. Dominant talkers include people who simply talk frequently or loudly, and remain insensitive to whether their views are relevant or interesting to others. Dominant talkers can also be local leaders or professionals who feel that their views are the only opinions that matter.

Sometimes, dominant talkers can be useful informants. If they are leaders, their knowledge can be very useful. However, when these people prevent others from participating in a group discussion or exercise, they need to be managed in order to allow wider participation.

To raise understanding of dominant talkers, the trainer can prepare a short introduction based on the notes above. The trainer can then run a brainstorming session and ask participants to call out ways to handle a dominant talker.

Example
Handling dominant talkers in the Arusha PE training

The participants in the Arusha PE Training suggested the following ways to handle a dominant talker:

- Divide the group into smaller groups and disperse the groups to different places.

- Direct questions at particular individuals. If the dominant talker interrupts, say something like ‘Thanks for your useful contribution. We can now hear what other people have to say’.

- Assign a physical task to the dominant talker to distract them.

- During a discussion on animal health, say to the dominant talker, What you’ve told us is very interesting. It would be good to see some of your animals and talk more about the problems you’ve mentioned. One of the team then goes with the person to visit their animals, thereby separating the person from group without causing offence.

- Stop the discussion and resume later.

- Make the dominant talker part of the team.
Training sessions on participatory disease searching in relation to national surveillance needs

Ensuring that trainees understand the national rinderpest eradication strategy

Outline lesson plan:
- Presentation on the national rinderpest eradication strategy

Time required – 40 minutes (20 minutes presentation plus 20 minutes question and answer session)

At some point in a PDS training course, it is useful to ensure that trainees recognize the role of PDS within the overall rinderpest eradication strategy for a particular country.

The trainer can prepare a brief summary of the current status of rinderpest eradication in their country. This is one of the few occasions during a PDS training course when a ‘formal’ presentation can be used. Keep the presentation short - no more than 20 minutes - and allow plenty of time afterwards for questions and clarifications.

Analysing the current surveillance system

Outline lesson plan
- Brainstorming on surveillance activities and ranking of current emphasis on different surveillance methods
- SWOT analysis
- Ranking of surveillance characteristics that need strengthening

Time required – 1.5 to 2 hours

An analysis of the existing surveillance system helps trainees to see how PDS fits into the overall system. PDS doesn’t replace other surveillance activities, but is complementary to other methods and strengthens the overall system.

Brainstorming on surveillance activities

A brainstorming session can begin with the question:

What are the different rinderpest surveillance activities that we are currently using?

These activities are quickly listed on a flipchart. If trainees forget to mention an activity, this can be added by the trainer.

Surveillance activities include:
- Disease reporting
- Serology
- Clinical surveillance
- Questionnaire surveys
- Active reporting
- PDS
- Wildlife surveillance
- Outbreak investigation

After the surveillance activities have been listed, it can be useful to rank them in terms of the relative emphasis placed on each activity by the national eradication programme. The ranking can be done as a group exercise, or each trainee can conduct their own ranking and the ranks are then added.

At this point, the trainer can remind participants of the important seven indicators.
of effective surveillance. This can be achieved using a pre-prepared flipchart and the handout called *Indicators of Effective Surveillance*.

- **SWOT analysis of the surveillance system**

SWOT means strengths, weaknesses, opportunities and threats. Starting with strengths, the trainer asks participants to call out their views on the strengths of the existing system. These are listed on a flip chart. The process is then repeated for weaknesses, opportunities and threats.

During the SWOT analysis the trainer should remind people of the seven indicators of effective surveillance. This will help people to decide whether a particular aspect of the system is a strength or weakness.

An example of a SWOT analysis is presented below, from the PDS training workshop in Griftu, Kenya (November 2002).

---

**SWOT Analysis of PACE National Surveillance Systems in the Somali Ecosystem**

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Qualified Manpower</td>
<td>• Cooperation/Acceptance is Low</td>
</tr>
<tr>
<td>• Structure in Place</td>
<td>• ELISA Technology in Crisis</td>
</tr>
<tr>
<td>• Background Information</td>
<td>• Difficulty in Identifying Disease</td>
</tr>
<tr>
<td>• Good Funding Overall</td>
<td>• Not Enough Resources on Active Surveillance</td>
</tr>
<tr>
<td></td>
<td>• Better Definition of Mild RP Needed</td>
</tr>
<tr>
<td></td>
<td>• Sensitivity</td>
</tr>
<tr>
<td></td>
<td>• Specificity – Lab Support Variable</td>
</tr>
<tr>
<td></td>
<td>• Timeliness – Delayed Investigations</td>
</tr>
<tr>
<td></td>
<td>• Access – Representativeness Poor</td>
</tr>
<tr>
<td></td>
<td>• Information Dissemination and Exchange</td>
</tr>
</tbody>
</table>

| Opportunities                    | Threats                                                                     |
|----------------------------------|                                                                            |
| • Develop Common Understanding   | • Bureaucracy                                                             |
| • Skill Development/Training     | • Lack of transparency                                                    |
| • Build Coordination             | • Insecurity                                                              |
| • Build Common Approach:        | • Natural disasters                                                      |
| - Disease Reporting             | • Politicisation of RP                                                    |
| - PDS                           | • Trade Bans                                                              |
| - Outbreak Investigation        | • Personal Safety                                                         |
| • Border Harmonization          | • Donor Fatigue                                                           |
| - Low level meetings            | • Reporting Endangers Careers                                            |
|     between field workers        | • Performance Indicator Targets not Achievable                            |
| • Better Communications         |                                                                            |
| • Better Info Exchange          |                                                                            |
| • Review Progress Periodically   |                                                                            |
Ranking of surveillance indicators that need strengthening

Further analysis of the existing surveillance system can involve a simple ranking of the ‘indicators that need strengthening’. Again, the ranking can be conducted as a whole group exercise, or individuals can rank the indicators and the ranks are then summated.

An example of this kind of ranking is shown below, again drawn from the Griftu PDS workshop.

<table>
<thead>
<tr>
<th>Surveillance Characteristic</th>
<th>Ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sensitivity</td>
<td>1st</td>
</tr>
<tr>
<td>Specificity</td>
<td>3rd</td>
</tr>
<tr>
<td>Timeliness</td>
<td>2nd</td>
</tr>
<tr>
<td>Representativeness</td>
<td>4th</td>
</tr>
<tr>
<td>Simplicity</td>
<td>6th</td>
</tr>
<tr>
<td>Flexibility</td>
<td>7th</td>
</tr>
<tr>
<td>Acceptability</td>
<td>5th</td>
</tr>
</tbody>
</table>

If sensitivity is a priority for strengthening, field level capacity to detect disease has to be improved.

If timeliness is a priority for strengthening, capacity to quickly detect disease and intervene has to be improved.

If specificity is a priority for strengthening, capacity for correct disease diagnosis has to be improved.

PDS can assist in all of these three areas.

PDS and the concept of the veterinary detective

Outline lesson plan

- Treasure hunt for clinical rinderpest
- Brief presentation on PDS using diagrams

Time required – 2 to 2.5 hours
Further reading – handouts on PDS

During the introductory session on participatory epidemiology and PDS, the general concept of PDS will have been explained. However, one of the most important training challenges in a PDS course is to ensure that participants fully understand the difference between a conventional, quantitative epidemiological survey and the investigative and inductive nature of PDS.

One method that can be used to clarify the PDS approach is the treasure hunt. This method uses clinical rinderpest as the ‘treasure’ to be located, and encourage the trainees to think in an investigative and searching way.

Example
The rinderpest hunt in the Arusha PE Training

A rinderpest hunt is a series of clues. If each clue is solved correctly, the sequence of correct answers will lead the team to rinderpest. The answer to one clue leads the team to the next clue, and the clues are located in envelopes at various locations in the training centre compound or surrounding area. Therefore, a rinderpest hunt requires a lot of planning.

In the Arusha training, 22 participants were divided into four teams. Each team was given the same set of clues to follow and were told that the first team to find rinderpest was the winner. To start the hunt, each team was sent to a different location before being handed their first clue. Six clues were used.
**Clue 1 - A spatial clue**

When practising the participatory mapping exercise earlier in the training, each of four groups had produced their own maps of the training centre compound. A prominent feature on some of the maps was a small hill known as Mount Denmark. Near to this hill was a fishpond. However, the different maps had different orientations so that the position of ‘north’ was not consistent.

The clue said “You are a team of vets and you need to find the last cases of rinderpest in the country “Emmess”. You hear rumours that rinderpest is in a particular, remote place. You need to go to the place to investigate the rumours. Apply orientation of the map of Group 1 to the map of Group 2. The place you need is located to the west of the fish and gives a good view of the training centre. Your next clue is found up there.”

**Clue 2 – Problem solving**

The team were given a piece of paper with 5 pictures as follows:

![Images of a horse, a camel, a man, a fish, and a child]

The clue said ‘You’ve used the map to locate the place with rumours of rinderpest. You need to find and interview your first key informant. The first letter of the word describing each drawing makes another word that fits into the space in the following sentence: Go to the house of the ………. of the training centre’

**Clue 3 – Logical problem solving**

The clue said, ‘Well done. You’ve found your key informant and he is directing you to specific boma where he heard stories of rinderpest occurring. To locate the boma, solve the following clue:

- Square root of 49 = X
- Y = (14² – square root 256)/20
- Z = 2XY

XYZ correspond to letters of the alphabet
Go to the place where the live ZYX is found.’

**Clue 4 – Using a translator**

The receptionist at the training centre was called Haika George, though few of the trainees knew her full name. She was Tanzanian but also spoke fluent Danish. She was primed by the trainer and told that people would be visiting her to ask for information. However, she should only speak in Danish and not provide the next clue until the team had found and used a translator. Also, the teams should fully explain who they are and why they wanted the information.

A further trick of the clue was that one of the participants was also called George. The clue said, "You have interviewed a livestock keeper here in the boma and learned that the cattle went to the dry season grazing area. You now have to find the key informant called George (initial H.G.) and persuade George to tell you where the cattle are located. George will then give you an envelope containing this information. Find the key informant called George. Persuade this key informant to give you the next clue’.

**Clue 5 – Observation**

Houses in the compound were identified by a letter and number e.g. A3, B2, F6. Each team was given a piece of card. On the card the following symbols were written:

![Image of symbols]

The clue said, ‘The herd location is written on the piece of card, but the half of the card is missing. Use a mirror to find where the herd is located and go there.’
**Clue 6 – Confirming the diagnosis**

The teams were given a set of 8 letters written on separate pieces of card.

A I P C N S M L

The clue said, ‘Because of your skills in disease searching, you’ve managed to find the suspect herd. The final clue will help you to confirm the identity of the last rinderpest cases in Emmess.’

Hopefully, after a rinderpest hunt the participants will understand clearly that disease searching is a very different approach to a pre-planned survey or study.

The trainer can reinforce this and other aspects of PDS using a 30-minute presentation on the principles and methods of PDS. The handouts called *Participatory Disease Searching versus Surveys: So What’s the Difference?* and *A Methodology for Rinderpest Participatory Disease Searching* can be used to help design the presentation. These handouts also make useful homework and further reading.
Training sessions on methods for participatory epidemiology

The following participatory methods are most commonly used in PDS:
- Semi-structured interviews, especially using probing questions
- Participatory mapping
- Time-lines and oral history
- Proportional piling

Training sessions are required on each of these methods. At the end of each session, trainees will be ready to practice the methods in the field.

When done well, training participatory methods is time-consuming. Allow at least half a day to train one method.

**Semi-structured interviews**

**Outline lesson plan:**
- Presentation on different types of informal interviews for PDS
- Brainstorming session on ‘barriers to good interviewing’
- Open, closed and probing questions
- Mock interviews

*Time required – 2.5 hours minimum*

The trainer can refer to the handout A Methodology for Rinderpest Participatory Disease Searching and prepare a 15 to 20 minute presentation on the key features of interviewing for PDS.

The presentation can be followed by a brainstorming session on ‘barriers to good interviewing’. Participants are asked to call out factors that will inhibit good communication between interviewer and informant.

**Examples of barriers to good interviewing from the Arusha PE Training:**
- Asking very direct or aggressive questions.
- Pretending or lying on the part of the interviewer.
- Interruption by the interviewer.
- Asking complicated questions.
- Using technical terms.
- Mixing languages.
- Ambiguous questions.
- Leading questions.
- Compound questions.
- Sensitive questions.
- Irrelevant questions.
- Repetitiveness.

(IIED, 1995)

The trainer can ask the participants to give examples of questions described as ‘aggressive’, ‘complicated’, ‘sensitive’, ‘irrelevant’ and ‘compound’. This helps to ensure that everyone is clear about the importance of phrasing questions carefully.

PDS often uses semi-structured interviews based on open and probing questions. The trainer can provide participants with examples
of closed or leading questions and ask them to re-phrase the questions as open or probing questions.

**Examples**

The question ‘How many times did you visit the veterinary clinic last year?’ can be rephrased as ‘Last year, what did you do if your animals became sick?’

The question ‘Do you use oxytetracycline to treat CBPP?’ can be rephrased as ‘How do you treat cattle with somba?’

► **Mock interviews**

People only really become skilled at interviewing if they practice the method.

The trainer should divide the participants into groups of 4 to 5 people. Ask 2 or 3 people in the group to play the role of livestock keepers and the other 2 people act as interviewers.

The trainer should visit each group in turn and give them a specific topic to investigate using a short, semi-structured interview. The handout *Summary Guidelines for Semi-structured Interviews* covers this issue. Suitable topics might be ‘Sudden death in cattle’, ‘Diarrhoea in calves’, ‘Fair prices for veterinary drugs’ and so on.

The interviewers have to prepare a checklist and then conduct the interview in front of the other participants. The participants watch the interview and then comment on the good and bad points of the interview.

This exercise can be made more useful (and entertaining) if the trainer asks the livestock keepers to act in particular ways. For example, some could be hostile, others could be bored while a third group could be suspicious.

**Time-lines**

The time-line method is a type of interview focussing on historical disease events. When used with older informants, the method can cover periods of 50 years or more. The method is relatively simple to use and probably doesn’t warrant a long training session, although is should be practised in the field.

In summary, informants are asked to think back in time and describe important events that occurred in the community. The team can chose whether to mention rinderpest, thereby prompting the informant to focus on rinderpest outbreaks. Alternatively, the team can not mention rinderpest and wait to see if the informant mentions the disease.

Reports of rinderpest obtained from interviews and timelines can be tabulated – see the Griftu workshop report for an example of how this is done.
**Participatory mapping**

Outline lesson plan:

- Short introductory presentation on participatory mapping, including guidelines on how to map – 20 minutes
- Practical session in groups – 1 hour
- Presentation of maps by each group followed by question and answer session – 1 hour

**Total time required is around 2.5 hours.**

The trainer can refer to the handout called Participatory Mapping to prepare the initial presentation for this session. The handout is given to participants after the presentation.

Key points to make during a presentation are:

- Spatial information on livestock distribution, movements, interactions, and disease events is extremely useful in PDS
- Some information is easier to describe and analyse visually than in written form. It is easier to draw a map than describe a map in words
- Mapping is useful at the beginning of a piece of work to define the spatial boundary of the system under investigation. It also acts as a good ice-breaker as many people can be involved
- Maps produced on the ground using locally-available materials are easy to adjust until informants are content that the map is correct
- Maps do not need written words or labels, and therefore non literate people can participate

The second stage of the session involves practical work.

**Example**

**Practical session on participatory mapping in the Arusha PE Training**

The participants were divided into four groups. Each group was tasked with seeking out a particular informant or informants in the training compound, and requesting these informants to produce a map of the compound. The trainer was aware that certain informants in the compound would be easier to work with than others.

The groups were instructed to copy the maps on to flip chart paper and be ready to explain the maps to the other participants. They were given 1 hour to complete the mapping.

**Group presentations**

Group presentations are an important component of participative training courses. They allow people to share their results with other participants, and explain the process that led to the results. This includes problems they came across when using a particular method. These sessions allow participants to ask questions and identify strengths and weaknesses relative to their own experiences.

As part of the practical work, each group was asked to present their findings to the main group.
Some of the discussion points that arose during the presentations were:
- Which way is north? The map should show orientation.
- Who produced the map? The names of the informants should be written on the map.
- Should the map have a scale? In either km or time taken to traverse the area covered by the map.

Proportional piling

Outline lesson plan:
- Introductory presentation, 10 minutes
- Demonstration, 30 minutes
- Practical sessions, 1.5 hours

Total time required – 2 hours, 40 minutes

Trainers should refer to the handout called Proportional Piling for background information on the uses of proportional piling in PE. This handout can be used to prepare a very short presentation (no more than 10 minutes) to introduce the method.

Proportional piling is most easily taught by demonstration followed by practice in groups.

Although a method such as proportional piling appears very simple, it is much more difficult to use than people anticipate - always give enough time for classroom practise of PE methods.

► How to teach proportional piling

In the Arusha PE training, proportional piling was taught by demonstration. Two Ethiopian participants acted as highland farmers, and the researcher asked them about the same 5 diseases studied previously in the matrix scoring and seasonal calendar practise sessions.

Stage 1 – identify local terms for different age groups of the livestock type being studied.

The researcher asked the informants to explain how cattle are categorized under the traditional system. The informants named and described three main age groups of cattle as follows:

- calves (0-1 year of age) - tija
- heifers (1-3 years of age) – gider
- adults (> 3 years of age) - lam

The researcher checked the meaning and names of the different cattle age groups.

Stage 2 – Piling of counters to show disease patterns in each age group

The researcher explained that each informant would conduct an exercise in turn. Selecting one of the livestock keepers, he gave him a pile of 100 stones and explained that these stones presented all the calves tija in his herd during the last year.

Discussion points:

Do we conduct use this method with individuals or groups of informants?

The method seems to work with either individuals or groups of informants. If you want to look at individual herds, you need to know who knows most about a particular herd. For example, in a pastoral area the herd may be a long way from the settlement and it is the
young men with the cattle who know most about the health problems. These men may not necessarily be the herd owners.

*How do we know which animals the informant is referring to? Are these animals only his or her own animals, or do they also include animals that may be loaned to or being cared for by the informant?*

Informants can be asked questions that will answer these issues. Movements of animals into and out of herds in pastoral areas can be very complex and include dowry payments and a complex array of loans and gifts. In some cases, it makes sense to define ‘herd’ as a group of animals cared for by a particular informant over a particular time period.

*But we have not asked how many animals are in the herd!*

This is an important advantage of the proportional piling method – we can avoid asking potentially sensitive questions about the number of animals owned.

Bear in mind that when epidemiologists report incidence, mortality or other variables the convention is to use percentages. A percentage is a proportion and can be derived without knowing the number of animals in a population or a herd.
Handouts for a PDS training course
by Andy Catley and Jeffrey Mariner

This section contains handouts that can be used during a PDS training course. The handouts can be photocopied, or printed off from the CD-ROM supplied by AU/IBAR.

List of handouts

Why is participation important?
Seven types of community participation
Notes on attitudes and behaviour in participatory epidemiology
Participatory epidemiology and participatory disease searching: what’s the difference?
A methodology for rinderpest participatory disease searching
Participatory disease searching and surveys: what's the difference?
Triangulation in participatory disease searching
Working as a team when using participatory methods
Indicators of effective surveillance
Summary guidelines for semi-structured interviews
Participatory mapping
Proportional piling
Why is participation important?

The 100-to-1 Cow Project

The farmers in a small village in the Indonesian province of Irian Jaya in western New Guinea, had rarely, if ever, seen a cow before government representatives announced that a boatload of cattle would soon arrive.

The village had about 300 households most of whom depended on subsistence farming supplemented by raising a pig and a few chickens, and by hunting. Apart from government officials and the occasional trader, the village had little contact with the outside world.

Government development planners were anxious to introduce beef cattle to the region in order to provide a new source of meat for the country’s rapidly growing urban centres. As the people of the village had migrated to the coast from upland areas known for breeding pigs, the planners assumed that these people would adapt easily to the challenges of expanded livestock-raising.

The visiting officials convened a one-day training programme and then, 100 beef cattle arrived. Almost at once, the animals began wreaking havoc. Knee-high fences designed to keep pigs from entering the village centre were no barrier to the animals; They trampled gardens, damaged homes, broke tools, and fouled fresh water sources. When the cows were shooed away, many wandered into the bush and disappeared.

Deciding to hunt them down before they did any more damage, the villagers armed themselves with bows and arrows and one-by-one they killed the cows until there was only a single animal left alive. Satisfied that the danger was passed, they spared the lone survivor, a living memory to the danger that government officials had called “development”.

Source: Connell (1993)
## Seven types of community participation

<table>
<thead>
<tr>
<th>Type of participation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Manipulative participation (Co-option)</td>
<td>Community participation is simply a pretence, with people’s representatives on official boards who are unelected and have no power.</td>
</tr>
<tr>
<td>2. Passive participation (Compliance)</td>
<td>Communities participate by being told what has been decided or already happened. Involves unilateral announcements by an administration or project management without listening to people’s responses. The information belongs only to external professionals.</td>
</tr>
<tr>
<td>3. Participation by consultation</td>
<td>Communities participate by being consulted or by answering questions. External agents define problems and information gathering processes, and so control analysis. Such a consultative process does not concede any share in decision-making, and professionals are under no obligation to take on board people’s views.</td>
</tr>
<tr>
<td>4. Participation for material incentives</td>
<td>Communities participate by contributing resources such as labour, in return for material incentives (e.g. food, cash). It is very common to see this called participation, yet people have no stake in prolonging practices when the incentives end.</td>
</tr>
<tr>
<td>5. Functional participation (Cooperation)</td>
<td>Community participation is seen by external agencies as a means to achieve project goals. People participate by forming groups to meet predetermined project objectives; they may be involved in decision making, but only after major decisions have already been made by external agents.</td>
</tr>
<tr>
<td>6. Interactive participation (Co-learning)</td>
<td>People participate in joint analysis, development of action plans and formation or strengthening of local institutions. Participation is seen as a right, not just the means to achieve project goals. The process involves interdisciplinary methodologies that seek multiple perspectives and make use of systemic and structured learning processes. As groups take control over local decisions and determine how available resources are used, so they have a stake in maintaining structures or practices.</td>
</tr>
<tr>
<td>7. Self-mobilisation (Collective action)</td>
<td>People participate by taking initiatives independently of external institutions to change systems. They develop contacts with external institutions for resources and technical advice they need, but retain control over how resources are used. Self-mobilisation can spread if governments and NGOs provide an enabling framework of support. Such self-initiated mobilisation may or may not challenge existing distributions of wealth and power.</td>
</tr>
</tbody>
</table>
Notes on attitudes and behaviour in participatory epidemiology

1. Introduction
An important aspect of participatory approaches is the way we interact with other people. This interaction determines the relationship and trust that develops between an investigation team and local people, and affects the types of issues and information that people are willing to discuss in an open manner.

*If we look at this issue from an epidemiological perspective, the relationship between the investigation team and livestock keepers is a key factor affecting the value of participatory disease searching.*

If informants are concerned that researchers have a 'hidden agenda', will use the information solely for selfish purposes or may pass information to authorities, then their participation will be poor. Also, if informants consider outsiders to be rude or arrogant, or only interested in their own opinions, the discussion will not be very constructive.

Therefore, a crucial feature of participatory epidemiology is that researchers must be constantly aware of their own attitudes and behaviour.

2. Attitudes
The evolution of participatory epidemiology was strongly influenced by social anthropologists and their interest in indigenous knowledge. In short, researchers began to realise that rural communities had a great wealth of knowledge and skills that had developed over generations. Similarly, farmers were experimenters in their own right. They recognised problems and tested different ways to solve these problems.

Consequently, participatory approaches to development aimed to use indigenous knowledge as the basis for development interventions. By understanding what farmers already knew and by involving them in problem solving, projects were better tailored towards local perceptions and capacities. This principle has been widely applied in some of the better community-based animal health projects in pastoral areas.

From the perspective of meaningful *participatory disease searching*, investigators must believe that an informant has something useful to say. This means respecting local views and opinions, and being open to ideas that may not necessarily agree with modern science. This does not mean that as veterinarians, we must automatically accept all indigenous knowledge as valid and useful. The idea is to identify local knowledge that seems to agree with our professional know-how, and use this knowledge to help us to find rinderpest or confirm its absence.

3. Non-verbal communication and listening skills
As outsiders, everything we do in a community influences information flow. This doesn't only mean what we say, but how we behave. This ‘non-verbal communication’ can take many forms, for example:

- how we dress and appear
- what we carry with us - our possessions
- how we travel – on foot, bicycle, matatu or project vehicle (bearing the project logo)
- our body posture
- our behaviour

---

1 Note that this also applies to conventional methods such as interviews used during questionnaire surveys.
2 Sometimes called 'ethnoveterinary medicine' when related to animal health and production topics.
Outsiders always give visual signals about who they are and their reasons for visiting an area. When project vehicles bear logos, people may have false expectations or concerns.

If your vehicle carries a logo related to rinderpest eradication, people will expect you to be interested in rinderpest.

When using participatory methods, researchers need to think carefully about their behaviour and how this influences the interaction with local people. This interviewer is doing well, but does he really need to take notes during the interview or could it wait until afterwards?

- Sitting at a higher level – this makes the researchers automatically look down on the informants
- Failing to make proper personal introductions and begin meetings according to local customs and manners – this can give the impression that local customs are not important
- Failing to arrange meetings and interviews at times which suit local people – people are often busy and are only available at certain times of days
- Showing signs of boredom or fatigue – for example, by yawning
- Showing signs of impatience – for example, foot tapping or repeatedly looking at a wrist watch
- Dominating a discussion or interview by lecturing people
- Refusing to accept offers of local food or drink

Further information

Further information and more copies of this handout are available from AU/IBAR. Contact: andy.catley@oau-ibar.org Website: http://www.cape-ibar.org
Participatory epidemiology and participatory disease searching: what’s the difference?

Many veterinarians involved in epizootic disease control in Africa and with experience of pastoral communities, have noted a wealth of local livestock knowledge, including good diagnostic skills and awareness of modes of disease transmission. Participatory epidemiology is the use of participatory methods to improve understanding of animal health issues. Key features are summarised below:

**Attitudes and behaviour**

Practitioners are required to assess their own professional and cultural biases. Essentially, they needed to be genuinely willing to learn from local people, not lecture to them but actively and patiently listen. This requires respect for local knowledge and culture.

**Combined methods and triangulation**

Participatory epidemiology uses interviewing, scoring and ranking, and visualisation methods. Of these, interviews are the most important group of methods because they are used alone but also complement and form the basis for other methods. The visualisation methods include mapping (natural resource maps, social maps, service maps), seasonal calendars, time-lines, transects, Venn diagrams, flow diagrams. Scoring methods include matrix scoring and proportional piling. These methods are combined with conventional veterinary investigation and epidemiological tools.

**The use of key informants**

Although pastoral communities generally are recognised as knowledgeable about animal health matters, certain people are known to possess special livestock knowledge and skills. These local experts are important key informants for participatory epidemiologists.

### Participatory epidemiology methods

<table>
<thead>
<tr>
<th>Information required</th>
<th>PE methods</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Background information:</strong></td>
<td>Natural resource maps, social maps.</td>
</tr>
<tr>
<td>System boundary</td>
<td>Social mapping, Venn diagram</td>
</tr>
<tr>
<td>Social organisation</td>
<td>Wealth ranking</td>
</tr>
<tr>
<td>Wealth groups</td>
<td>Proportional piling</td>
</tr>
<tr>
<td>Relative livestock ownership</td>
<td>Livestock species scoring</td>
</tr>
<tr>
<td>Preferred types of livestock reared</td>
<td>Proportional piling</td>
</tr>
<tr>
<td>Food, income and other benefits from livestock</td>
<td>Flow diagrams, service maps</td>
</tr>
<tr>
<td>Marketing systems</td>
<td>Service map, Venn diagrams, ranking and scoring</td>
</tr>
<tr>
<td>Veterinary services</td>
<td>Natural resource maps, transects.</td>
</tr>
<tr>
<td>Resources available to rear livestock</td>
<td></td>
</tr>
</tbody>
</table>

**Disease-specific information:**

| Priority livestock diseases, with reasons | Disease scoring |
| Local characterisation of diseases according to disease signs and causes | Matrix scoring |
| Estimates of incidence and mortality | Proportional piling; progeny history |
| Temporal information: | |
| - history of livestock diseases | Timelines |
| - seasonal variations in livestock disease, vectors and livestock-wildlife interactions | Seasonal calendars |
| Spatial information: | |
| - contact with neighbouring herds, wildlife, disease vectors | Mapping; mobility maps |
| - areas of disease events | Mapping |
| - preferred control options, with reasons | Matrix scoring |
**Action-orientated**

Participatory epidemiology aims to generate information that can be verified with communities and leads to agreement on appropriate action. Initially, the aims of a particular study or investigation should be clearly explained to avoid raising expectations. In some situations, further laboratory results will be required and the mechanism for transferring these results back to the community should be defined.

**Methodological flexibility, adaptation and development**

Participatory epidemiology is a relatively new branch of epidemiology that is still developing. The approach is based on qualitative inquiry and complements the qualitative nature of standard veterinary investigation procedures. According to the needs of a given community or organisation, participatory epidemiology can also combine the benefits of participatory approaches and methods with quantitative inquiry. Methodological adaptation is encouraged.

* Those uses marked “*” are particularly relevant to government veterinarians involved in epizootic disease control.
This handout describes participatory disease searching (PDS) as it directly relates to rinderpest. The specific techniques that are most useful are open-ended questions, probing, time line construction, triangulation (cross-checking of reports), key informants (community leaders, traditional healers, veterinary staff, expatriate technical assistants and international campaign co-ordination offices), mapping as well as direct clinical observation and transects.

**Preparations**

Rinderpest is a disease that depends on the mixing of livestock for survival. There are no known carrier states or examples of chronic infection. The virus survives through the continuous occurrence of new acute cases in susceptible animals. Thus, the virus must continuously find new susceptible animals for survival. A safe, effective and inexpensive vaccine exists that has been successfully applied in most areas where veterinary service delivery is reliable. These factors suggest, and indeed experience has shown, that remote, marginalised pastoral communities, where livestock contact rates are high and vaccination is sporadic, are often the reservoir for the endemic persistence of rinderpest.

Rinderpest PDS should take these factor into account when designing reconnaissance missions. As a first step, an inventory of remote cultures and communities should be made and secondary sources of information should be obtained and researched. In PRA, one often looks at ‘proxy indicators’ in regard to sensitive subjects for which it may be difficult to obtain unbiased direct information. Remoteness, insecurity, and lack of services can serve as proxy indicators for the likely presence of infectious disease when prioritising search areas at the national level. It is especially important to avoid ‘tarmac’ or access bias in regard to rinderpest searching.

As with any disease investigations, the appraisal team should carry all necessary sampling materials in case a SE outbreak is encountered. In addition, the team should carry Clearview tests and a camera, if these are available. Photographs of affected animals and lesions are supporting data for diagnostic purposes and in some cases become invaluable training and communication materials.

In general, it is better to involve a representative of the veterinary services from the national level as members of the study team who is not known by community members. Local representatives of the veterinary services are included in the study as key informants. The presence of local veterinary authorities in the appraisal team can introduce bias as the respondents may wish to avoid sensitive subjects. Incorporation of local officials in the study team makes the process less anonymous and confidential.

**Interviewing**

As with other types of disease searches, the interviewer should be careful not to communicate their specific interest in rinderpest to the respondents. If possible avoid travel in vehicles used in rinderpest control activities or with individuals locally known to be specialised in rinderpest control. The interview should be introduced as a general study of animal health issues in cattle or a similarly broad theme.

A sample PRA checklist for rinderpest disease searching is presented in Box 1. Items 1 to 3 introduce the subject and establish the identity of the participants. Items 4 to 6 are an expanding enquiry into animal health problems. Item 4 investigates what animal health problems the respondents are personally and presently facing. Item 5 inquires into what animal health problems the immediate community is presently facing. Finally, Item 6 inquires into the most significant animal health problems the community has faced regardless of time. It is important to note at which stage in the interview process rinderpest is mentioned.

Rinderpest should not be mentioned in an interview by the appraisal team prior to the respondents listing of animal health problems.
If a respondent introduces the subject of rinderpest, she/he should be asked to describe the disease as part of the verification process. If the respondent cannot accurately describe the disease, their report should be discounted. A procedure for weighting reports is outlined in Box 2.

If rinderpest has been described accurately, the following topics should be probed:

- Have they had personal experience with the disease or did they learn about it from others?
- If they have had personal experience with a rinderpest compatible event, when, where and in whose cattle did they observe the disease?
- How severe was the outbreak? What was the relative importance of symptoms?
- What were the general circumstances at the time of the event (grazing conditions, water availability, security conditions,)

**Box 1: Sample Checklist for Participatory Rinderpest Disease Searching**

Avoid mentioning rinderpest before the cattle owners do.

1. Introduce the appraisal team as an animal health appraisal.
2. Identify the respondents and establish if they are cattle owners.
3. Establish their main herding locations (mapping).
4. What are the current cattle disease problems in their herd? If tearing or diarrhoea is mentioned, explore these syndromes in detail.
5. What are the current cattle disease problems in the area?
6. Historically, what are the most important disease problems of cattle? Invariably rinderpest is mentioned in the response to this question if the cattle owners have experienced outbreaks in the last two decades. Frequently it will be the first disease mentioned.
7. Have they personally seen rinderpest in their lifetimes? What does it look like?
8. When was the last time their cattle were affected by rinderpest? Where? Where did it come from?

As warranted, further probing questions can be added to cross-check reports made in other interviews, further define cattle movements which may affect the epidemiology of the disease, or to contrast current outbreaks with previous outbreaks in regard to the severity of disease.

**Box 2: Weighting reports of rinderpest**

Concerning assessing reports, the following weighting criteria may serve as an example for the categorisation of volunteered reports from individuals who can accurately describe the disease:

I. A first hand report from a herder of cases in his own herd.

II. A first hand report of clinical cases observed by a veterinarian or veterinary assistant.

III. A report of cases directly observed by a cattle owner but in other’s cattle.

IV. A second-hand report or hearsay from veterinarians, herdsmen, public officials or elders who did not actually see the disease. This last information should be noted and may be used as leads to assist the team in selecting locations for further study, but should not be used as data in the construction of maps and time lines or other forms of analysis.

The individual reports that are internally consistent from categories I, II and III can be tabulated and mapped to build a consensus view of the historical and recent incidence of the disease in the region.
livestock contacts with other communities and wildlife, trade links, etc.)?

- Has the disease occurred at any other time? Repeat questions 1 to 3, as time permits, for each previous occurrence of SE outbreaks.

By the end of the interview, if the respondents have not mentioned rinderpest, the study team can inquire directly about rinderpest. In this case, it is important to note that the participants did not volunteer rinderpest as an animal health problem and that despite whatever information is obtained through direct questioning, rinderpest is not a stated priority of the respondents. It is recommended that the information obtained through such types of direct and possibly leading questioning does not constitute data for epidemiological analysis. With caution, it may serve as background information or leads to provide direction to future fieldwork.

**Topics for Probing**

Probing on specific subjects can provide very useful insights into community knowledge on disease epidemiology, pathology and diagnostic processes. Often it is best to reserve these probing sessions for especially knowledgeable key informants. These are usually more senior members of the community respected and consulted by the community for their livestock knowledge.

**Diarrhoeal disease**

In a subset of interviews, the community should be probed about the different terms used to describe diarrhoeal disease. Points to be investigated are:

- What terms are used to signify diarrhoea in general?
- Are different types of diarrhoea distinguished (i.e. bloody vs. non-bloody, acute vs. chronic, etc.)
- What specific diseases do they associate with diarrhoea?
- What indicators are used to differentiate between different diarrhoeal diseases?

**Clinical forms of rinderpest**

At appropriate times, subsets of respondents should be probed about the relative severity of different rinderpest events they have observed over the years. If diarrhoeal diseases are being described, but not identified as rinderpest, respondents can be asked how this distinction is made. In light of the occurrence of mild rinderpest, this is an especially important theme for exploration in East Africa.

Some communities may distinguish rinderpest as a disease that kills and rule out rinderpest as a diagnosis of non-fatal diarrhoea. It is important that the appraisal team adequately identify the criteria for traditional rinderpest diagnosis and establish if any clinical forms of rinderpest are excluded from the local traditional definition.

**Disease concepts and methods of rinderpest transmission**

It is useful to attempt to understand local concepts regarding the cause of disease and methods of transmission. In regard to rinderpest, pastoralists can often accurately describe risk factors and types of contact that lead to transmission. Knowledge in these areas varies significantly between communities and it is important not to make assumptions.

**Community responses to rinderpest**

Understanding community responses to rinderpest, either endemic or epidemic, can contribute to risk analysis in regard to the spread of the disease or provide insight into the mechanisms of endemicity. Some responses to rinderpest that have been noted in the past are:

- ‘Quarantining’ affected herds by making them graze away from unaffected herds or water after other herds
- Avoidance of wildlife
- Running away from outbreaks
- Traditional vaccination

Informal quarantine is a method used by several communities in response to a variety of disease situations. It is one of the more desirable responses as informal quarantine does work to reduce contact rate. As with most great plagues, a popular desire to flee is a frequent response. Although this may benefit individuals temporarily, it has the obvious effect of facilitating spread of the disease through increased contact rates over greater
distances. Traditional rinderpest vaccination is an interesting practice that is probably no longer used. At least all known descriptions are historic.

**Mapping**

Rinderpest is a disease that depends on cattle contact and movement for its very survival. Mapping of cattle movement and determination inter-community contact is a very important activity in regard to understanding local rinderpest ecology.

In order to initiate a mapping exercise, respondents should be asked to specify their primary grazing sites by season. Depending on the complexity of the bio-climatic system, it may be worth constructing a seasonal calendar as a companion exercise. Often, pastoralists will specify location names that are not evident on modern maps. These initial questions often turn to a discussion of just exactly where these key resource sites are which naturally leads to the sketching of maps on the ground.

A broad area about an arm and a half’s reach should be cleared and smoothed. Usually, participants will naturally gather round and equip themselves with the necessary tools: normally sticks and other objections to assist in drawing and act as land marks. The participants should first be asked to indicate key landmarks such rivers, market towns, major wells or watering sites. Then the grazing sites can be indicated. In addition to normal grazing sites, emergency-grazing areas used in time of drought or insecurity should be indicated. The participants can also indicate the territories occupied by other communities and points of contact as well as shared or contested resources. During the mapping process, information can be collected on the nature of the interaction with neighbouring communities (e.g. trade, competition, raiding, hostility, etc.). Eventually, the map will become crowded with information and it will be time to stop and transfer the information to note books.

If desired, the mapping exercise can be repeated in later sessions for the collections of other types of data such as the location of forests, bush and crop areas, or wildlife distribution. Later, the different types of information can be analysed conceptually as layers, much as in geographic information systems.

For rinderpest epidemiology, the data on movement, mixing (contact) and trade will be the most significant. These will be key factors in subsequent risk analysis and in disease control strategy design. Movement and contact data relative to the presence of the virus will determine where and when vaccination or surveillance is appropriate.

**Clinical Observation, Sample Collection and Transects**

Before or after an interview, it is always useful to walk the camp, herd and adjacent environment. In rinderpest disease searching, tearing is a sign that can be detected at a distance. If you are walking the herd prior to the interview and note tearing, it is best not to call attention to the sign. Proper clinical exams should be carried out after the interview. The only exception is when the livestock are on the move and you run the risk of losing the opportunity. If you are unfamiliar with the temperament of local breeds or they are know to be aggressive, due caution should be exercised.

If active rinderpest is reported or tearing is noted, a complete clinical exam of affected animals is essential. Detailed notes on the individual history and clinical presentation of each animal should be taken. After examination, clinical cases compatible with the SE outbreak definition should be sampled.

In any event, the appraisal team should take a moment to investigate any examples of current health problems the livestock owners would like to present. This gives the study team an additional opportunity to cross check disease descriptions with actual clinical cases. Further, as the livestock owner has donated his valuable time to the study, it is only appropriate that the team take a moment to investigate the farmer’s concerns and provide useful advice. Bear in the mind the problem of creating false expectations. It is best not to promise or suggest any future assistance. The provision of free drugs, although it may seem helpful and even be enjoyable, contributes to the creation of false expectations and perpetuates the psychology of dependence. If drugs are required, the best solution is often to provide the farmer with a verbal or written prescription and advice on where they can be purchased.
**Analysis of Results**

Participatory disease searching is somewhat different from other types of PRA. Most PRA interviews start at a general level and work towards specifics. The interview technique used in PDS casts an ever-broadening net until the respondents volunteer rinderpest as a problem. At this point the interview begins to focus down on EVK regarding rinderpest. This could happen at any of three levels: current personal experience, current personal observation or in the past. Part of the process of judging the quality and significance of reports relates to when the respondent introduces the subject of rinderpest. The earlier in the interview process that the subject is raised, the more significant the report (see Box 2).

As described previously, reports of rinderpest or other SE events should be categorised, tabulated and examined for trends or unifying factors. This process should begin in the field and be carried on throughout the study. The lessons learnt during the PDS will lead to the reformulation of hypothesis, new questions and modification of the criteria of analysis. Always bear in mind that rinderpest intelligence may be sensitive information at any level of the system from the herder to head of veterinary services. The key is to remain flexible, patient and open-minded throughout the process.

The existence of the stomatitis-enteritis outbreak definition and guidelines for comprehensive rinderpest surveillance assists in the analysis of rinderpest PDS results. If the community’s terminology fits the SE outbreak definition, then the reports collected as part of the PDS should enter in the rinderpest report registries. If the community consensus points to the circulation of rinderpest or another SE agent, then the investigation should continue until a definitive diagnosis is reached. The principals of comprehensive rinderpest surveillance and performance monitoring require that the PDS should continue until active cases are found for sampling. In the event that active SE cases cannot be found, then a purposive serosurvey is indicated.

In the event that a PDS detects a rinderpest focus and representative cases are confirmed, then all the cases that are epidemiologically linked to the confirmed case are themselves confirmed. The linked cases are all those that fit the same clinical description and were determined to be in contact or for which a chain of transmission can be reasonably assumed. In regard to rinderpest, a chain of transmission could be reasonably assumed where herds share a watering hole or grazing area.

In the event that a detailed PDS detects a rinderpest focus and representative cases are not confirmed, then the epidemiological intelligence gathered by the PDS should form a working hypothesis for future disease control efforts in the area. The PDS result can be used to formulate future surveillance and vaccination tactics. The PDS may also serve as a research hypothesis for further detailed epidemiological studies using both qualitative and quantitative techniques. The need to conduct further research must be balanced with action-oriented needs. This is especially the case in regard to vaccination activities that will preclude serological investigation or may obscure clinical disease without achieving eradication. It is better to have a full understanding of the epidemiological and ecological dynamics of the disease prior to embarking on extensive vaccination programmes with vague objectives.

**Acknowledgement:**

Participatory disease searching: some principles

In participatory disease searching (PDS), the objective is to find clinical cases of rinderpest or other disease (or verify the absence of disease). For this task, researchers need to adopt an investigative, open-ended system of inquiry. Rather than use preset methods and design such as those used in surveys, an inductive approach is used.

With this approach, each information gathering exercise generates insights that guide or induce the next stage of the process. The researchers select from a basket of methods those that best suit a particular situation and information need at a particular time and location.

Therefore, PDS differs from the kind of 'survey' that many epidemiologists are familiar with. In a survey, sample sizes and survey methods are predetermined and usually decided upon away from the survey area. Ideally, random sampling is used to enable extrapolation of results to a wider population. In practice, particularly in pastoral or remote areas, convenience sampling is used due to resource or logistical constraints.

This diagram illustrates a survey based on random sampling and a questionnaire.

The researchers miss rinderpest either because the rinderpest site was not selected during site identification or, the questionnaire did not include open questions concerning rumours of rinderpest.

For mild rinderpest, the questionnaire may not have adequately explored livestock keepers’ knowledge of the disease.

In practice, this method often suffers from poor pre-testing of the questionnaire and problems with access to randomly selected locations.
This is a survey is using *convenience sampling*. Although at the design stage many surveys aim to use random sampling, in the field convenience sampling is common.

The river and lack of roads have prevented the team travelling far beyond the main urban centre. This survey suffers from the same weaknesses as random surveys with regards questionnaire methodology.

Rinderpest is overlooked because the researchers never physically get close to the disease and again, the questionnaire does not enable full exploration of informants’ knowledge on the disease.

This is *participatory disease searching*. Initial interviews and mapping in the village direct the researchers to a particular grazing sites (1 and 2). The team travel by road to the place and there, more interviews, time-lines and proportional piling show that livestock keepers have good knowledge of rinderpest. Although they haven’t seen the disease for some years, they’ve heard rumours emanating from a distant grazing area that is rarely visited. Using mapping, the team learn how best to access this area. They decide to abandon the vehicle and continue on foot to point 3. After two days they reach the rumour area (4) and following more interviews, reach a grazing area with cattle showing clinical signs of rinderpest (5). Recent clinical cases are sampled.

Further information and more copies of this handout are available from AU/IBAR.
Contact: andy.catley@oau-ibar.org
Website: http://www.cape-ibar.org
The three main groups of participatory methods are:

- **Informal interviewing methods**
- **Visualization methods**
- **Ranking or scoring**

All these methods are supported by knowledge of secondary literature and direct observation.

Ideally, the methods are used together. The results from one method are compared with the results of one or more other methods. This process of comparison and crosschecking is called **triangulation**.

**Triangulation** can be compared with the process of making a diagnosis in veterinary medicine. When making a diagnosis a clinician collects and compares information from different sources, including the case history, owner interview, direct observation of the farm environment, clinical examination of the animals and so on. All this information is mentally combined to provide a provisional or final diagnosis.

The most commonly used methods in participatory disease searching are:

- **Interview methods**:
  - Semi-structured interviews
  - Timelines
- **Visualisation methods**:
  - Mapping
- **Ranking and scoring methods**:
  - Proportional piling

Note that information from each method is triangulated with information from every other method. A further level of triangulation is the use of clinical examination of cattle by veterinarians (direct observation) and laboratory diagnosis.
Many PE methods work best when a team of two or more researchers work together. Within the team, roles should be clearly defined.

- One person should be the facilitator. The facilitator introduces the session, asks questions, explains the method and checks the information as it arises from the informants. Therefore, the facilitator interacts directly with the informants and does not need to write anything during the method. In other words, the communication flow is not interrupted because the facilitator keeps stopping the discussion in order to write down what has been said.

- Another team member acts as the recorder. This person usually sits slightly back from the group and records the discussion or results of scoring methods as they arise. The recorder also watches the group dynamics and keeps a watch on who talks in the group and who doesn’t. If necessary, the recorder can remind the facilitator to include people who are not contributing to the discussion.

The team members need to carefully prepare how they are going to run each session and who is going to say what. It can be very confusing for informants if, for example, the team members interrupt or contradict each other when explaining how a particular method should be conducted.

**Managing groups**

When working with groups of people, researchers need to pay attention to group dynamics. For example, during a particular method, who is talking and who remains silent? Various methods can be used to encourage less willing participants to contribute their views. Researchers also need to know how to handle dominant talkers in groups i.e. those people who talk to such an extent that other people are excluded from the discussion.

How to manage groups will be discussed during the workshop.
Indicators of effective surveillance

**Sensitive**
The system must be capable of detecting and investigating a reasonable percentage of suspicious disease events.

**Specific**
The system must be able to correctly identify the cause or nature of the detected disease events.

**Timely**
Information must be made available within a timeframe that permits an appropriate response or intervention to be put in place, if one is warranted. Information is a perishable commodity that looses value with the passage of time.

**Representative**
The system should generate information that accurately depicts the overall situation without bias due to remoteness, inaccessibility etc.

**Acceptable**
The results of the system should be of sufficient interest and value to all participants to justify the workload and other opportunity costs created by the activity.

**Flexible**
The system should be capable of adapting to new, unforeseen events or needs.

**Simplicity**
The system should be no more complex than necessary with the aim of encouraging participation.
Summary guidelines for semi-structured interviews

1. **Prepare yourself:** this is possibly the most important! Define the topic you want to investigate, work out the key 4 or 5 questions you want to ask and who it is you want to interview. If possible bring an assistant along as a note-taker.

2. **Introduce yourself and the purpose of the meeting:** Your informants will want to know why you have come and why you have an interest in the selected topic.

3. **Watch your body language throughout:** Be friendly, informal, respectful and try to sit on the ground! Stay calm; there is never any need to become emotional!

4. **Start with general questions/comments:** This will put people at ease. The easiest is to start with something visible that everybody can agree with. Use simple language. Ask only one question at a time.

5. **Mix questions with general discussion:** By introducing variety, you will keep up the interest of your informants. Casual dialogue will ensure good communication.

6. **Use diagrams, symbols and other drawings:** These will help in keeping people interested and ensuring everybody participates and understands.

7. **Use simple language:** Avoid “scientific” words. Ask only one question at a time, avoid leading questions, long or complicated questions, or questions which can be answered with simple “yes” or “no”.

8. **Probe:** This is the most difficult. If an interesting point comes up, try and discover more. Six small words (why, how, who, what, when, where?) will help you to probe: keep them in mind throughout!

9. **Observe:** to make sure that everybody participates (especially women) and the conversation is not dominated by a few individuals. Also make sure that people are not getting restless (a sign they are getting tired): normally, 90 minutes is a maximum for group interviews.

10. **When the interview is over:** thank your informants and give them an opportunity to ask their own questions: this is polite and also will give you valuable clues!

11. **Make full notes after the interview:** (unless you have a note taker). By just writing down the main points you will not slow down or interrupt the conversation.
1. **Introduction**

Mapping is a useful visualisation method. Examples of maps include:

- livestock mobility and grazing maps
- natural resource maps
- opportunities and service maps
- social maps

Mapping is a useful method for the following reasons:

- both literate and non-literate people can contribute to the construction of a map (as it is not necessary to have written text on the map)
- when large maps are constructed on the ground, many people can be involved in the process and contribute ideas. People also correct each other, and make sure that the map is accurate
- maps can represent complex information that would be difficult to describe using text alone
- maps can act as a focus for discussion

In pastoral communities, livestock mobility maps are useful for prompting discussion on topics such as animal health problems that were location-specific, and access to veterinary services when herds are in different places at different times of year.

Also, if you are trying to learn about contact between herds from different communities, maps can show when herds are in close contact with each other or with wildlife. This information is particularly useful when developing strategies for control of epizootic diseases.

In **participatory disease searching**, maps can be used to:

- understand cattle movements and system boundaries
- define contact between neighbouring herds
- identify specific herds or communities where rinderpest occurred in the past, or is rumoured to occur at present
- plan the activities of the investigation team – maps can indicate accessibility to remote areas, and travel and logistical arrangement can be planned accordingly

2. **The Method**

1. Mapping is best used with a group of informants, say between 5-15 people. Find a clean piece of open ground.

Assuming that you are involved in PDS, explain that you would like the group to produce a picture showing features such as:

- geographical boundaries of the community. In pastoral areas, these boundaries should include the furthest places where people go to graze their animals
- main human settlements, roads and main footpaths
- rivers, wells, other water sources
- livestock markets and trade routes
- grazing areas, farmed areas, forests and other natural resources
- distribution of ethnic groups, clans etc.
- seasonal movements of livestock by livestock type
- seasonal and spatial contacts with herds from other communities or wildlife
- perceptions of 'high risk' areas for rinderpest; past or existing communities with rinderpest

Explain that the map should be constructed on the ground using any materials that are to hand. For example, lines of sticks can be used to show boundaries.

2. When you are confident that the group understands the task they are being asked to perform, leave them alone to construct the map and return in about 30 minutes. At this point, leave the group alone and do not interfere with the construction of the map.

3. After about 30 minutes check on progress. Give the group more time if they wish.

4. When the group is content that the map is finished, ask them to explain the key features of the map.

The process of *interviewing the map* enables researchers to learn more about the map and pursue interesting spatial features. Hence, when used imaginatively, mapping methods yield both diagrams and discussion of diagrams. It is important than one member of the team takes notes during this discussion.

5. It is often useful to add some kind of scale to the map. To do this, select a main human settlement and asking how many hours it takes to walk from here to one of the boundaries of the map. A north-south orientation can also be added to the map.

3. **Triangulation**

Historical information produced by mapping (e.g. past disease outbreaks) can be crosschecked using time-lines, proportional piling and official reports (if any) of disease outbreaks.

Use of GPS/GIS allows overlay of information from participatory maps on to official maps.

---

**Further information**

Further information and more copies of this handout are available from AU/IBAR.

Contact: andy.catley@oau-ibar.org

Website: [http://www.cape-ibar.org](http://www.cape-ibar.org)
1. Uses of proportional piling

Proportional piling methods have various epidemiological uses, but are particularly useful for determining herd age structures, and disease incidence and mortality.

In participatory disease searching, proportional piling is an indirect way of:

- assessing local perceptions of the occurrence of rinderpest within a given time period, such as one year
- understanding age-specific incidence and mortality of rinderpest

Two important advantages of proportional piling are:

- the method does not require herd sizes to be estimated. Therefore, sensitive questions like ‘how many cattle do you own?’ are not necessary
- when assessing disease incidence and mortality, the method involves comparison of different diseases and therefore, avoids exaggeration of a particular disease situation

2. The method

Key point

When using proportional piling to assess rinderpest, informants should not know that the investigation team is particularly interested in rinderpest!

Example
Assessing incidence of cattle diseases in Tana River District, Kenya

Proportional piling was used to determine the incidence of cattle diseases in Orma pastoral communities, Kenya. Previous use of matrix scoring had indicated that Orma disease names could be interpreted as follows:

- gandi: chronic trypanosomiasis
- hoyale: FMD
- buku: acute haemorrhagic trypanosomiasis
- somba: CBPP
- madobesa: rinderpest

Stage 1

Interview key informants to learn about local definitions of cattle age groups. Different pastoralist groups usually have specific names for age groups such as unweaned calves, weaned calves, young adults (or unmated stock), adults and so on.

Orma pastoralists categorised their cattle by age as follows:

- Jabie: Calves up to around weaning age; the 0-2 years age group.
- Waela: Weaner group, 2-3 years old.
- Goromsa: Young adult stock, including heifers and young bulls; age group 3 to 4 years.
- Hawicha: Adult stock, particularly the milking cows kept around the permanent villages; > 4 years of age.

The proportional piling method was repeated with each of these 4 age groups of cattle.

Stage 2

Taking the jabie age group first, a pile of 100 stones was used to depict this age group. An informant was asked to divide this pile of stones into two piles to show the pattern of ‘sick jabie cattle during the last year’ and ‘healthy jabie cattle during the last year’ in his herd.

Stage 3

The pile of stones representing sick cattle was then sub-divided by the informant to show the pattern of jabie cattle suffering from gandi, hoyale, buku, somba, madobesa and ‘other diseases’ during the last year.
Stage 4

When this piling was completed, the stones were gathered and the procedure was repeated with the other age groups.

A diagrammatic representation of the method is shown here

5. Interpretation of results

If you are using proportional piling to assess previous occurrence of rinderpest, any allocation of stones/counters to rinderpest by informants warrants follow-up questioning.

Similarly, if no stones/counters are allocated to rinderpest, follow-up questioning is still useful to confirm that the informant is confident that the disease was not observed.

6. Triangulation

The results of proportional piling can be triangulated with:
- time-lines
- serological surveys

7. Recent uses: disease modelling

Proportional piling has recently been used to generate herd structure and age-specific mortality data to estimate the basic reproductive number $R_0$ for rinderpest and build disease models.

This approach enables models to benefit from indigenous knowledge on disease behaviour and is described in Jeffrey Mariner’s work on rinderpest modelling in southern Sudan.

Further information

Further information and more copies of this handout are available from AU/IBAR.
Contact: andy.catley@oau-ibar.org
Website: http://www.cape-ibar.org