

Environmental information for and from children

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I. INTRODUCTION

THIS PAPER DESCRIBES how a series of illustrated learning packages on environmental issues developed for schools also sought to stimulate responses from the children. Annual competitions invited children to answer questions and submit essays and drawings. Children's responses have proved not only a valuable source of information on their perceptions of environmental issues but have also contained information on traditional knowledge and action in their communities.

Since 1979, the International Year of the Child, Mazingira Institute in Nairobi has been exchanging information with primary school children about their environment. Mazingira means environment in Kiswahili, and the institute was founded in 1978 on the assumption that people can - and do - understand and manage the environments they live in. Mazingira's activities include research, action research in communities, networking and documentation, in order to channel and focus information about environment and development issues. The children's project combines research and information dissemination, using mass communication techniques to set up a two-way communication and learning process. Children are important agents of change. They have time to think in school and are usually the most literate people in rural communities. The "information exchange with children" project tries to help children link what they learn in school with what they hear from the elders in their community, and with what they themselves can see and do.

II. THE CHILDREN'S PROJECT

SINCE THE PROJECT'S inception, a series of illustrated learning packages - like comic books, containing stories, articles, games and puzzles - have been mailed out to all the primary schools in Kenya. One of the most important components is an annual competition, which invites children to answer questions and to send in essays and drawings. Their responses have been used as data and the best entries receive prizes for themselves and their schools. Winning entries are published in another full colour printed package distributed to everyone who enters.

The topics on which the project has focused have varied over the years, often responding to what has been learned from the children. Major themes have included tree planting, water management, wood fuel, tree seedlings, water and sanitation, health and nutrition, health and safety, immunization, nutrition, and occupational and environ-

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Sample copies of Mazingira Magazine and information packs for primary schools are available at nominal cost. Please contact: Librarian, Mazingira Institute, P O Box 14550, Nairobi, Kenya.

mental hazards. In addition to the main topic, major subthemes such as pesticides, population and women's work, are also discussed, and these often lead to useful new information or further research. For example, a competition question revealed that 80 per cent of Kenyan children were cleaning their teeth with chewsticks from different species of plant or shrub. Follow-up research with the Kenya Medical Research Institute showed these chewsticks to be as effective as using a toothbrush, and extension packages on chewsticks were sent out to schools, health centres and teacher training colleges.

The information in the learning packages attempts to balance useful technical knowledge (for example, how combustion and carbon monoxide poisoning work, immunization principles and schedules) with what will stimulate the children to investigate, evaluate and act on their own environment. For example, the issues raised include what is good and bad about large and small families and what are traditional health practices. Certain attitudes are reinforced, including respect for elders' traditional knowledge, gender equality, support to parents in the home (especially appreciation of mothers' work load) and bringing home useful knowledge to help the family. The first competition in 1979 elicited so much information about the uses of Kenyan trees and shrubs, for fuel, fibre, food, building and medicines that a book was published. At that time, there were only about 5,000 primary schools in Kenya. Since then the number has increased to over 14,000. From 1983-86, the project was extended to Ugandan primary schools as well. Usually, each school receives ten copies of the package, necessitating print runs of between 50,000 and 250,000.

III. LEARNING ABOUT SHELTER

IN 1989, IT was decided to adapt the exchange with children to find out more about children's attitudes to shelter, housing and services. Mazingira Institute collaborated with the Kenyan Ministries of Education and of Lands and Housing, to produce a poster competition for World Habitat Day with the support of the United Nations Centre for Human Settlements (Habitat). An A4 size wall chart was sent to all schools (see illustration).

The theme for World Habitat Day 1989 was "Shelter, Health and Family". The wall chart illustrates the theme in a way that children can interpret in their locality and asks them to enter the competition. Each school received one wall chart with a covering letter from the government to the head teacher suggesting how to use it. The extent to which the information sent to schools is used depends to a considerable extent on the individual head teachers themselves. Most responses over the years have been from class teachers in the final year of primary school, using the material in any subject from science to english. Responses to the wall chart contest have been lower than in previous years, only a few hundred instead of several thousand. This may be due to the fact that only one copy was sent, or to a change in Kenya's primary school syllabus which has increased the teaching load. Most responses have been from children entering as individuals rather than through their schools.

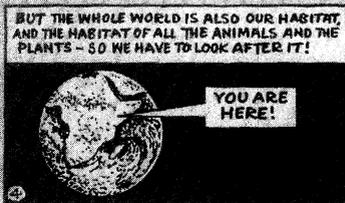
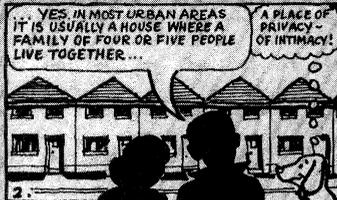
The first question required children to find out about the health and safety of traditional houses by asking their elders how and why they were designed and built. The second question asked them to draw their own house and evaluate what they liked about it. Next they were asked to describe how various types of waste were dealt with at home and to evaluate whether the methods were safe and healthy. All these questions



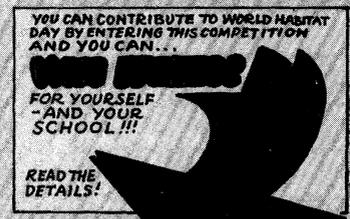
WORLD HABITAT DAY 1989

In Kenya, this year, we are observing World Habitat Day, 2nd October, by announcing a Kenya Primary Schools 'HABITAT' Competition to run over the next six months, on the theme:

'Shelter, Health and the Family.'



THAT'S WHY THE UNITED NATIONS CENTRE FOR HUMAN SETTLEMENTS - HABITAT - TRIES TO PUT IT ALL TOGETHER!



HOW TO ENTER THE COMPETITION

RULES

- The Competition is open to you if you are in Standard 6 or 7 in 1989
- You must answer ALL the questions.
- Try to answer them in as much detail as possible, and include drawings wherever you can.
- Make sure you write clearly and draw neat and well labelled diagrams.

WHAT TO DO

Write your name, age, sex and standard.
Write the name and address of your school.
Write the address and districts of your home.
Is your home in a town? If yes, write the name of the town.
After answering all the questions please post your entry BEFORE 31st MARCH 1990 to:
HABITAT Competition 1989,
Human Settlements Secretariat,
Ministry of Lands and Housing,
P.O. Box 75323,
Nairobi.

PRIZES

First Prize (for the best three entries):
For you: Sh.750 in cash.
For your school: Sh.1,000 in book tokens.

Second Prize (for the next three best entries):
For you: Sh.500 in cash.
For your school: Sh.750 in book tokens.

Third Prize (for the next ten best entries):
For you: Sh.100 in cash.

QUESTIONS

- Q1. Talk to an elderly person in your area. Ask him or her how people worked out the design and built their shelter in the old days. How did they ensure that the shelter and its surroundings were safe and healthy places?
- Q2. Draw your home and its surroundings. What do you like most about your home? What do you like most about your surroundings? Give reasons for your answer.

- Q3. Describe how people in your area usually dispose off waste water, human waste and garbage (rubbish). Do you think the way it is being done is safe and healthy or not? Give reasons for your answer.
- Q4. Visit your friend at home and observe - the materials it is built of, the rooms it has, how many people live in it, type of sanitation, ventilation and lighting and the surroundings.

- Also observe activities taking place in the home. Do you think the home and its surroundings are safe and healthy or not? What improvements are needed? Give reasons for your answer.
- Q5. If you were to design a dwelling place for your family, what would you do to make the shelter and its surroundings safe and healthy? Explain your ideas with words and with the help of both diagrams and pictures.

HABITAT Competition 1989 organised by: Ministry of Lands & Housing, Ministry of Education and Mazingira Institute with the assistance of UNCHS-Habitat.

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encouraged observation and analytical skills.

In most of the entries, children were successful in using knowledge they had learned in school to give an informed assessment of the design of traditional housing and practical judgements about health hazards. It was often mentioned that traditional building was a communal process, divided into specialized tasks according to age and sex. Some children pointed to the spaciousness of traditional housing with the separate structures for different family members and kitchens separate from the living space. "My elder brothers have their own houses. We don't have to crowd in one house for sleeping in. They are small houses but clean and strong. We also have a kitchen where my mother cooks food. This is also good as it is very easy to clean as it contains only a few things, which are only related to cooking."

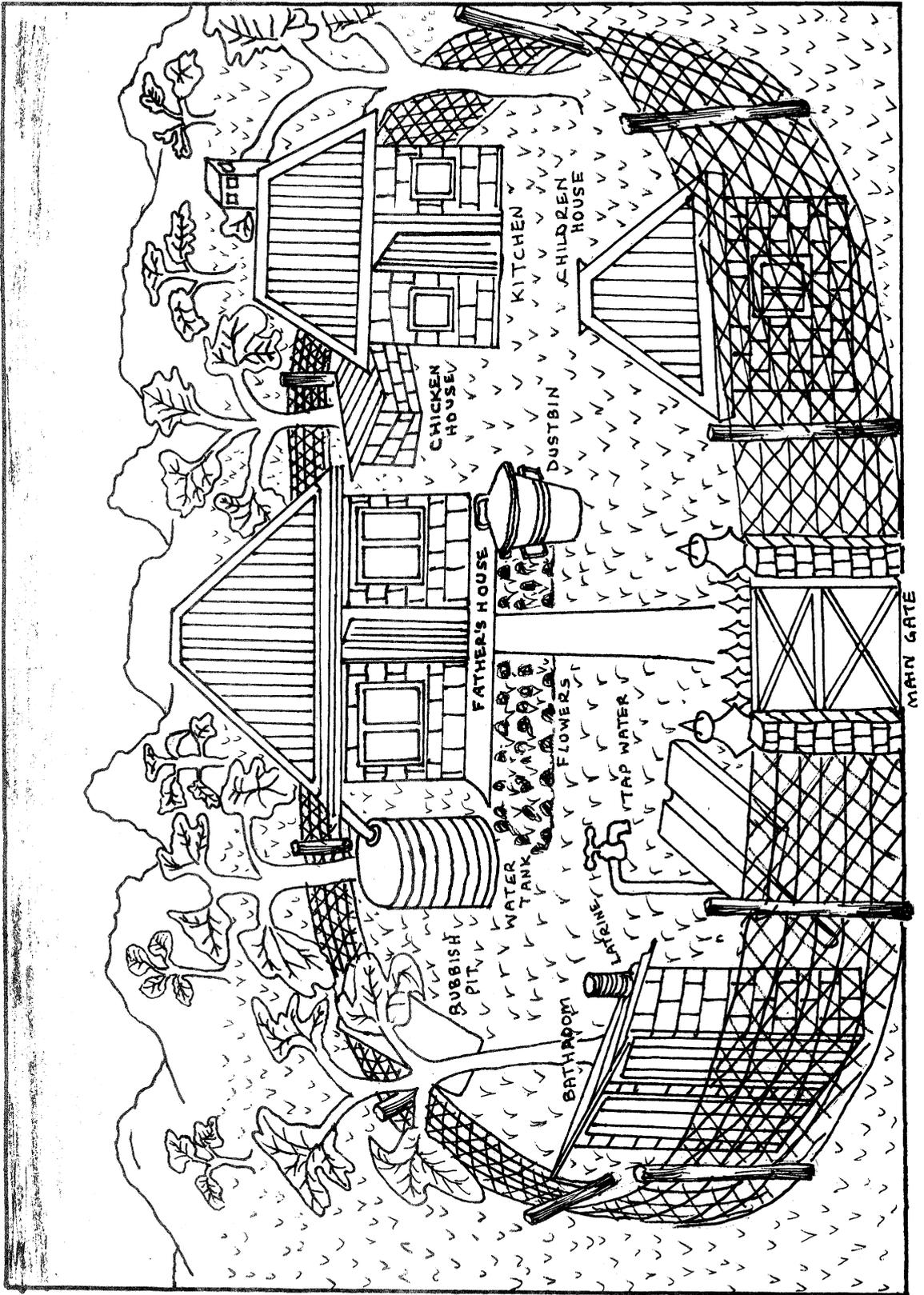
From experience with previous competitions, we knew that children might be unwilling to criticize their own families' waste arrangements, so a question about wastes asked them to look at a friend's house and evaluate its health and safety. This elicited observations about overcrowding, the health problems of sleeping in the same space as animals, water contamination and poor waste management. These responses were clearly based on knowledge acquired at school. There was notable sensitivity to waste separation and, for example, the need to use waste water for garden crops and trees, as opposed to hazardous human waste. Good use of waste water to keep down dust on earth floors was sometimes distinguished from careless disposal of water leading to mosquito breeding.

The final question in the competition invited children to describe how they would design a good house and what they would do to make it safe and healthy. It is worth noting that none of the children had any difficulty in relating to the environmental design process. All described a sequence of decisions often starting with site selection based on criteria such as water availability, and moving on to site clearing and protection, selection of construction materials and, not infrequently, economic survival in the form of land productivity and farming. Clearly, Kenyan children are familiar with the idea of having to manage environmental resources.

However, in contrast to their analyses of traditional houses, some children were in favour of modern style houses with living space, kitchen, toilet and bathroom in one structure, without any corresponding analysis of why this might be better. One entry emphasized aesthetic considerations such as nice paths leading to every structure and elements of modern living including carpets and "improving the environment by importing many things from different parts of the world". Such elements were integrated with more pragmatic design considerations such as fencing to prevent wild animals coming in, choosing fertile land and building two lavatories, one for young people and the other for adults.

Here is an excerpt from one of the prize winners: "I would make sure there are trees for the provision of shade and clean air. The grass should be cut to ground level always to avoid turning the compound into a breeding place for small animals such as rats or mosquitoes. I would dig a very beautiful pit latrine at a distance from the dwelling house. The compound should be neat, with water tanks for trapping rain water. There should be very many rooms in the house. A separate kitchen for cooking as smoke at times irritates the eyes while mother is cooking. Chicken and cattle should have their own places of sleeping as it is not good to share rooms with animals. The floor should be cemented to allow easy washing and make the house clean always. Above all it should be

A DWELLING PLACE FOR MY FAMILY



neat and permanently constructed as shown in the drawing.”

One of the objectives of the project is to bring the children's responses to a wider audience interested in habitat/shelter affairs. It is revealing that their approach to design and health is quite conscious, though based on largely rural experience. There is no doubt that urbanizing Kenyans use similar strategies, though achieving little success in the face of limited urban services and opposition to rural methods. The next step needs to be to fill this gap by policy makers adapting to the population's shelter strategies, and by teachers and pupils thinking through adaptive urbanization strategies.

IV. CONCLUSION

IT IS HOPED that this use of the children's project to bring children's perceptions to a wider audience will evolve further. Meanwhile, the approach is being adapted in other directions as well. As part of the African Forum for Children's Literacy in Science and Technology, supported by Rockefeller Foundation, an extension package for children on animal husbandry and health is being distributed. This will elicit feedback from the children on traditional animal husbandry and health management practices and beliefs, as well as basic data on the role of livestock in their household economies and innovative ideas on animal husbandry.

In a context of limited resources, this approach of distributed learning packages, stimulating responses from children, and learning from these responses, has proved productive in combining mass media with the education system to mobilize the considerable resources of Kenyan youth to address environment and development problems. There is also a great potential for linking it to policy making.