

ENVIRONMENTAL EDUCATION FOR SURVIVAL: THE USE OF RADIO AMONG NOMADS

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A Unesco/UNEP project using radio as a medium of environmental education among nomads is described and evaluated. The project, conducted among the Rendille of northern Kenya, aimed *inter alia* at creating awareness of environmental problems, specifically desertification, fostering positive attitudes towards conservation of resources and sensitizing decision-makers about the need for an integrated, comprehensive resource management policy.

BACKGROUND

"How did Adichare get in that box? I want to talk to him."

"So the plants here are different than in other parts of Kenya?"

"How many goats to buy a radio?"

These were some of the comments made by Rendilles after listening to the first of a series of environmental radio programmes. Many of them were listening to a radio for the first time.

The Rendille are traditionally nomadic pastoralists who for generations have been subsisting on their herds of camels, sheep and goats, and who move with them seeking forage and water across a vast arid area in northern Kenya stretching from Lake Turkana to Marsabit and as far south as Laisamis (Figure 1). Their *manyattas* - nomadic camps - consist of strong thorn enclosures (within which the livestock are kept at night) surrounded by small huts consisting of poles, hides and grass matting, which are easily dismantled and carried on camels.

Life is however changing for the Rendille, as it is for other nomadic pastoralists such as the Boran, Samburu and Gabbra, who also occupy some of the same area. In recent years two changes in particular have been taking place simultaneously and are accelerating overgrazing and excessive tree cutting, leading to desertification. Firstly there has been an overall increase in the human and livestock populations and secondly, people, with their livestock, are tending to settle around a few boreholes and wells. These settlements primarily offer water and security from inter-tribal raiding, and they become sites for shops, medical facilities, schools and outlets for famine relief. Unfortunately, they also become centres of increasingly widening circles of denuded land as the people graze their animals and cut thorn trees for building their *bomas* (livestock enclosures). The problem of desertification has reached such a magnitude as to threaten not only the survival of the nomadic peoples of northern Kenya, but also roughly more than half of Kenya's land surface, including 15% of its population.

THE IPAL PROJECT

The Integrated Project in Arid Lands (IPAL) was established by Unesco with financial support from the United Nations Environment Programme (UNEP) in 1976 with the aim of finding direct solutions to the most urgent environmental problems associated with desert encroachment and ecological degradation of arid lands. It forms part of the international Unesco programme, *Man and the Biosphere* (MAB), and is an example of the type of pilot activity that Unesco and UNEP, together with other organizations and a number of

governments, are trying to promote to provide a scientific basis for the rehabilitation and rational management of arid and semi-arid zone ecosystems through integrated programmes of research, training and education.

The study area is located in the arid zone of northern Kenya and consists of 22 500 km² situated between Lake Turkana and Marsabit Mountain, including the Chalbi desert. The site was selected to be sufficiently large to be representative of the various physical environments and to cover the major biotic communities found in the area. Field stations were located at Gatab, Olturot, Kargi, Korri and Ngurunit, with the project headquarters at Marsabit.

IPAL scientists have for some years been collecting data and building a comprehensive picture of the area with studies of climate, water distribution, soils, vegetation, wildlife, domestic livestock, traditional management practices, history and socio-economic and cultural characteristics of the people. The work has been planned not only as a scientific enquiry into changes in an arid zone ecosystem, but also to seek modifications and possible alternatives to existing practices which could enable degraded grazing lands to recover. While still primarily a scientific study, the present phase of the project

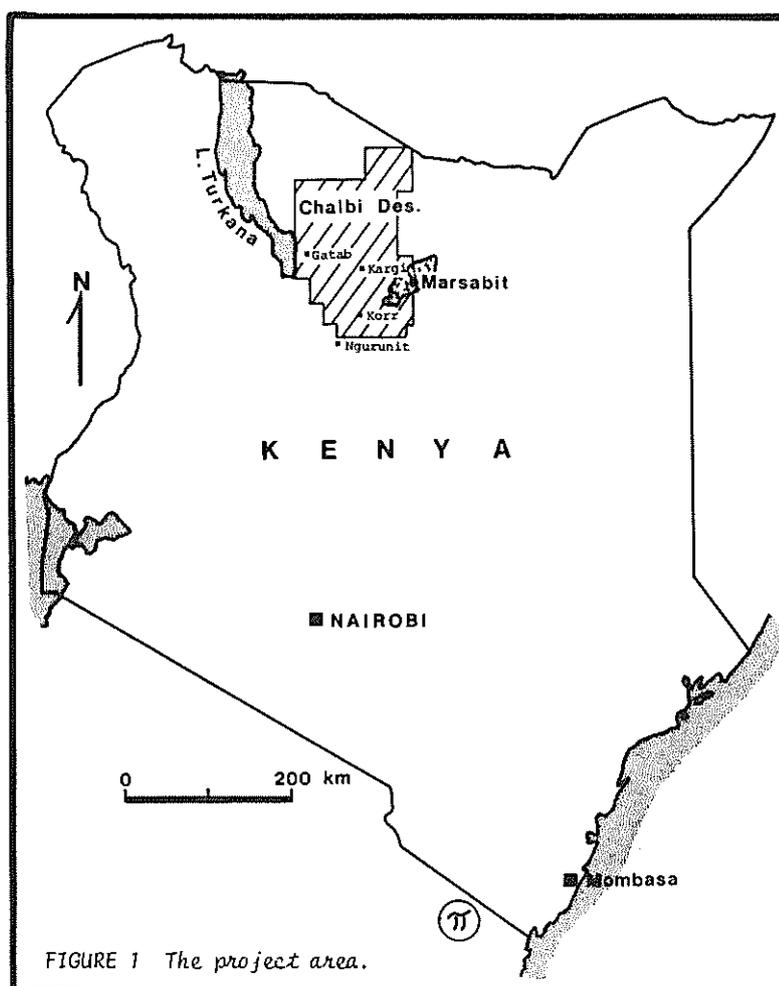


FIGURE 1 The project area.

is more action-oriented, with emphasis on human ecology and on education and training, the aim being to develop and implement land use plans for this part of the world. At the same time, IPAL's results are being disseminated by publications, training and seminars to other countries with similar problems of desertification.

From the beginning, IPAL has been aware that any measures suggested to halt desertification will have to be made with a good understanding of man-environment relationships, and with the full co-operation of the people concerned. Any modifications to traditional livestock and rangeland management practices will have to be seen in the light of new attitudes and information about the environment. Therefore it was considered essential to find an appropriate channel for communication and education to make the nomadic pastoralists aware of the desert encroachment, of their own impact on the environment, of alternative measures to improve productivity of the herds, and of other projects' findings. Simply this is a case where environmental education is a matter of life and death.

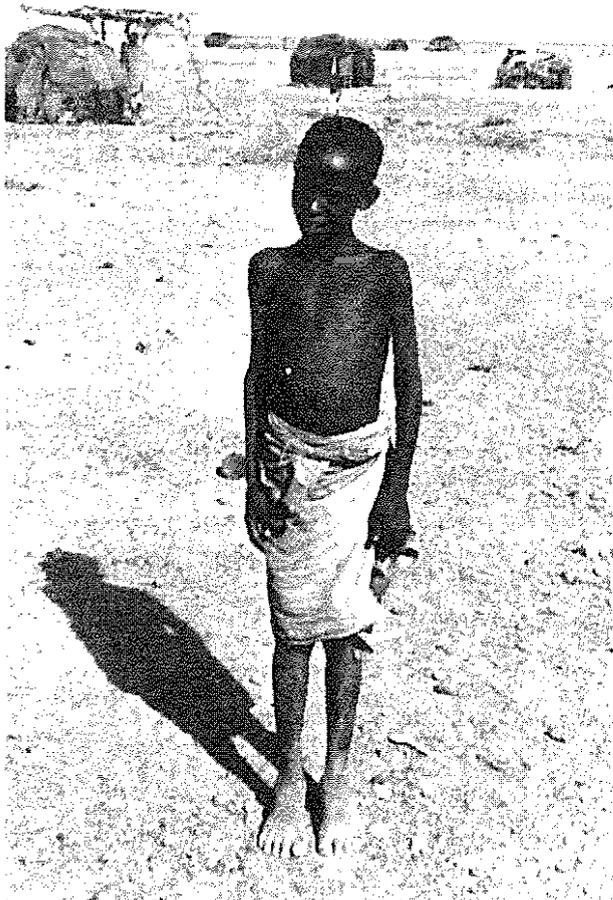


FIGURE 2 A Rendille boy with a 'manyatta' in the background. Kora, Kenya.

PRELIMINARY SURVEY

A preliminary survey of means of communication in the study area produced a bleak picture. The nomadic pastoralists are largely illiterate and they live in remote, generally hot, inaccessible areas. Roads are few and poor, and as a result there are limited extension services. Outside of Marsabit there are no newspapers or telephones and only the occasional radio, usually located in a *duca* (shop) within a settlement. There are a few two-way radios located in administrative police posts, missions and at IPAL field stations. The usual means of communication appears to be through *barazas* (meetings) of the elders usually called by the chief. When the chief wants to call a *baraza*, or if an important message needs to be disseminated, this is done by sending a messenger who walks to the nearest *manyatta*. From

there a new messenger then goes to the next *manyatta* and so on. In this manner, a message may travel 30 kilometers within six or seven hours.

The survey indicated that radio could be a medium which had a chance of success. It would move with the nomads, and it would 'speak' their language. The greatest limitation was that it was virtually untried. Would the nomads listen to it? What credibility would it have? How would they know the time to turn it on for the programme?

RENDILLE RADIO PROGRAMMES: A TEST CASE

As part of the educational component of the IPAL Project, a test case was carried out to obtain a preliminary assessment of the use of radio as a means of communication and as a channel for environmental education with Rendille nomads in the area. This involved the design, production, broadcasting and evaluation of a six-month series of environmental radio programmes in the Rendille language. Each programme was 15 minutes long and was broadcast via the national Broadcasting Service, 'Voice of Kenya', twice a week.

Objectives

The primary goal was to obtain a preliminary assessment of the use of radio as a means of communication and education in the area. The radio programmes in turn were designed to:

1. Acquaint Rendille-speaking people in the study area with the work of IPAL (Unesco) and help establish favourable public relations.
2. Create awareness of environmental problems, specifically desertification, in northern Kenya.
3. Introduce suggested measures, based on project findings, which are intended to help the Rendille improve the quality of their nomadic life.
4. Foster positive attitudes towards conservation of resources.
5. Sensitize decision makers in the area to the need for an integrated, comprehensive, resource management policy which takes all factors into account.
6. Provide an opportunity for discourse and further learning regarding the social and cultural values and traditional land-use systems of the Rendille.

Approaches

Several techniques were used in an effort to determine which approaches would be more successful. These were:

1. Short talks by prominent and respected members of the area.
2. Interviews with local people, and with IPAL scientists and staff.
3. Short stories and dramas (to depict environmental problems and possible solutions).
4. Simple descriptions of ways and means used to study the environment.

At the end of each programme, the presenter asked two or three questions on the content to emphasize the main points. After each question a brief period of time was allowed to elapse (to encourage listeners to attempt to respond) then a short, concise answer was given.

Experimental Radio Sites

Nineteen Rendille *manyattas*, within access of IPAL

field stations, were selected as sites for placing radios and carrying out evaluation of the individual programmes. Co-operation of the chiefs and sub-chiefs was sought, and several acted as custodians for the radio sets. In addition, adult educators assisted IPAL field assistants to complete evaluation forms and to answer questions and lead discussion after each programme.

Content

The first few programmes included interviews with local people ... herd owner, traditional leader, chief, headmaster ... to show how different people interact with their environment and to point out common problems regarding the use of resources. A few programmes were concerned with how people obtain knowledge and how studies may help find solutions to problems. There were also programmes specifically concerned with topics of interest to nomads, such as water, trees, soil, camels, goats, rangelands, wildlife and climate, for which the scientists provided input. The programmes were recorded in the study area, with as much participation as possible from the nomads themselves. Much use was made of Rendille vocal music and of local sound effects (e.g. people and livestock at the wells, wildlife sounds and children playing).

Formative Evaluation

A short evaluation form was designed to be used by field assistants after each radio programme. Data were collected on the quality of radio reception, reactions and comments of the listeners and on the evaluator's own assessment. This ongoing evaluation helped to spot weaknesses and enabled continuous modification of the programmes. A total of 480 evaluation forms were completed and analyzed.

Summative Evaluation

Two surveys were conducted, one before the programmes began and the other at the end of the series, to determine whether the objectives of the programmes were achieved. These surveys were conducted with the aid of Rendille-speaking field assistants using a structured interview schedule. The sample of respondents was stratified to represent the various elements in Rendille society (i.e. elders, women, young warriors, leaders, teachers and pupils) in each of the *manyattas* where an IPAL radio was placed. The interview schedule was designed to include a few questions related to each of the six objectives of the radio programmes.

106 and 119 people were interviewed in the pre-radio programmes and post-radio programmes surveys respectively. As far as possible, the same respondents were interviewed. However, when this was just not possible, a close match was made. To ensure that gains achieved were not due to educational differences in the two samples, a Test of Educational Profile was carried out. There was no significant difference.

Results

The first objective of the radio programmes was to acquaint the people in the study area with the work of IPAL and to help establish favourable public relations. The first three questions in the interview schedule were designed to achieve this, and significant gains were made.

The second objective was to help create awareness of environmental problems, specifically desertification. The following questions were designed to measure any gains in this direction:

- Question 4: Are there any problems obtaining things you get from your surroundings which help keep you and your family alive?
- Question 5: Do you think that too many trees are being cut?
- Question 6: Do you think there are more or less plants here now than when your parents were children? Why do you think this is so?
- Question 7: If herds eat all the plants in an area and leave the ground bare, does it hurt the land? If yes, how?

Significant gains were made in 5, 6 and 7. Some interesting results were:

- There was some difficulty in understanding question 4. An appreciable number of respondents stated that there were "no problems" obtaining basic resources. Failure of rains or lack of water was the most often cited problem (44%).
- A large number of respondents (41%) in the pre-radio programme survey thought that *not* too many trees were being cut down. The figure was reduced to 18% in the post-radio programmes survey.
- Surprisingly, many respondents (59%) in the first



FIGURE 3
Listening to an environmental
education radio programme
near Marsabit.

survey answered that they thought there were more plants now in their surroundings than when their parents were children. The figure was significantly reduced in the second survey.

- In response to question 7 about 10% of the respondents answered that the land would lose its beauty or would not look nice if it was bare. The rest of the responses related to basic needs not being met.

Questions 9 through 12 were designed to assess achievement of objective 4, which was to foster positive attitudes towards conservation of resources. The questions asked the respondent whether he or she was doing anything to protect or improve (a) the soil, (b) plants, (c) wildlife and (d) water. Significant gains were made in each of these areas. The smallest gain, understandably so, was achieved in the protection of wildlife. Predators represent a big threat to the pastoralists' livestock and there is a stated desire to exterminate them. Consequently, whereas the sound effects of the wildlife programme were enjoyed, the actual message of that programme was one of the most poorly perceived.

Objective 6 was to use the production of the programmes as an opportunity for discourse and further learning about the social and cultural values of the Rendille. Questions 13 through 19 sought information. Question 20 asked the respondent whether he or she would like to ask any questions. Some interesting findings were:

- The Rendille value large families. 50% of the respondents indicated over 10 children as being desirable.
- They perceive the need for money by indicating that they would value some of their children getting a wage-earning job elsewhere to help out.
- When asked what kind of work they would like their children to do, 42% answered 'go to school' and 33,7% answered 'some to go to school and some to look after the animals'. Thus, they clearly indicated their feeling that school and keeping herds do not go together. This information has important implications, as it shows that the education or training required to modify livestock management practices is not going to be effective if channelled only through the schools, for it will not be reaching those who are actually going to be keeping herds.
- Family ties are close. 49% of the respondents would like their children to live nearby.

- The illiteracy rate is high. 77,8% of the respondents in both surveys had no schooling or only a few months of adult literacy classes. Noteworthy is the fact that the percentage who stated that they would like more education shot up in the second survey.

Questions 21 through 24 sought information regarding the use and ownership of radio sets. Of those interviewed before the radio programmes only 11% had radios. After the radio programmes 24% claimed to have radios. Some had bought some or had old ones repaired in order to hear the programmes. The number of those listening to radio also dramatically increased. 89% of the respondents stated that they generally liked the radio programmes. 1% disliked them; 10% had no opinion and 91% stated that they had learned new things.

It was not possible, with any real validity, to measure gains made towards the achievement of the fifth objective i.e. to sensitize decision makers in the area to the need for an integrated, comprehensive resource management policy. However, the large degree to which decision makers were involved in the production of the radio programmes (e.g. acting as custodians of the radios, being interviewed for programmes, participating in discussions and helping oversee programme evaluations) appears to have had a very positive effect.

CONCLUSIONS

The study was considered a success as real significant gains were measured in five of the six objectives. It has shown that this medium of communication, with some limitations and certain modifications, has a good potential for future environmental education endeavours in the study area, and possibly with other nomadic peoples.

REFERENCES

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FIGURE 4
The author with field assistants recording and obtaining materials for radio programmes.

