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The problem and solution game

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• Background

This paper is based on socio-economic research carried out on the Isiolo Livestock Development Programme, Kenya¹. It describes a ranking game played by the research team with the inhabitants of Isiolo. The aim was to get different, yet related, groups of farmers to identify and rank their own problems, and then suggest ways of solving them. The game is based on a well-known and commonly played board game.

Local people are well placed to identify and understand development problems, and to identify potential solutions. It is widely agreed that their knowledge and perceptions are essential but it is not easy to elicit their opinions in a representative manner. Public meetings tend to be dominated by one or two people who are often not representative of the community as a whole, with the voices of women and the poorest rarely being heard. Questioning by technical staff often produces answers which reflect mainly the respondent's expectation of what is on offer. Besides, it is an illusion to expect communities, stratified by age, gender and occupation, to have a single view of priorities.

The way people see problems and solutions depends directly on their personal experience and their own position relative to others in the community. In order to get round these problems, we used a problem and solution ranking game.

¹ Swift, J. and Umar, A.N. 1991. *Participatory Pastoral Development in Isiolo District*. Final report on socio-economic research in the Isiolo Livestock Development Project.

• The problem and solution game

The problem and solution ranking game is best played after a community has been ranked according to wealth. It is important for planning purposes to know how equally wealth, particularly in livestock, is spread in the communities being studied.

Households with few or no animals have different perspectives and different problems from those with many animals. Development priorities will be different. For example, a restocking programme might be a priority for households with few animals, while better marketing facilities would be more appropriate for those with many animals. It is usually counter-productive to ask households directly about animal holdings, so wealth ranking was used.

The game was played with particular groups of people (e.g. similar wealth groupings, groups of women) who might be expected to share views of problems and solutions. In total, 70 groups played the game, each composed of representatives of different households. They were from each of the 11 *deda*, covering each of the three main livestock production systems in the area: *Waso* pastoral, *charri* pastoral and agropastoral and all wealth ranks.

It was played first with the wealthiest households in the community and then the poorest and, time permitting, one group in between. Although it was difficult to organise, the game was also played with three groups of poor women in the *Waso* pastoral system. The game aims to allow these groups to identify their problems, rank them and then list possible solutions in order of priority.

Playing the game

To play the game, the following five steps are taken:

1. The researcher scoops six holes in the ground, in two parallel rows of three and sits on one side with his or her team. The community group sits on the other side and nominates one person as their representative.
2. The researcher then explains that each hole is a major community problem and that the group must decide what each hole represents. The researcher then follows the discussion, noting points of debate or disagreement. When the group has chosen what problem label should be given to each hole, the researcher writes these down and asks the group why these particular problems have been chosen rather than others. The reasons are noted.
3. The researcher then produces ten one-shilling pieces and asks the group to use them to rank the problems in order of importance. The coins represent possible investment by the project to solve the various problems identified. The group may put from zero to five coins in any hole, according to the importance of the problem. Again the research team listens to the discussion and notes down important points. Once the ranking is finished the research team notes the results.
4. In the second round, the team may go into more detail about each of the particular problems identified. The coins are picked up and the group are told that all the holes now represent components of the most important problem which they have just identified. Each hole represents one component and ten coins are distributed among the different components in order of priority. At this stage the researcher may begin to add ideas of his/her own about potential solutions and suggestions for the group.
5. This is repeated for the two other most important problems identified.

The game is best played in a camp where the researchers are already known. It should

ideally last for one hour only, or a maximum of two.

Scoring and recording the game

The results of the game are recorded by the researcher in a notebook as the game proceeds. Assistants note the discussions among participants, especially on the reasons given for particular choices, on disagreements and on other issues raised. Significant phrases used are noted down verbatim.

The team should fill in a score sheet as soon as possible after the game is over. The following information should be recorded on this sheet:

- Characteristics of the group, particularly its position in the wealth rank and what this means in terms of livestock and other resources;
- Each problem identified and allocated coins in the first round, together with the score (out of a possible maximum of ten) it received. Problems which were raised and given holes but not allocated any coins score a half;
- Each component of the major problems identified in the second round, the order of priority agreed upon and any solutions discussed (if particular facilities are suggested such as dams or boreholes the respondents are asked to specify sites and the researcher records the details);
- Details of the discussions held throughout the game, especially disagreements, debates about priorities, views, issues and reasons put forward to justify particular choices.

To analyse a series of games, the score sheets are grouped first by geographic area or production system and then by wealth strata within the production system or geographic categories. Problems are grouped into categories such as water, and scores totalled, with comparable problems grouped together. Final scores are reduced to a percentage of the potential maximum i.e. an average of all the individual scores. A similar procedure is followed for the second round scores for components of the major problems.

· Outcomes of the Isiolo problem and solution game

Table 1 shows how the different wealth groups perceived their problems. Although the problems were also analysed within the three different production systems, the rankings from the three different production systems have been grouped into a single Isiolo-wide set of problems, ranked by wealth.

In compiling this table, individual problem scores were weighted by the number of wealth groups identifying them and the importance they were allotted. For simplicity the problems and solutions have been grouped into four categories..

The game revealed that livestock management problems are the overwhelming concern of the rich. Of the issues included in the 'livestock management' category, water was the most important, followed by animal health and the problems of outside graziers.

The poor were concerned by their lack of livestock, and suggested restocking as a solution. Agriculture and the possibility of alternative employment were also ranked as important. The middle wealth rank's concerns spanned those of rich and poor. Livestock management concerns, with water given the first place, were given most importance but lack of livestock and restocking were also given high priority.

Table 1. How different wealth ranks perceived problems and solutions

Problem/Solution	% of Total Possible Score		
	Rich	Middle	Poor
Livestock management	87	51	7
Lack of livestock	-	21	49
Agriculture	4	9	13
Other:			
alternative employment	2	4	10
need for direct assistance	-	2	12
school	3	5	7
miscellaneous	4	5	2
Total	100	100	100

• **General conclusions**

The groups were entirely free to select their own problems and allocate their own priorities to them. Nevertheless, a high degree of consensus emerged, based not on the difference between production systems or geographic areas, but on differences in wealth. In all three production systems the emphasis was on livestock. Even the poor groups in the agropastoral system were more concerned with livestock, or their lack of it, than with agriculture. Respondents often had detailed views about specific livestock interventions that, in their view, were needed. They were often critical of the siting or construction of past infrastructural interventions.

The rich, by virtue of their wealth, were able to focus their attention on specific livestock management questions. The middle and poor groups had more diversified interests and expectations. Agriculture was given a low but consistent priority. The need to deal with problems associated with school emerged as common, in different degrees, to all wealth groups.

Groups of poor women focused on problems similar to those of other poor people, although discussions with them highlighted particular aspects of their situation. For example, widows had few livestock of their own in anticipation of a future inheritance. However, they retained economic responsibility for their young children's stock. They often had labour shortages, exacerbated by their responsibility for domestic water collection, and were unable to take part in community labour or community redistribution schemes because they did not participate in the social and economic life of the community on the same basis as men.

Relatively few people asked for direct assistance. Several groups pointed out that restocking was the only viable way back to a reasonable livelihood and that it is a kind of assistance which cannot be squandered. People in all three groups were willing to participate in new investments by providing labour but had no cash to contribute. Several groups stressed the importance of Boran traditional institutions for the local

management of interventions, especially where they concerned natural resources. They believed that Boran management structures were effective and well understood and should be built upon, not ignored.

Finally, several groups expressed enthusiasm for this participatory approach to planning. They hoped the project would pursue the outcomes and solutions identified in the game, and not simply decide to go ahead and follow its own ideas.

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