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NO. 38

OUTREACH

A NETWORK FOR ENVIRONMENT AND HEALTH AWARENESS TEACHING, TRAINING.

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WOMEN, HEALTH AND ENVIRONMENT

OUTREACH is a unique coalition of local, national and international organisations working to disseminate information on environmental and health issues.

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Issue No. 38

Main theme: **WOMEN-HEALTH AND ENVIRONMENT**

including general information;
Nadu Chula mud stove;
Worldwide;
women and water supply;
market gardening;
double digging.

other topics:

environment - wildlife in East Africa;
animals.

writer/ editor: **Gillian Dorfman**

OUTREACH packs are prepared bi-weekly. The material in the packs- for children and adults- is for use in magazines, newspapers, radio scripts etc..

Use this material as you wish. **ADOPT, ADAPT and ADD**, but please **CREDIT OUTREACH** and source where indicated

We need feedback. How useful is this material? How can we make it better? Are there special topics you need? Please let us know. Write to:

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INFORMATION POLL FOR OUTREACH issue no. 28

Please complete this poll, and return it to:

Valerie Leakey, UNEP Co-ordinator of OUTREACH, c/o UNEP Information Service, P.O.Box 47074, Nairobi, KENYA

If you need more space for comments, please use the back of this paper.

A. PLEASE ANSWER THIS QUESTION

Do you wish to continue to receive OUTREACH packs? NO YES

please note: If you do not return this form, you will not receive future issues of OUTREACH.

B. CONTENT

Please list the materials in this issue that are useful in your area. (List the items by page number - for example, pages 2-7, page 24 and so.)

I particularly liked page(s) _____ because _____

I would like more information on (list environment and/or health subjects). _____

C. FORMAT

Which of the following do you find most useful? (Please tick appropriate box(es):

- | | |
|------------------------------------|--------------------------|
| * factual articles (environment) | <input type="checkbox"/> |
| * factual articles (health) | <input type="checkbox"/> |
| * radio scripts | <input type="checkbox"/> |
| * practical activities (adults) | <input type="checkbox"/> |
| * practical activities (children) | <input type="checkbox"/> |
| formal education: | |
| * classroom activities | <input type="checkbox"/> |
| * teachers' notes | <input type="checkbox"/> |
| * reviews of educational resources | <input type="checkbox"/> |
| informal education: | |
| * children's games and puzzles | <input type="checkbox"/> |
| * stories (environment) | <input type="checkbox"/> |
| * stories (health) | <input type="checkbox"/> |
| * other _____ | <input type="checkbox"/> |

D. USE OF OUTREACH MATERIALS

Do you interpret OUTREACH materials in one or more languages?

NO YES

What language(s) _____

Exactly how do you use OUTREACH materials? (Please tick appropriate box(es):

- * in children's magazines
- * in radio programmes
- * in teacher training
- * in curriculum development
- * in literacy classes
- * in extension courses
- * in wildlife clubs
- * other _____

Please enclose a copy of article(s)/script(s) which has been adapted from OUTREACH materials, and which has been written in the local language. (eg. newspaper articles, magazines etc.)

E. YOUR AUDIENCE

Let us know more about your audience (for example, rural and/or urban; children and/or adult; literate etc.,) _____

F. YOUR AREA

Let us know more about your area. What's happening? Are local farms losing soil? Do women find it increasingly difficult to find fuelwood? Is there disease because water and sanitation facilities are inadequate? Is local wildlife under threat from encroachment/poaching? _____

What's being done about local problems? Are there campaigns to get children immunised? Are people planting trees and/using energy-efficient cooking stoves? Please include information on successful schemes, and what has been learnt from failed projects, too. _____

Comments:

Name and address: _____

Please write the date when this issue was received: _____

OUTREACH 38

CONTENTS:

Using the chart below, you can see at glance which fields of interest are touched upon in this OUTREACH pack.

Letters in the chart indicate the following:

a - articles b - stories c - activities and games

d - teachers'/parents' page e - resources

Topic		General	Africa	Asia	Middle East	Latin America & the Caribbean	Deserts	Forests	Wetlands	Oceans	Mountains	Grasslands
Land (L)	ac											
Water (Wa)	ae											
Atmosphere (A)												
Wildlife (Wi)	c	b										
People (P)	ad											
Human Habitation (Ha)												
Health and Sanitation (He)	ade											
Food and Nutrition (F&N)	acd	a	a									
Energy (E)	ad		a									

Reading levels:

I = for young children aged 8 - 10 years

II = for schoolchildren aged 11 - 13 and adults with basic literacy skills

III = for teachers and/or people with a secondary education

	Topic	Reading Level	Page(s)
Articles			
	Women of the world: the facts	P	1-10
	Nadu Chula mud stove (IWTC)	E/F&N	13-15
	Market gardening in Togo (IPPF)	F&N	15-16
	WorldWIDE	III	21-22
Stories			
	The wonderful world of Willy Warthog part 1: Snared	Wi	23-25
Activities and Games			
	More vegetables from your garden (DCFRN)	L/F&N	16-20
	Missing parts (NMNH)	Wi	26-27
Teachers'/Parents' Page			
	Possible ways to use "Women of the world: the facts" in classwork	P	11-12
	Mr and Mrs Towers & the children (UNESCO/UNFPA)	III	28-30
Resources			
	Women, Work And Health kit (War on Want)	III	22
	A new film on women and water supply	Wa/He	25

INTRODUCTION

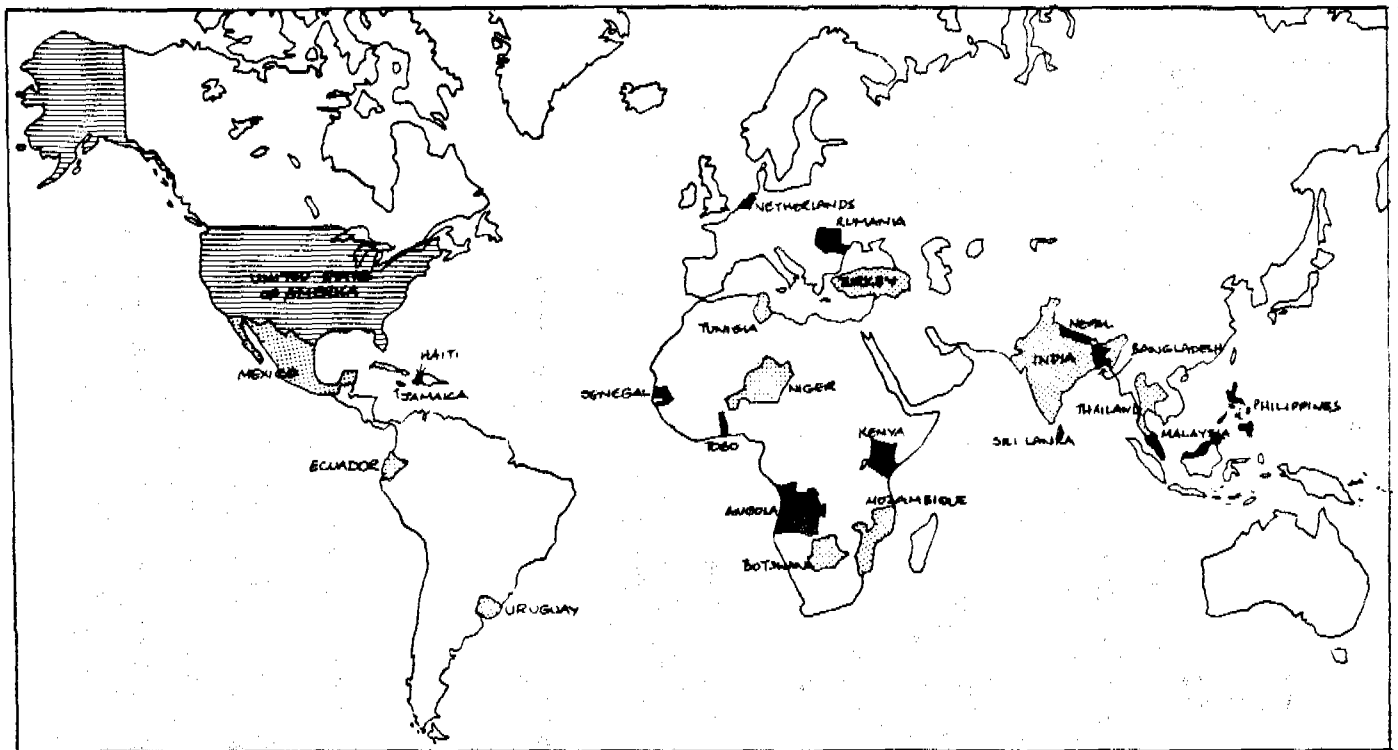
OUTREACH issue nos. 38, 39 and 40 are about and for women. They focus on women because of the contribution that women do - and can - make to the health and welfare of themselves, their families and communities and to the state of the environment.

The issues aim to:

- * Encourage people to believe that belonging to one sex or another should not limit one's possibilities of participating in the family and in the sustainable development process.
- * Offer practical ideas and activities for women to improve their health and that of their families and community.
- * Demonstrate how women have achieved - and can achieve - improvements to their living conditions and to the environment in general.

LOCATION MAP

The map below shows the location of places mentioned in OUTREACH issue no. 38:



Women of the world: the facts

Women: home and work

WOMEN'S ROLES (1)*



A few women in the top social groups in some Third World societies live in total seclusion, behind the veil, never taking part in outdoor activities. In the farming communities, their husbands would typically be well enough off to employ field labour. This pattern of life is typical of Indian upper castes and the Middle East.

The next ranking social group is one in which the women do domestic duties, craft work and occasional poultry raising, but never earn money. Their menfolk do their own ploughing, planting and agricultural work. This pattern is typical of that of most women of Latin America, and the Indian cultivator caste.



The third group is equivalent to low caste women in an Indian village. They assist their men in the fields, go to market, and at certain times of the year do extra paid work. Most women in Asia live like this. In the Philippines, for example, women work 30 hours a week on the family farm, while men work 43 hours.

The fourth and lowest group consists of those women who are expected to support themselves and their families virtually independently. In Asia they regularly seek work as landless labourers, as do India's "Untouchables". In Africa, where this is the typical pattern, the woman bears the right to work a piece of land by marriage and then bears all the responsibility for food production.



* (see pages 9 and 10 for sources of reference)

WOMEN AS HEAD OF HOUSEHOLDS (2)

Largely because of the migration of men to towns and cities, women end up heading at least 17% of households in the developing world - 30% or more in some rural areas.

A WOMAN'S WORK IS NEVER DONE

Here is a day in the life of a typical rural African woman:

20.30 to 21.30

Wash children and dishes



21.30

Go to bed

18.30 to 20.30

Cook for family and eat



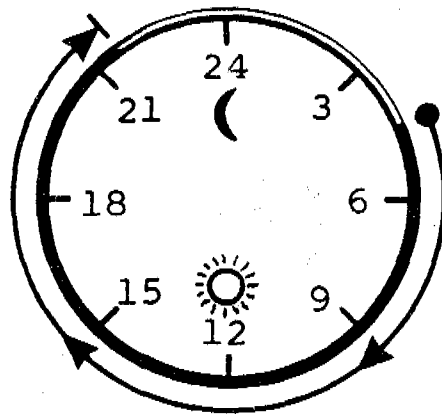
17.30 to 18.30

Collect water



16.00 to 17.30

Pound and grind corn



15.00 to 16.00

Collect firewood, return home



4.45

Wake up, wash and eat



5.00 to 5.30

Walk to fields



5.30 to 15.00

Work in fields



WOMEN'S WORK IS NOT RECOGNISED

(3)

World statistics indicate that only a certain percentage of women work, but this is untrue. In Africa:

- * 5% of women clear land,
- * 30% turn soil,
- * 50% plant crops,
- * 70% weed and hoe,
- * 60% harvest crops,
- * 80% carry crops home,
- * 80% store food,
- * 60% process food,
- * 60% market produce,
- * 90% carry water and fuel,
- * 50% look after domestic animals,
- * 10% hunt,
- * 95% cook and look after the family.



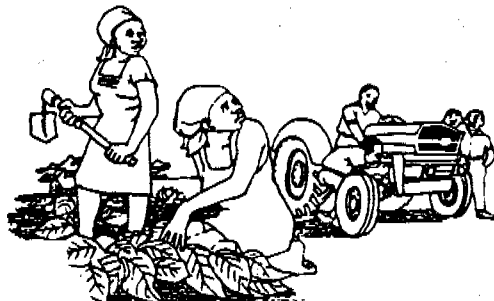
Among the rural poor the mother is working from early morning until after dark. Even a pregnant woman will carry her usual workload up until the day her child is born. She will go back to doing her normal chores two or three days afterwards. When a woman's day is so full, it is hard for her to do any more than she does for her children.

WOMEN'S AND MEN'S WORK (4)

Women account for two-thirds of the world's work hours. They produce 60-80% of the food in Africa and Asia, 40% in Latin America. Yet they officially constitute only one-third of the world's labour force, receive only 10% of its income, and own less than 1% of its property.

WOMEN, MEN AND FOOD PRODUCTION (5)

50% of the agricultural production and all of the food processing are the responsibility of women. Yet, almost all the training and technology for improving agriculture is given to men.

WOMEN, WORK AND THE ENVIRONMENT

(6)

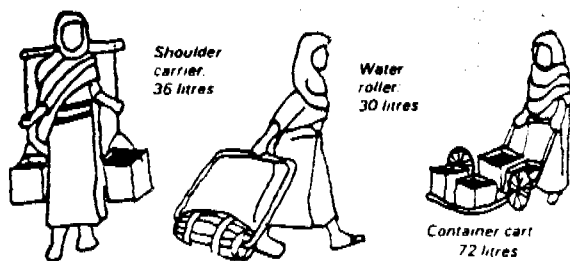
Deforestation, poor land management and an emphasis on cash crops (known in East Africa as "men's crops") have shrunk the arable acreage available to the developing world's food producers, most of whom are women. At the same time the decay of the environment has forced women to spend more hours each day, often walking greater and greater distances, to find water and firewood for their families.

Women and health

WOMEN AND WATER

The provision of water for household use in most Third World societies is the task of women. They spend sometimes as much as 6 hours a day walking long distances and carrying heavy loads of water.

In the Sahel, women may leave home at dusk, sleep at the water sources, and return in the cooler morning hours. There is a joke in Senegal that wells are replacing contraceptive pills. In the mountains of Nepal, women may have to climb 1,000 metres down steep slopes to a river and then carry water back up, sometimes twice a day. Time and physical burdens due to water needs generally increase during dry seasons.

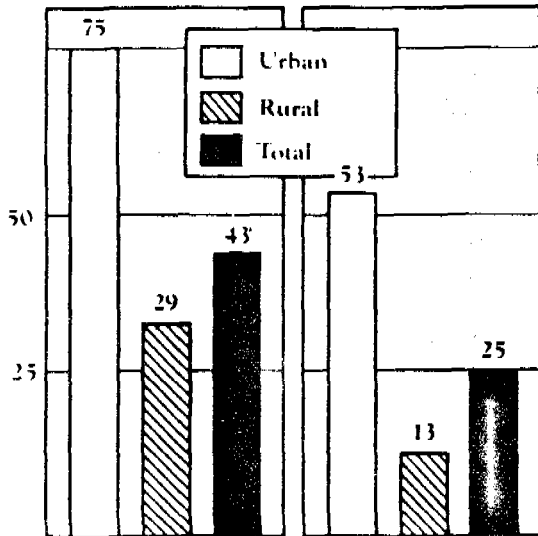
Ways Women Can Transport Water (7)

The task of obtaining water uses much of women's energies and time, which in turn has serious consequences for their health and their families' health. Women reportedly use up 9% of their daily caloric intake in carrying water. (Women carrying water in hilly terrain use up as much as 27% of their caloric intake.) For pregnant and nursing women, this is a significant drain on their energy reserves.

The heavy jars or cans that women carry on their heads can lead to back-trouble, while tasks such as child-care or income-raising activities may suffer due to lack of time. In addition, in many places women spend more time actually working in the water - washing clothes, for example - and so may be more often exposed to water-borne diseases.

WOMEN AND WATER continued

Access to Safe Water and Sanitation Facilities in Developing Countries (1980) (8)



Percent of population with access to safe water (1980) Percent of population with access to sanitary excreta disposal (1980)

- * The World Health Organisation has estimated that 80% of all sickness and disease in the world is attributable to inadequate water or sanitation.
- * It is estimated that between 30,000 and 70,000 people die every day from diseases caused by unclean or inadequate water and by insanitary conditions. (9)

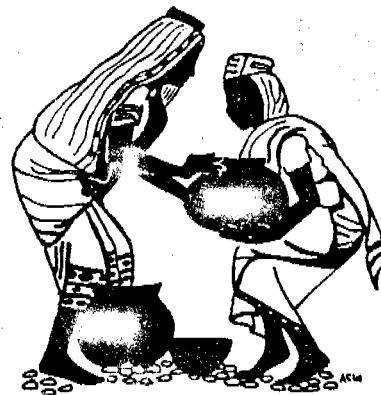
Involving women in water projects

- * Women involved with water on a daily basis from an early age have great expertise on its sources and availability. For example, in one area of Panama, women took the engineers to a fresh water source on the shore which had not been found by the engineers in their survey.
- * It has been estimated that 50% of improved water systems

Women are responsible for family hygiene

Women are largely responsible for both the quantity of family water supply and the way in which it is used. Women buy or make soap for the household, clean the home, and care for household animals. It is generally women who teach children defecating habits, handle infants' faeces and clean the latrines. Women also get rid of rubbish and used water.

Therefore, women may be agents of water contamination. Contamination often occurs after water has been collected, through improper handling on the way to or in the home. Many people believe young children's stools are "harmless". Yet, they have greater concentrations of germs than do those of older children and adults. Women, who care for young children, often have increased numbers of germs on their hands and so easily pass on disease to themselves and to their families.



worldwide are not in use because of breakdowns, shortage of fuel for diesel pumps or cultural inappropriateness. In many countries, women are likely to be more knowledgeable than men about pump breakdowns

continued...

WOMEN AND WATER continued

and well defects and more concerned about maintenance. (When a system stops working, women are the ones who will have to bear the extra burdens.) Women should, therefore, be trained to recognise problems and carry out basic maintenance and repairs. In Bangladesh, for example, women tubewell caretakers were trained to do preventive maintenance as well as some repair work. They did these tasks just as well as men, and they kept

the pump areas cleaner. They did, however, depend upon men to buy spare parts as men in Bangladesh do most of the shopping. In Thailand, 480 women handpump caretakers in 101 villages have been trained. In Angola, where women have been recruited as water source monitors, the breakdown rate has markedly declined. Elsewhere, though, men are more commonly put in charge of maintenance.

WOMEN AND ENERGY

Collecting firewood

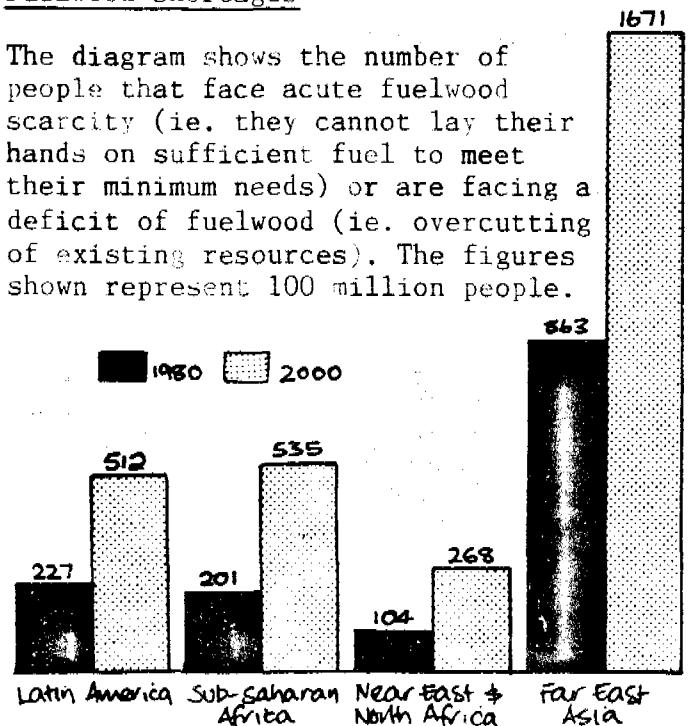
Women spend a major part of their day looking for firewood or other fuel. In parts of Kenya, women reportedly spend 20 to 24 hours per week fetching firewood, while in Botswana, they may walk as much as 8 miles per day. The availability of fuel determines whether meals are served hot or cold, hence whether they are relatively free of or contaminated by germs. This is particularly critical for weaning foods. Many families in the Sahel have had to reduce hot meals to one per day, while soybeans introduced for nutritional purposes have been rejected because they require too much cooking. The growing scarcity of firewood and other fuels is not just a woman's health problem, but women are the usual collectors and users and thus are particularly affected.

Sickness from smoke

At least 300 to 400 million people risk their health daily in indoor smog created by smoky fires and cooking hearths. For example, open-hearth burning of fuels such as wood, dung or crop wastes releases large amounts of soot, ash and tar into the air people breathe.

Fuelwood Shortages

The diagram shows the number of people that face acute fuelwood scarcity (ie. they cannot lay their hands on sufficient fuel to meet their minimum needs) or are facing a deficit of fuelwood (ie. overcutting of existing resources). The figures shown represent 100 million people.



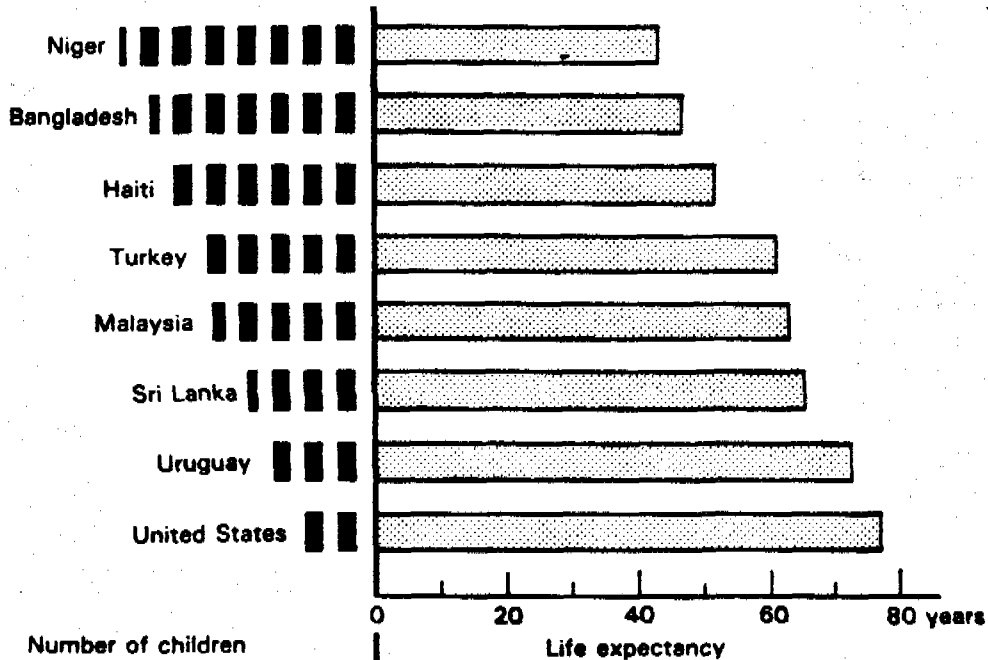
source: *The Gaia Atlas of Planet Management* ed. N. Myers, Pan Books, London, 1985. £9.95

Victims of this home-made pollution are mostly women and children in rural areas of Africa, Asia and Latin America. They suffer from constant ill health and often die prematurely. Respiratory diseases such as acute bronchitis and pneumonia cause more than a quarter of all deaths in children under five years in such areas. Many children are weakened even before they are born by the smoke breathed in by their mothers.

FEMALE LIFE EXPECTANCY AND TOTAL FERTILITY RATES (10)

Those countries where mothers have an average of 2 or 3 children are also those countries where women live longer:

(Life expectancy may also be affected by other factors such as women's heavy workload and social service deficiencies.)

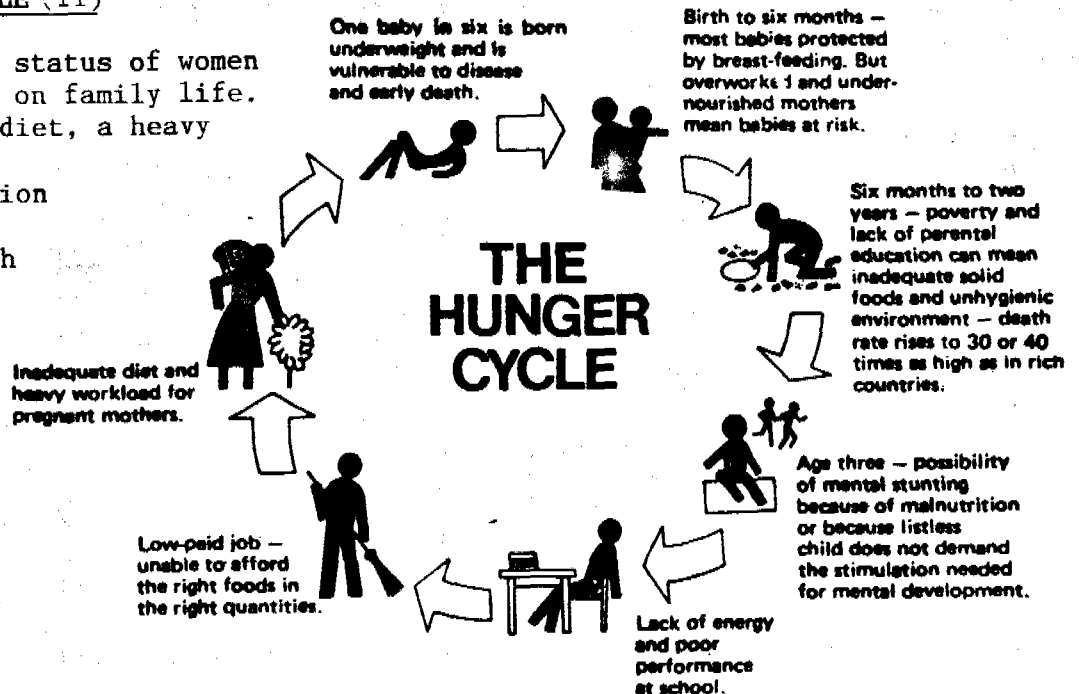


Too frequent pregnancies, along with constant stress and fatigue take their toll on women's health.

In certain areas as many as 60-70% of women suffer a more or less serious form of anaemia.

THE HUNGER CYCLE (11)

The low social status of women takes its toll on family life. An inadequate diet, a heavy workload and a lack of education contribute to the poor health of mothers and children:



MATERNAL MORTALITY (12)

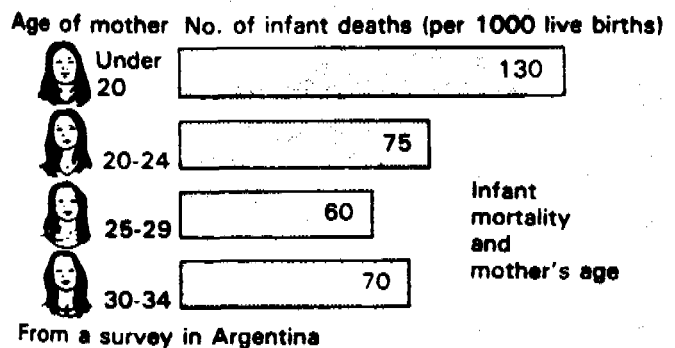
Maternal and infant mortality are especially high in situations of extreme poverty. The death of a mother is not just a personal but family and national tragedy. Millions of children are left motherless each year. Yet with adequate health care - including easy access to ante- and post-natal care, maternity care, and family planning services - a great many of these maternal deaths could be avoided.

Maternal deaths per 100,000 live births from deliveries, complications in pregnancy, childbirth and the puerperium

Mozambique	650
India	600
Tunisia	310
Ecuador	210
Kenya	190
Jamaica	128
Rumania	31
Netherlands	13

TEENAGE PREGNANCIES (13)

Too early marriages and/or pregnancies and childbearing may limit the future for female adolescents in all spheres, including education and employment. Young mothers are not the only ones to suffer from teenage pregnancies. Children born to women under the age of 20 are approximately twice as likely to die in infancy as children born to women in their mid-twenties!



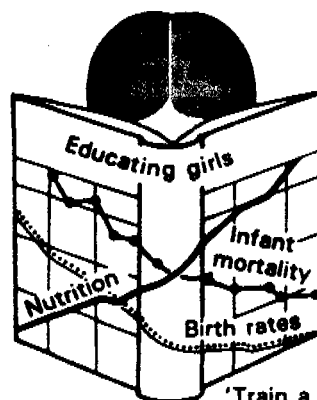
Women and education

SCHOOLING

Education is probably the single most important factor in the enhancement of women's status. It has a positive impact on health: it is closely associated with a falling infant mortality and birth rate and improved nutrition:

The education of girls also has a positive impact on a woman's ability to control the number and spacing of children and her access to employment.

Mother's schooling, child growth and mortality (14)

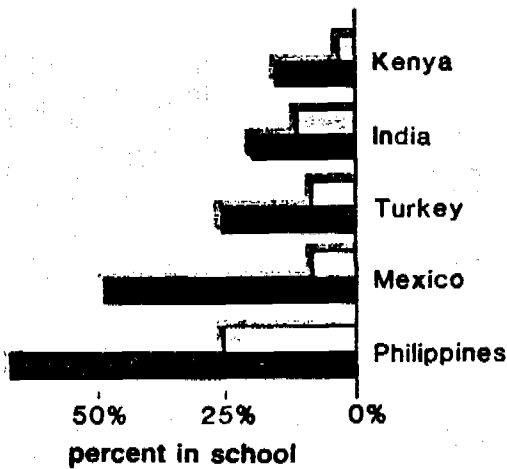


'Train a man and you train an individual; train a woman and you build a nation.'
(Bishop Nzimbe, Machakos, Kenya, May 1985)

SCHOOLING continued (15)

School enrollment rates for girls have quadrupled in many countries just since 1960:

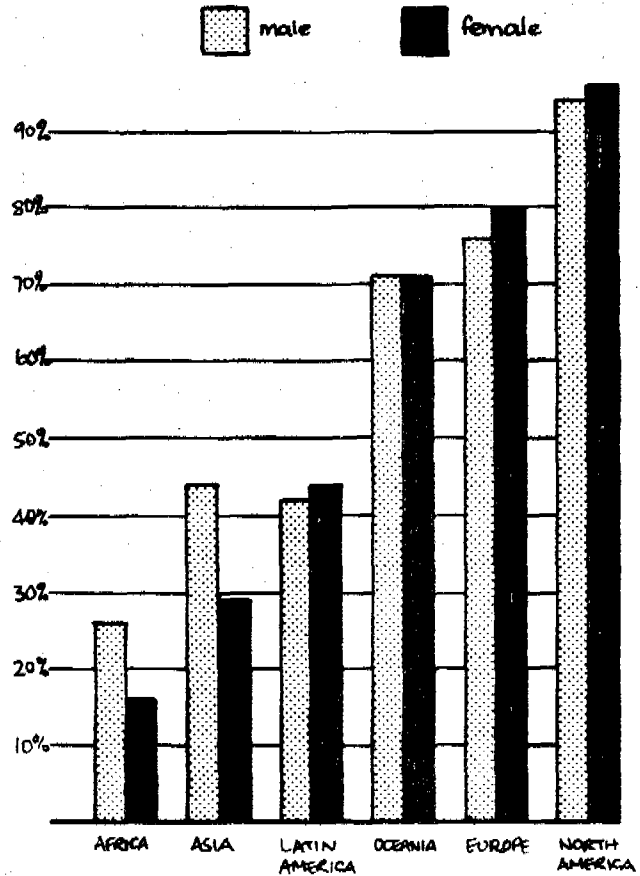
Improving Secondary School Enrollments for Girls, 1960-1980



Yet, the school enrollment rates for girls still lag behind boys' rates in Asia and Africa. In the developing countries, less than one-third of the girls attend secondary school:

The traditional obstacles to sending girls to school - the need to keep them working at home and the danger that they will meet boys and "go astray" - are still factors in some rural areas of Africa and Asia, though they are disappearing. Only among the relatively tiny urban middle classes is education for girls universally taken for granted.

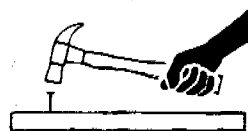
Percentage of males/females enrolled in Secondary Schools (1985)



SCHOOL SUBJECTS

Many schools still have "girls' subjects" and "boys' subjects". In most countries:

boys do woodworking and metalwork



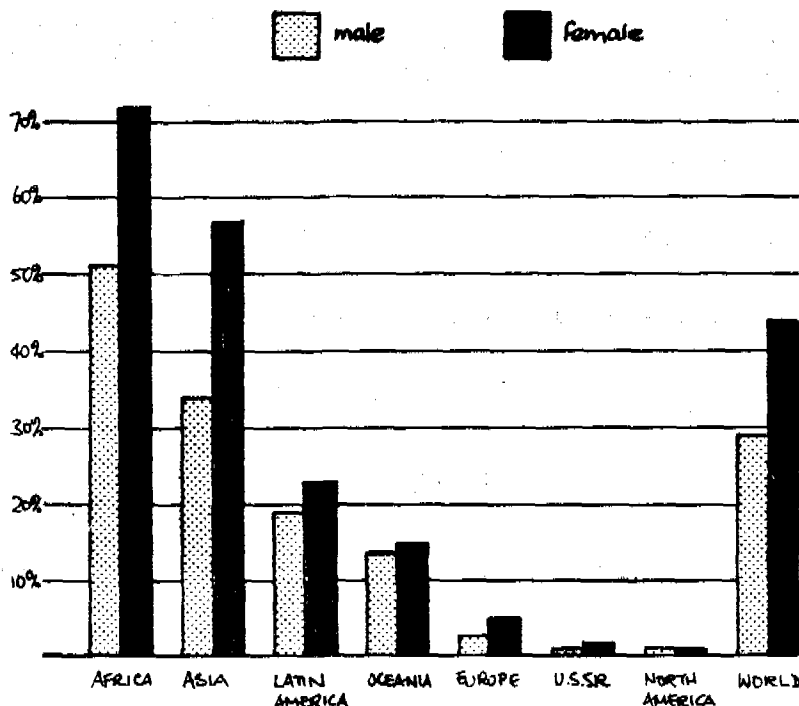
... girls do home science and needlework



ILLITERACY

It is estimated that in the developing world 57% of women are illiterate compared with 35% of the men. Resistance by Third World women to other opportunities of raising their quality of life - better nutrition, family planning, domestic hygiene - are very closely linked with literacy.

Percentage of male/female adults that are illiterate (16)

SOURCES OF REFERENCE

These sheets are adapted from "Women of the World: the facts", a fact sheet that appeared in UNICEF News Issue No.104 (UNICEF Division of Information and Public Affairs, 3 UN Plaza, New York NY 10017)

Most of the information of the UNICEF sheet comes from: the 1979 State of the World's Women Report for the UN Decade for Women; the World's Women Data Sheet (1980), Population Reference Bureau, and the New Internationalist Issue No. 56 "Women Hold Up Half the Sky".

A general reference for these sheets is:

"Women and Health information for action issue paper" prepared by the World Federation of Public Health Associations for the Aga Khan Foundation and UNICEF, 1986

Other references used on these sheets are listed below:

- (1) This classification of women's roles is based upon research cited in Woman's Role in Economic Development" by Esther Boserup, and appeared in Women of the World: the Facts" an information sheet in UNICEF News, Issue 104
- (2) Kristian Helmore, The Neglected Resource: Women and the Developing World, part 1, December 17, 1985, published in the Christian Scientist Monitor.
- (3) World Survey of the Role of Women in Development, A/CONF./116/4. World Conference to Review and Appraise the Achievements of the United Nations Decade for Women: Equality, Development and Peace. Nairobi, Kenya. July 1984.
- (4) See (2) above.
- (5) Lovel, H.J., Feuerstein, M.T. (eds.) (1985) Women, Poverty and community development. A special issue of the Community Development Journal, Vol.20 (3): 156-254.
- (6) See (2) above.
- (7) Women, Health and Development, a kit prepared by the JUNIC/NGO Sub-Group on Women and Development of the Joint United Nations Information Committee's Working Group on Development Education. For further information, write to: Development Education Centre, UNICEF, Palais des Nations, CH-1211 Geneva 10, SWITZERLAND
- (8) World Health Organisation Rapid Assessment Report, 1980 (United Nations, Report of the Secretary-General, International Drinking Water Supply and Sanitation Decade: Present Situation and Prospects, United Nations document A/35367, July 1980) Notes: (a) Figures should be regarded as rough approximations, giving orders of magnitude only. The number of public and private water and sanitation facilities which have fallen into disuse or disrepair is grossly underestimated. (b) Figures exclude the People's Republic of China, for which statistics are unavailable.
- (9) A. Agarwal, J. Kimondo, G. Moreno, J. Tinker Water, Sanitation, Health - for All? Prospects for the International Drinking Water Supply and Sanitation Decade, 1981-90 an Earthscan publication published by the International Institute for Environment (1981)
- (10) Morley, D. and Lovel, H. My Name is Today, published by Macmillan Publishers (1986)
- (11) See 7 above.
- (12) "UN Estimates" See (7) above.
- (13) See (10) above.
- (14) See (10) above.
- (15) The World's Women: A Profile prepared by the Population Reference Bureau in Recognition of UN Decade for Women 1976-1985
- (16) See 15 above.

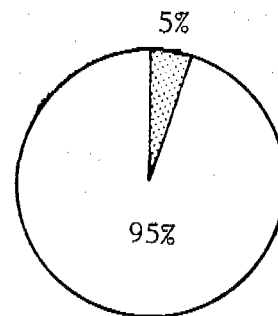
TEACHERS' /PARENTS' PAGEPOSSIBLE WAYS TO USE "WOMEN OF THE WORLD: THE FACTS" IN CLASSWORK

Here are some questions, discussion themes and activities that are based upon, "Women of the World: the Facts". This is not an exhaustive list. Most of the questions may be asked of older students, but many activities can be adapted to suit younger children, too.

1. What social group do you (or your mother/sisters) belong to? Describe a day in your life. What do you think is good about your lifestyle? What would you (or your mother/sisters) like to change about your/their way of life? Do you think these changes are possible?
2. What is a "head of household"? Why are more and more women becoming heads of household? Is your mother one? If so, what kind of decisions does she have to make for your family?
3. The clock that describes a typical day for a rural African woman can be used in various mathematical exercises (which can emphasise the hard work demanded of rural women). Here are two possibilities:
 - * How many hours does the woman work in the fields? ($9\frac{1}{2}$ hours)
 - * What proportion of each day does the woman spend collecting firewood and water? (2 hours or $\frac{1}{12}$ of each day)
4. The average rural African mother is working from early morning until after dark. Can you think of ways to ease the burden of her daily life? (e.g. share the chores among more of the family members; organise piped water to the home; make mechanical corn grinders available. (A

mechanical grinder can grind corn into better flour in 2 or 3 minutes than women can grind it in 1 or 2 hours by hand.)

5. Use the information in "Women's work is not recognised" to make pie diagrams like the example given below:



5% of women clear land

6. The design of farm machinery often does not take women into account. Can you think of any design considerations that should be made with regard to women? (e.g. in some cultures, women cannot sit astride machinery; equipment should be designed to suit female strengths; existing machinery may be oversized for women's hands and bodies etc.,.) Draw a picture of a piece of farm machinery that women (a) can use (b) cannot use.

7. Interview a woman in your community. Ask her questions on any or all of the following:
 - a) What kind of training would she like or need to improve her farming skills;
 - b) If, and how, gathering fuelwood or water has become easier or harder in recent years;
 - c) What problems she faces as a food producer (e.g. no land security; soil erosion etc.,..)

8. Several mathematical exercises can be linked to the transport of water. Here are two examples:
 - * If a Nepalese woman must climb down 1000 metres to the river twice a day to fetch water, how many metres does she climb - up and down - in a week? ($4000 \times 7 = 2800$ metres)
 - * How many more trips must a shoulder carrier make, compared to a container carrier, to collect (a) 100 litres of water? (1)
(b) 144 litres of water? (2)

9. In a group, discuss ways women can improve family hygiene. Make posters that explain these hygiene measures to women in your community.

10. Why should women be involved in water project planning and maintenance? Do you know women in your community that would be willing to become involved in such projects? Prepare a letter to local water officials/funding bodies explaining why they should involve women in a local water project.

11. According to the figures on fuelwood shortages, how many people in the four regions of the world faced acute fuelwood shortages in 1980? (139,500,000) How many will be facing such shortages in the year 2000? (298,600,000) Relate these figures to numbers that your students can understand, (e.g. x times the number of people in your village; these people would fill x number of local buses).

12. Make a haybox cooker that can be used for slow burning, (see OUTREACH issue 27, page 26).

13. Can you think of ways to reduce sickness from smoke inhalation?

14. Can you think of one way Haitian women can prolong their life spans?

15. Can you suggest any ways to break the cycle of hunger?

16. Describe what might happen to a family that is left motherless? Draw upon your own experiences/imagination.

17. In groups, carry out an interview survey on the extent of education for girls in your community. Find out the number of girls/women that had no formal schooling; a primary education only; a secondary education. Can you determine any characteristics of the girls/women (including family/lifestyles) that may account for the amount of schooling they received? What did they learn at school? What would they have liked to have learned? Have educational opportunities changed over the years in your community? How many women can read or write? Present your findings to the class and/or community.

NADA CHULA

OUTREACH 38/p.13

International Women's Tribune
Centre (IWTC)
777 United Nations Plaza,
New York, NY 10017
U.S.A.

Intermediate Technology Publications
9 King Street,
Covent Garden,
London WC2E 8HW
ENGLAND

This information is taken from: The Tech and Tools Book: a guide to technologies women are using worldwide compiled by Ruby Sandhu and Joanne Sandler and produced by IWTC and I.T. Publications, 1986.

This publication is an illustrated guide to 60 technologies women are using worldwide, with descriptions of each technology's strengths, weaknesses and uses. Technologies useful to agriculture, communications, energy, food processing, health and sanitation, and income generating projects are included. Other sections provide guidelines for introducing AT components into women's projects, with listings of AT centres, journals, catalogues and donor agencies. The cost of the publication is US\$10.00 and is available from IWTC.

If the information below is reproduced, please include the following credit on the title page:

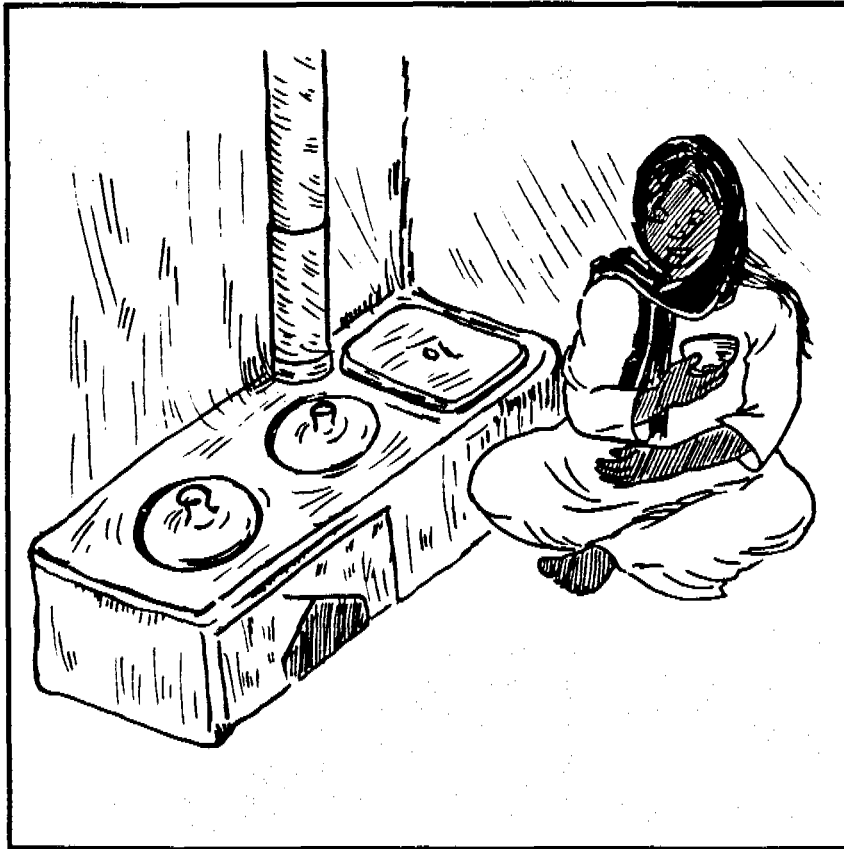
Copyright 1986 by I.T. Publications and International Women's Tribune Centre. Reprinted from The Tech and Tool Book with permission of the publishers, International Women's Tribune Centre and I.T. Publications.

Some ideas on how to use the information below

- * If the information is useful to you or your group, write away for further information.
- * Adapt the idea of the Tech and Tools Book, (as illustrated in these sample pages), and compile your own directory of technologies that women are using in your town, district or country.
- * Start a "Women's Appropriate Technology Mini-Resource Centre" and collect information that women can use in their projects. You could begin by ordering the Tech and Tools Book.
- * Organise a meeting of women in the community and describe this technology to each of them. Ask them to read the "How It's Been Used" information and discuss the potential for their own uses. Have them generate ideas about the uses and misuses of technology in their family and community.

BRIEF DESCRIPTION

The Nada Chula is a mud stove which can be built in different shapes and sizes to suit household needs, limited kitchen space and the aesthetic preferences of the users. In the low-lying areas, the average two-pot stove is popular, while in mountainous areas, the three-pot, square, T or L-shaped stoves with two tunnels and tin chimneys are preferred. The only fixed dimension is the firebox which should have an internal height of 17cm. The stoves are usually built on the floor using sun-dried mud slabs, soil and a clay fibre mix.



	NO COST	<input type="checkbox"/>
COST:	LOW COST	<input checked="" type="checkbox"/>
	HIGH COST	<input type="checkbox"/>
USE:	NO TRAINING NEEDED	<input checked="" type="checkbox"/>
	TRAINING NEEDED	<input type="checkbox"/>
	TRAINED OPERATOR NEEDED	<input type="checkbox"/>
CON- STRUCTION:	SELF-BUILT	<input type="checkbox"/>
	ARTISAN-BUILT	<input checked="" type="checkbox"/>
	FACTORY-BUILT	<input type="checkbox"/>
POWER SOURCE:	DIESEL/ELECTRICITY	<input type="checkbox"/>
	ANIMAL/MANUAL	<input checked="" type="checkbox"/>
	RENEWABLE	<input type="checkbox"/>
PURPOSE:	LABOUR- SAVING	<input checked="" type="checkbox"/>
	INCOME- GENERATING	<input checked="" type="checkbox"/>
	DOMESTIC	<input checked="" type="checkbox"/>
MAIN TENANCE:	SIMPLE TRAINING NEEDED	<input checked="" type="checkbox"/>
	SPECIALIST NEEDED	<input type="checkbox"/>

STRENGTHS

1. Stove is built with a chimney for smoke removal.
2. Consumes less firewood than traditional stoves.
3. Reduces overall time and labour required for cooking.
4. Has enabled numbers of women artisans to be trained and to generate income as stove builders.

WEAKNESSES

1. Chimneys and tunnels need to be cleaned regularly or they will clog up.

HOW IT'S BEEN USED

INDIA

The Nada Chula was named after the women of the Harijan Nada who participated in developing the technology. The stove was the result of the expressed needs for smoke removal made by some women. In order to spread knowledge about the stove in other parts of India, women who use the stove were trained to build them for others for a fee. Collaborating governmental and non-governmental agencies are trying to create a new type of village

artisan, the 'chula mistri', who would build the stoves for the village. The 'chula mistri' would be a woman, working either full- or part-time. Poor women could thereby earn supplementary incomes by providing this service.

Initially, the full cost of the stove was paid by the owner. However, in order to make it accessible to poorer families, subsidies are now being provided. The women are pleased with the stove. As well as smoke removal the benefits mentioned by women include, protection from excess heat (whilst at the same time providing a warmer living environment), reduced cooking time, fuel savings and an overall decrease in the labour required for cooking.

By the end of 1984 a few thousand stoves had already been built. Additionally, the stove is one of 15 models recommended for promotion under the Government of India's 'National Project for Demonstration of Improved Stoves'.

FOR MORE INFORMATION

WRITE: 1) MADHU SARIN, 48,
Sector 4, Chandigarh 160001
North India

READ: 1) BOILING POINT,
No. 7, Dec. 1984; No. 8,
Dec. 1985 (ITDG Stoves
Programme, Rugby, 1984/5).

MARKET GARDENING IN TOGO

The Editor,
People Magazine,
International Planned Parenthood Federation,
P.O.Box 759,
Inner Circle, Regent's Park,
London NW1 4LQ
ENGLAND

The article below is adapted from "Supporting Market Gardening" in People Vol.13 No.3 1986, published by the International Planned Parenthood Federation.

People is a development magazine, reporting world-wide on the effort to balance resources and population, to promote planned parenthood and to improve the human condition.

If this article is reproduced, please give credit to: People/IPPF

A group of women in the community of Gbodjomé, near Anèho in southern Togo (West Africa), has started a small co-operative project growing vegetables and staple foods.

The women grow onions and ghoma, a kind of spinach, as well as maize and cassava. Fresh cassava does not keep, but the women grate it to make flour. Then, they toast

the flour. Known as gari, the flour keeps well and is cooked to produce a starchy paste, eaten as a staple with meat, fish or sauces.

The food that the women grow is sold or eaten by their families. In their first year, the women had a turnover of 240,000 CFA francs (\$650). They spent some of this

money on seed and equipment. The rest was shared out among themselves, giving them a small measure of independence and extra money to buy food and clothing for their children.

The market gardening project is one of 20 similar projects supported throughout the country by the Togo Family Planning Association, (ATBEF). The ATBEF supplied the

group with seeds and tools and a medicine chest containing basic supplies such as aspirin, malaria tablets and disinfectant as well as condoms and foaming tablets.

Two days a week, the women of Gbodjomé work together in the fields. Afterwards, they gather for a talk on family health given by a ATBEF volunteer or literacy training in Ewè, the local language.

MORE VEGETABLES FROM YOUR GARDEN

**The Developing Countries Farm Radio Network,
c/o Massey Ferguson Limited,
595 Bay Street,
Toronto, Ontario M5G 2C3
CANADA**

The radio transcript below has been produced by **The Developing Countries Farm Radio Network**, a public service project of Massey-Ferguson Limited and the University of Guelph, supported by the Canadian International Development Agency. The transcript is from DCFRN's Package No.3 (item 9).

If the transcript is used, please give credit to: **The Developing Countries Farm Radio Network.**

If you would like further information on DCFRN or would like an audio tape cassette on this item (available in English, French or Spanish) send your request to DCFRN at the address above.

INTRODUCTION

In Africa and Latin America, women have traditionally maintained private plots for vegetables and sauce ingredients. Growing commercialisation of agriculture has reduced the amount of land available for vegetable growing and, indeed, has reduced the practice of home gardening. This trend has been to the detriment of women's and children's nutrition.

Women growing their own families' vegetables, or women's groups working on communal gardens may, therefore, benefit from learning about a way of producing a lot more food than they ever thought they could on a small piece of land.

The method is called **Double Digging**, and George Atkins, the Project Director of DCFRN, has been finding out about the system from Dr. C.V. Seshadri of Madras, India (address: Shri A.M.M. Murgappi Chettari Research Centre, Tharmani, Madras - 600 042, INDIA). Dr. Seshadri has been using this method of growing vegetables for several years - and has been producing much higher yields than normal. Here George Atkins describes the double digging method:

When you prepare your garden land by "double digging", you make it easier for your vegetable plants to get the food they need. They'll grow better and produce a lot more. Using this method, your plants will require less water but, to be really successful, you must be able to give them a light sprinkling of water every day.

Before you get started on the double digging, you will need a supply of good compost or well rotted animal manure. You will also need a good strong shovel. The best kind is a spade but you can use any kind of shovel.

(See diagram at the end of this article.)

If you decide to try out this method, better start with a small plot and you should start preparing it when the soil is moist and soft enough so that you can dig it easily down as deep as 25 or 30 centimetres (10 to 12 inches) below the top of the subsoil.

It's a good idea to start out by putting four stakes in the ground, one in each corner of a plot 1 1/2 metres (5 feet) wide and 3 metres (10 feet) long. Now your first job is to use your shovel and just push it down into the ground as deep as it will go. Because of this sharp edge on the top of the shovel, while you are doing this job, you may need to tie a short board or a flat stick onto the sole of your foot so that you can step down hard on the shovel to help push it deep into the ground. When you have it in the ground, move it back and forth to loosen up the top layer of soil a little. Don't dig out the soil, the idea is just to loosen it so it is no longer tightly packed together. While you are loosening up the topsoil all over the plot, remove all weeds and rubbish from the plot.

The next job is to evenly spread a good layer of compost or well rotted manure all over the top of the plot. If your soil is really good, put a layer of compost about 4 cm. (1 1/2 in.) thick on the plot; but if it's not such good soil (if it's sandy or just clay), the layer of compost or manure should be as much as 8 cm. (3 in.) thick.

Now that you've spread the compost, you're not going to step or walk on the soil in this plot any more, -- not at all. That's

because everything you do from now on will be aimed at making the soil in the bed loose and filled with compost.

But how will you be able to double dig the plot without stepping on it at all? -- Well, you must get something like a small door, made of a couple of boards (a piece of plywood would do) to put on top of the ground to stand on while you're digging. That way, the loose soil and compost won't be pressed down.

If you don't have any boards or plywood, you could make a light moveable platform out of sturdy light sticks (bamboo would be very good). Let's call this thing you're making a "door" because that's what it will look like. It should be 1 1/2 metres (5 feet) long and 60 centimetres (23 inches) wide, -- (like a small door). Now you have your door.

About two days after you've loosened the soil in the plot and spread the compost over it, you're ready to begin the next step; this is a very important step.

To start this, lay the "door" you've made on top of the compost across one end of the bed from one side to the other. Set it with one edge about 30 centimetres (12 inches) from the end of the bed. This leaves a strip of land uncovered. It's land that has been loosened and composted. The strip is across the end of the bed and it's 30 centimetres (12 inches) wide and 1 1/2 metres (5 feet) long. You're now ready to start the double digging.

So, standing on the door, you're going to dig out a trench in that area between the edge of the door and the end of the bed. The trench will be 30 centimetres (12 inches) wide, and the depth will depend on the thickness of the layer of top soil. Don't dig into the subsoil any more than 1 or 2 cm. (1/2 in.) at the most. The trench will then be 1 1/2 metres (5 feet) long stretching from one side of the bed to the other. If you have a wheelbarrow, you can put the loose soil and compost you dig out into it. When it's full, wheel it around to the other end of the bed. There, you make a long mound with it. Don't place the mound on the bed, but put it just beyond the bed, all across the end of the bed. If you don't have a wheelbarrow,

you can carry the soil, one shovelful at a time to the other end of the bed and make that long mound as you are digging out the trench.

Once the entire trench is dug, loosen the soil in the bottom of the trench to the depth that you can push your shovel into the subsoil. This, you can do by moving the shovel back and forth when it's pushed down as deep as it will go. If you have a fork, you can use it here too. You could actually lift this subsoil up a little and let it settle back about where it was, but now it will be much looser.

You now have a trench with a nicely loosened bottom.

Next, you move the door back 30 centimetres (1 foot) from the edge of the trench, again leaving a strip of land between the edge of the door and the trench just 30 centimetres (1 foot) wide. Now, standing on the door once again, you dig out a second trench in the area between the door and the first trench. This will be the same depth as the first one. This time, you will put out what you dig out of the second trench into the first trench, really filling it up. As you do this, the soil and compost will be loosely mixed together.

After this is done, the only trench open is the second trench and you're next job is to loosen up the soil in the bottom of it. As before, you loosen it to the full depth of your shovel below the bottom of the trench.

It's now time to move the door again to leave room to dig a third trench, this time filling the second trench. -- You then loosen the soil in the bottom of the third trench and move the door again so you can dig a fourth trench.

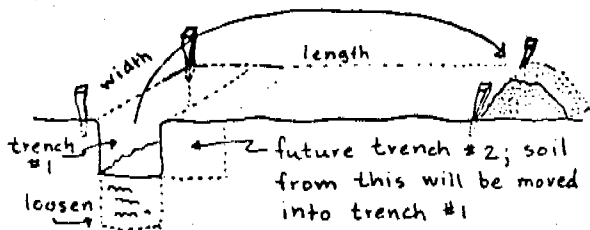
This digging and loosening goes right on then until you have come to the end of your plot. So you end up with one final trench. This last trench, of course, will be right beside the long mound of soil and compost you took out of trench No. 1, so you then use that soil to fill in the last trench.

You now have a bed that can produce four times more vegetables than you could have grown on that same plot before.

Whatever you do though, don't step on the plot, it will produce much more if it isn't packed down.

Serving "Agricultural, the Basic Industry", this is George Atkins.

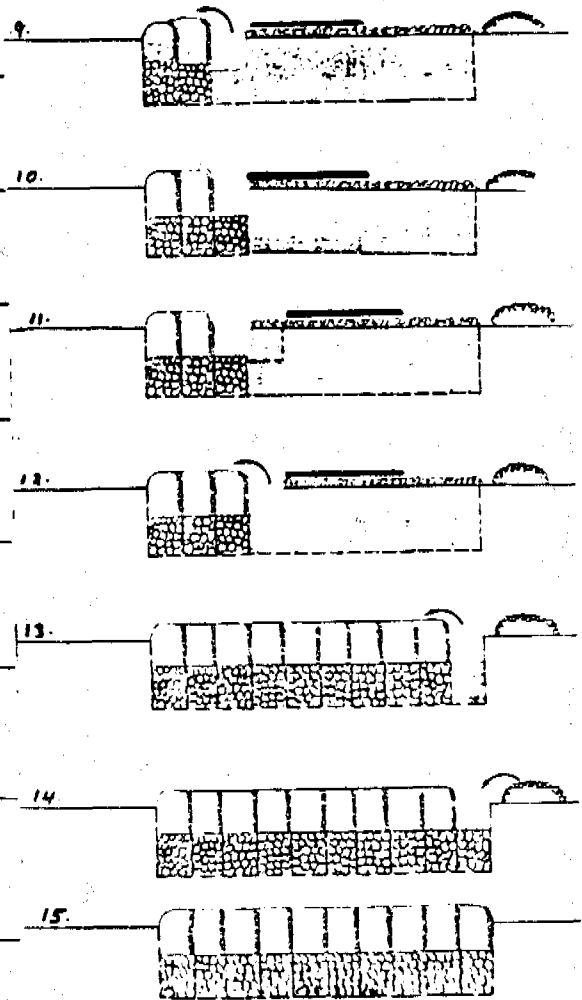
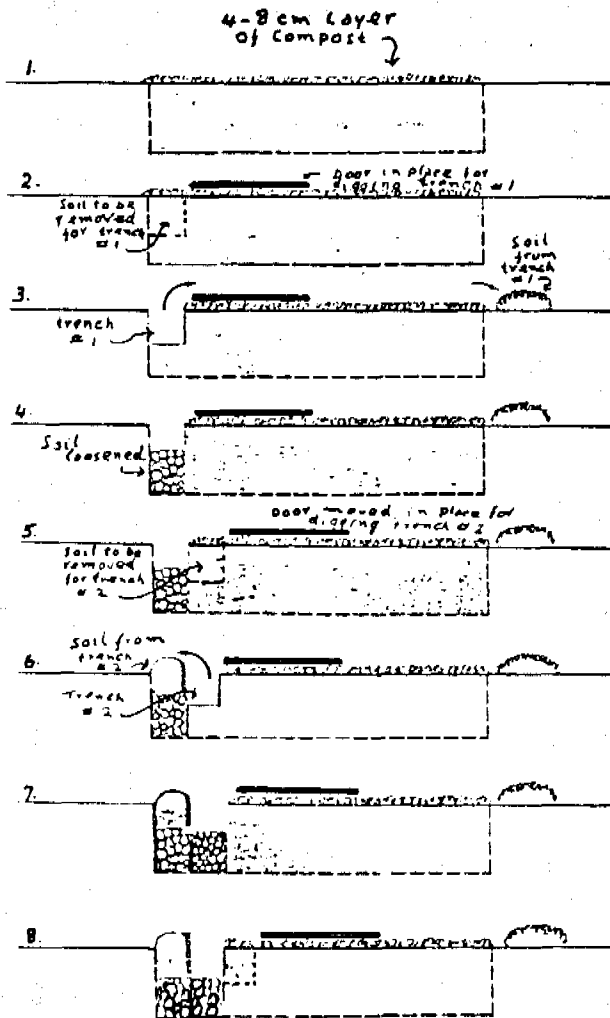
DOUBLE DIGGING (OR BIODYNAMIC/FRENCH INTENSIVE METHOD)



starting a Biodynamic/French Intensive bed... first trench is dug and soil set aside; trench subsoil is loosened. Bed width is 3-5 feet, length 3 feet minimum



finishing a bed... top soil has been moved over trench by trench; subsoil has been loosened without moving soil surface is raised in the process.



Ecology Action/Common Ground is a non-profit group carrying out research and education in matters related to the "double digging" concept of gardening (also known as the "Biodynamic/French Intensive Method"). The group has produced a book on the subject from which the illustrations shown above have been taken. The book, "How to Grow More Vegetables" by John Jeavons is available, price US\$5.95, from Ten Speed Press, P.O.Box 7123, Berkley, California 94707 U.S.A.

WorldWIDE an international membership organization founded in 1982, was established to strengthen the role of women in developing and implementing sound policies for managing the environment and natural resources.

Goals

- To educate the public and policymakers about the effects, specifically on women, of the destruction or contamination of natural resources or ecological systems; and to present women's perspectives on these issues.
- To increase the inclusion of women, and their environmental perceptions, in the design and implementation of development policies and programs.
- To support and expand the influence and capacities of women in organizations engaged in environmental/natural resource activities.
- To encourage women, individually and collectively, to include environmental/natural resource management goals in their personal and institutional agendas.

Membership: U.S.\$35

Newsletter: WorldWIDE News

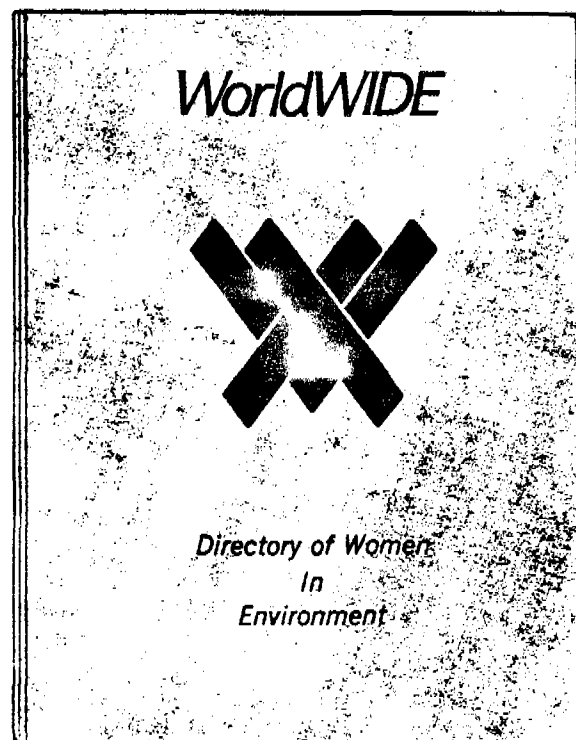
Address: P.O.Box 40885, Washington, DC 20016 U.S.A.

WorldWIDE Publishes All-Women List of Environmental Experts From Around The World

In October 1987, the first edition of WorldWIDE Directory of Women in Environment was published to facilitate women's environmental work and their participation in environmental policy-making. The Directory lists the names, addresses, education and training, languages, areas of expertise and projects of 231 women from 51 countries.

WorldWIDE expects the Directory to be an important resource that will help women share information about their work and provide mutual support, both through WorldWIDE and directly with each other.

The new Directory will also be a tool for agencies and organisations of all kinds looking for women to speak at conferences,



participate in meetings and consult over policy. While there is now more talk about the role of women in sustainable development and environmental protection, government agencies and non-governmental organisations have often found it difficult to identify women with experience and expertise in environmental issues.

The Directory is an effort to begin that process of identification by listing grassroot leaders, teachers, scientists, business women, political and government leaders, home-makers, lawyers, naturalists, communicators and others who are actively involved in protecting the natural environment and promoting sustainable development.

The *Directory* is organized geographically in a loose-leaf format (5½" X 8½"), divided into five regional areas of the world by maps showing the countries of each region. The *Directory* can be purchased with or without a WorldWIDE three ring binder.

Prices for WorldWIDE members are \$15 each for the *Directory* plus \$2.50 each for postage/handling and \$5 each for the three ring WorldWIDE binder plus \$2.50 each for postage/handling (\$25.00 for each complete *Directory* with binder including postage/handling).

Prices for nonmembers are \$25 each for the *Directory* plus \$2.50 each for postage/handling and \$7.50 for the three ring WorldWIDE binder plus \$2.50 each for postage/handling (\$37.50 for each complete *Directory* with binder, including postage/handling).

Women and organizations in Africa, Latin America and Asia who would like copies of the *Directory* but cannot purchase them are encouraged to request a free copy. Individuals and organizations in North America and Europe are encouraged to buy extra copies as gifts to other women.

This first edition of the WorldWIDE *Directory of Women in the Environment* was funded by a grant from the Wallace Genetic Foundation. Subsequent editions will be funded from the sale of the *Directory*.

RESOURCES: WOMEN, WORK AND HEALTH KIT

The British group, 'War on Want', has produced an information kit on the subject of 'Women, Work and Health'.

Materials in the kit note, among other things, that many women suffer from chronic ill health and become prone to infections and complications in pregnancy and child-birth as a result of overwork, fatigue and poor nutrition. Pregnancy-related deaths are cited as the major cause of low life expectancy for women in developing countries.

For further information, write to: 'Women, Work and Health' kit, War on Want, 1 Bridge Street, London SE1, ENGLAND

THE WONDERFUL WORLD OF WILLY WARTHOG by Leanore Bittner

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For more information on "The Wonderful World of Willy Warthog", write to: Leanore Bittner, 4545 55th Avenue, N.E., Seattle, WA 98105, U.S.A.

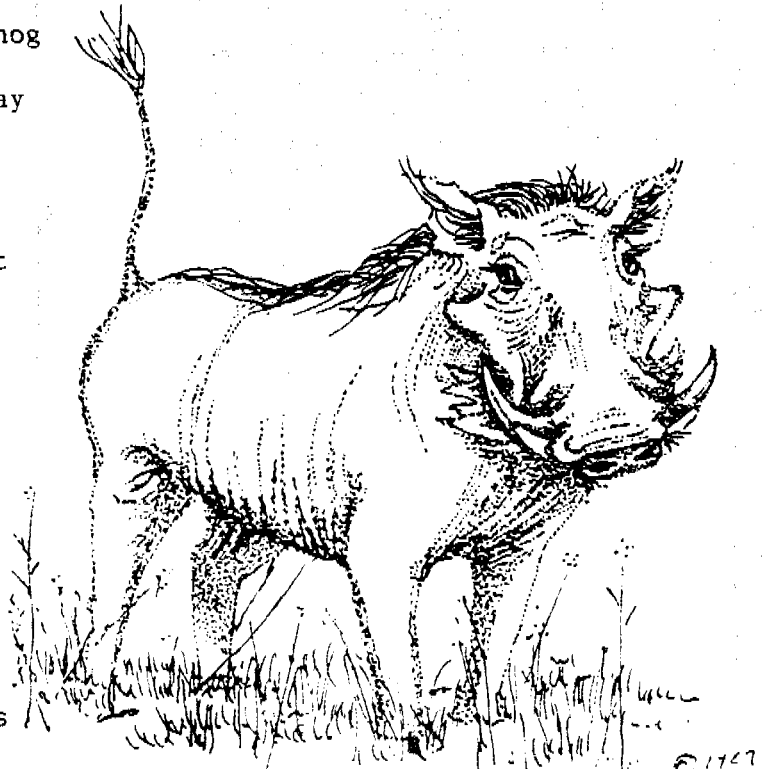
The Wonderful World of Willy Warthog may be presented as a complete story, or may be published as a serial in three parts. Part 1: Snared!, printed below, introduces Willy the Warthog, and describes what happened when his friend, Gerry Giraffe, got into difficulties. Part 2: Friends appears in OUTREACH issue 39. It is about Willy's friends and some of the dangers that they face. Part 3: The mysterious yellow monster, in OUTREACH issue 40, describes the changes that are taking place to Willy's home, and how these changes threaten the lives of Willy and his friends.

Part 1: SNARED!

My name is Wilson Weche Warthog III (the third). It's a pretty fancy name, I know, so for everyday use I prefer a shorter one. You can call me Willy, as my friends do. I like that. My sisters sometimes call me "Wily" or even "Wiseacre", but I just ignore that - you know what big sisters can be like.

I live in a wonderful place in the heart of Africa called Nairobi National Park. Here, in our 44 square miles of Kenya, the air always smells very nice from all kinds of plants, and it never gets too cold. In the beginning of the rainy season the blossoms of the acacia trees are as sweet as honey, and pretty little white lilies dot the grass. Later, the pink flowering Cape chestnut trees and the bright red flame lilies add their decoration to the bright green of the lacy, juicy new acacia leaves.

Every morning around six o'clock the sky changes its colours from star-sparkled, dark blue to pale blue and pink and gold. The beautiful birds are so happy to see the sun rise that they fill



Willy the Warthog

the early mist with their songs. Red and yellow barbets sing together, "Tweedle de tweedle". The black and yellow weaver birds chirp and chatter. The red-winged bush larks pour out their beautiful

melodies. At the same time, kori bustards sing, "Er-anna, er-anna", and the bubbling sounds of the coucals blend with the calls of the crowned cranes. Then, the soft, spicy breeze swirls the sounds together and they surround me like a cloud of music.

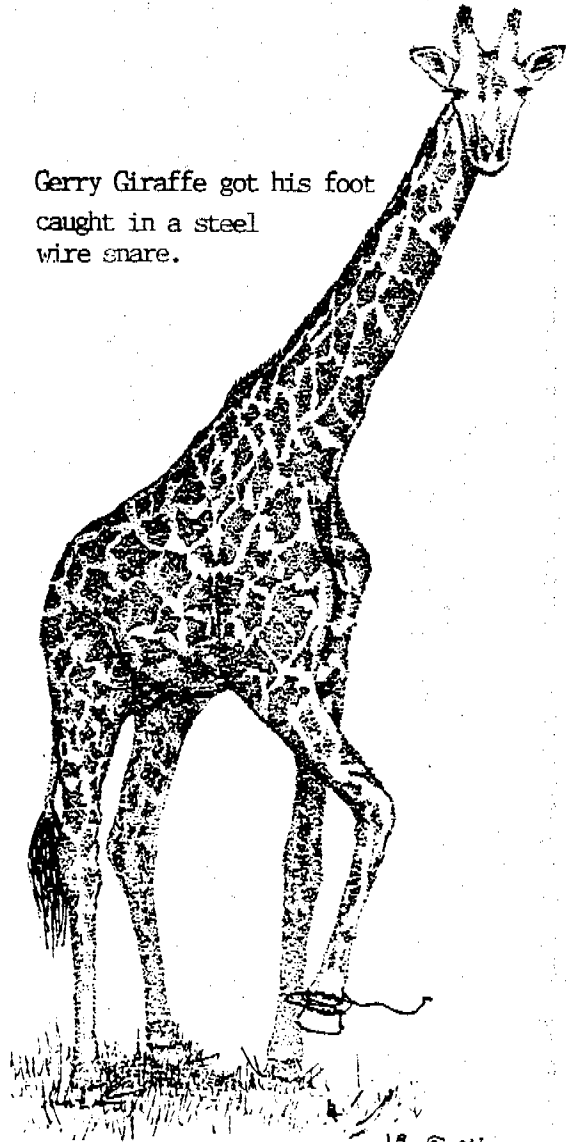
Our family home, by Lone Tree, is a nice big mound burrow that my dad got from an ant bear. It's a wonderful shelter at night, all soft and sweet-smelling, because my parents lined it well with fine grasses. It's a good shelter when the rain pours like a waterfall or when sometimes - sometimes - oh, it scares me to even think about it - well, occasionally a lion pride or leopard gets very hungry and - well, it's a good place to hide!

Actually, I'm the third Wilson Weche Warthog, because two of my older brothers had the name before I did. But the first brother decided to go to Amboseli at a time when there were so many of my relatives living here that it was hard to find enough food. As for the second brother, he disappeared during a very wet season. We heard rumours that he was - that one of the hungry lions got too close and - well, you'll see what I mean. Nothing like that will happen to me though, 'cause I'm very smart!

All around the hills and valleys and plains where we warthogs and our neighbours live there is something called a "city". I've heard that the creatures who live there, the "humans", can be very dangerous - even more dangerous than lions or leopards! I've seen them travel along the roads here in big machines they call "Land Rovers".

They seem quite friendly, but my mum and dad still warn me about them and run away when they see them. Maybe my parents don't know humans well enough and are just frightened by the old stories.

Gerry Giraffe got his foot caught in a steel wire snare.



Or maybe there are nice humans as well as dangerous ones. Because I've heard many humans talk about me and they say I'm "so cute"!

And sometimes they've helped me and my friends. Take the time I was happily munching new green shoots in the early rainy season near Sosian Valley. Out of the corner of my eye I saw the familiar big shape of my friend, Gerald Giraffe. But something was very wrong. Poor Gerry wasn't moving in his usual long, graceful strides,

or nibbling the luscious new acacia leaves. No, he was limping! Then, he came closer and I saw a horrible sight. His foot was almost cut off! He was in terrible pain, and barely able to tell me that he got his foot caught in a steel wire snare. He was hunting for the juiciest acacia leaves in a place where humans live near our Park. He struggled to free his foot, but the wire cut deeper and deeper as he struggled. Poor Gerry! What could I do?

I knew that humans called "Rangers" sometimes helped animals in trouble, but how could I call them? Well, I decided to stand right next to the road and wait for some humans to come near. Soon a Land Rover came slowly along the road. This was my chance! I stood there looking my cutest, with my tail straight up, and even did a few little dance steps. Of course, the Rover stopped - who wouldn't? As all the humans

pointed their cameras at me, and were about to click their little contraptions, I moved off in the direction of Gerry, who was waiting with as much patience as possible in his condition.

Sure enough! The humans saw Gerry, who limped slowly towards them. I saw them point their fingers at his foot. They seemed as shocked as I was. I hoped, as they drove off fast, that they would send the Ranger to help. They must have done just that, for a little while later a Ranger drove up and jumped out with his first aid kit!

I had to head for home because it was getting dark, so I don't know how things turned out for Gerry. That was a few weeks ago, and I haven't been back that way. But I hope he's okay, because Gerry's so friendly and nice to everyone - he wouldn't hurt a fly.

RESOURCES

A NEW FILM ON WOMEN AND WATER SUPPLY

The International Development Research Centre (IDRC) in Canada has just produced a 27-minute film entitled "A Handle on Health", emphasising the important role women in developing countries can play in ensuring a safe, uninterrupted water supply.

Every day women and children in the Third World spend countless hours and wasted energy fetching water to and from their homes.

The film shows how simple and durable handpumps can be designed, tested and manufactured with low-cost materials. Using experience from projects in the Philippines, Sri Lanka and Thailand, it demonstrates that active involvement of the whole community in water supply and sanitation can help ease the burden of many people.

Available in English and French and in 16mm film and video cassette, the film can be purchased from IDRC's Communication Division, P.O.Box 8500, Ottawa, Ontario, K1G 3H9 CANADA

source: UNICEF (1987)

MISSING PARTS

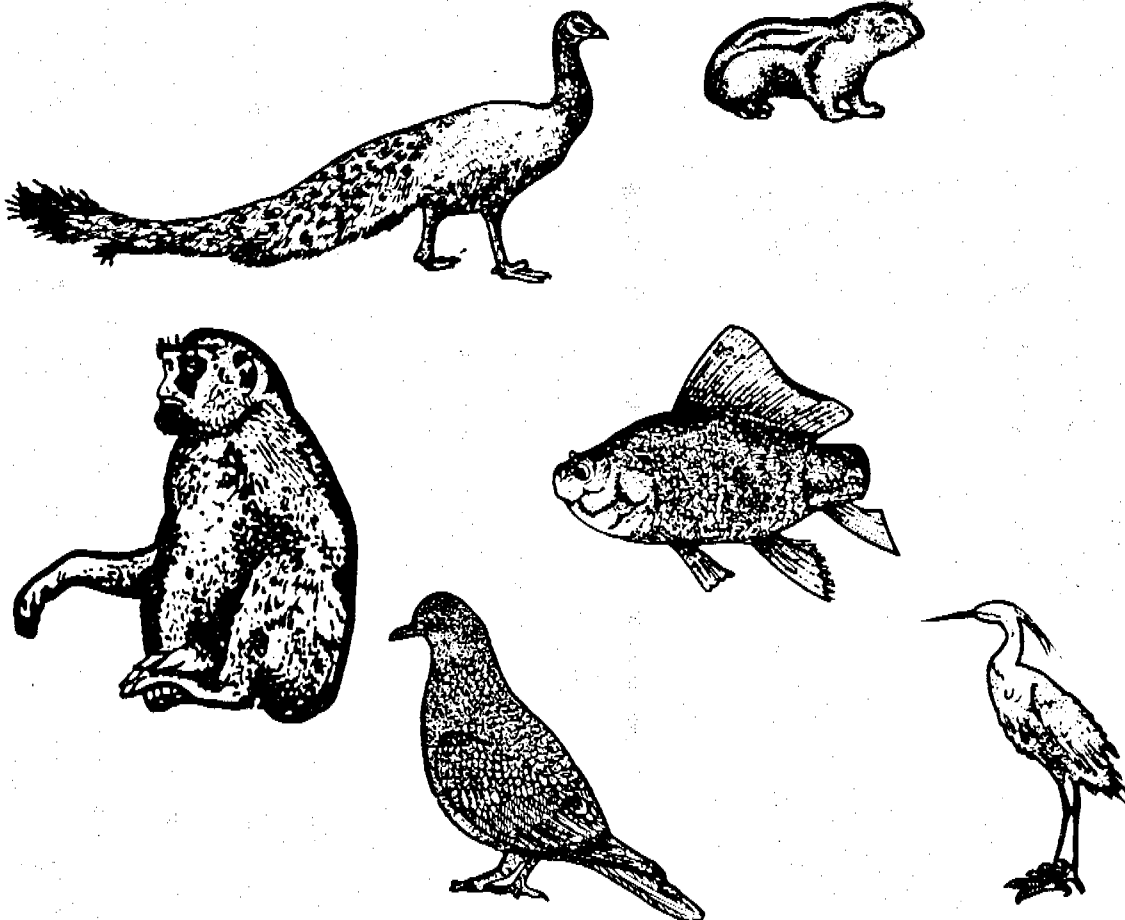
National Museum of Natural History, Vikram A. Sarabhai Community Science
 Department of Environment, Centre,
 Barakhamba Road, Ahmedabad 380 009
 New Delhi 110 001 INDIA
 INDIA

The activity below is taken from: "Animal Workbook for Children"
 developed by Vikram A. Sarabhai Community Science Centre for the
 National Museum of Natural History (2nd revised edition - April 1986)

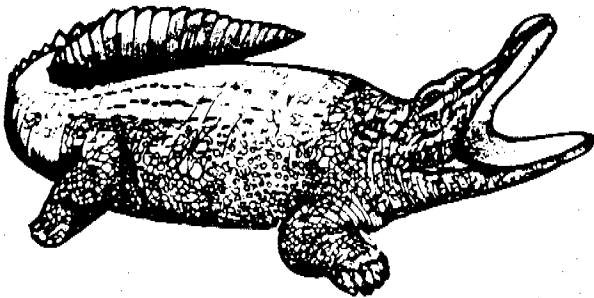
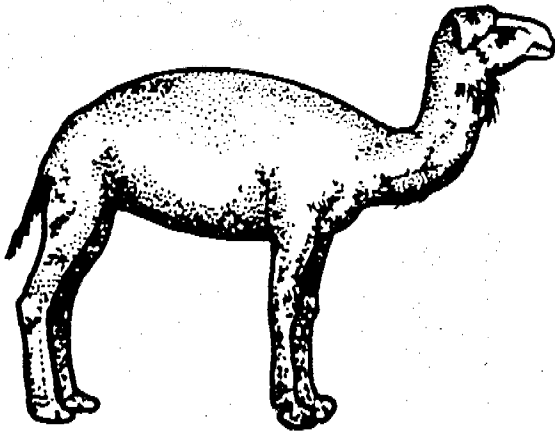
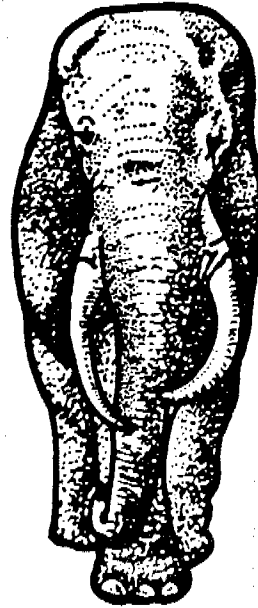
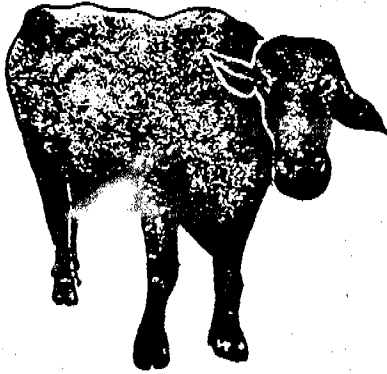
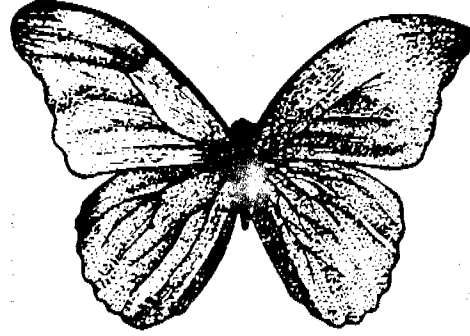
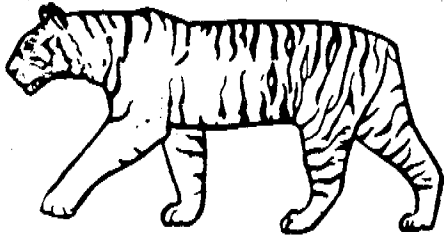
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The workbook is intended for children between the ages of 5 and 8 years.
 It provides them with activities that are fun, creative and informative.
 The workbook forms part of a package, "Nature Study Projects for
 Juniors" produced by the National Museum of Natural History.

What is missing in each of these drawings?



continued/...



Answers:

Monkey - tail; Fish - tall fin; Crocodile -
teeth; Heron - eye; Tiger - tail; Lizard - hind
legs; Butterfly - antennae; Elephant - ears;
Buffalo - horns; Camel - hump; Pigeon -
eye; Peacock - crest; Squirrel - tail.

TEACHERS' / PARENTS' PAGE

"Mr. and Mrs. Towers and the Children"

Regional Population Education Programme,
UNESCO-UNFPA,
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The activity below is taken from Unit 2 ("Together Men and Women Will Make a More Just, Human and Constructive World.") in Population Education Teaching Guide: Third Grade of Basic Education by Jairo Palacio, María C. Arango, Rafael Mazín, Socorro Espinales, Isobel Quintero, José Pinto, María V. Castro and Socorro N. de Márquez. The guide was published in 1985 by UNESCO Regional Population Education Programme, with the financial support of the United Nations Fund for Population Activities (UNFPA).

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Other activities from Unit 2, "The Pink Gnome..." (Let's Not Waste Any More Time) and "Who?" (It's Good to Know That We All Can!), appear in OUTREACH issues No. 39 and 40 respectively.

UNIT 2 "Together Men and Women Will Make a More Just, Human and Constructive World."

Basic Concepts: * The idea of belonging to one sex or another should not limit our possibilities of participating in the family and the society. * The idea that "masculinity" and "femininity" are two opposite and exclusive attitudes limits the possibilities of development and impoverishes human relations in general. * As men and women participate on a more equal basis the world will be more just, human and constructive.

Contents: * Role of culture in determining patterns of masculinity and femininity. * Social and cultural limitations of male or female participation and expression. * Need for well-rounded development of men and women to allow displaying their intellectual, emotional and social capabilities.

Activities: • "Mr. and Mrs. Towers and the Children..." (Let's Work Together)
• "The Pink Gnome..." (Let's Not Waste Any More Time.)
• "Who?" ... (It's Good to Know That We All Can!)

ACTIVITY No. 1

"Mr. and Mrs. Towers and the Children"

ACTIVITY ORIENTED TOWARD SHOWING THE IMPORTANCE OF SOLIDARITY BETWEEN PEOPLE OF BOTH SEXES.

HOW?

- * The teacher divides the children into boys and girls and forms two groups. Each group moves to one side of the room.
- * The group of boys is given paper, cardboard tubes, cardboard circles, empty boxes, paper tubes, ice cream sticks and empty cardboard containers to build a tower, without the little tools that the girls will be given. * The group of girls is given scissors, glue or any kind of sticking paste, a hammer and staples to build another tower, without the materials given to the boys. * The boys can move about freely, but they can't enter the "girls' territory." The girls must remain quietly seated.
- * After 5 or 10 minutes, the teacher asks: "Were you able to build your towers?" If they were, he then asks: "Can they stand up by themselves?" "Can they withstand tremors, hurricanes and earthquakes?" The towers are then tested.
- * The teacher breaks up the groups and forms new groups including boys and girls. Now everyone can use any of the materials, move around and talk.
- * A while later (10 or 15 minutes) the teacher checks to see if they were able to build the towers and asks: "Can they stand up by themselves?" "Are they resistant?" "Are they pretty?" "How did you do it?"
- * They jointly analyze the following aspects: sometimes limitations hinder our work... and many times those limitations cannot be justified.... But, people accept them as something which is "natural." This is the case with the division between the so exclusive, rigid and limited "male and female worlds".
The truth of the matter is that when these absurd and cumbersome barriers are broken, we can create strong, resistant and attractive things.

FOR WHAT?

SO THAT BOYS AND GIRLS WILL BE ABLE TO...

- * recognize that the existing lack of flexibility in patterns of behaviour constitutes a factor which weakens relationships between men and women.
- * develop attitudes that support a relationship between the sexes which is based on equality.
- * question cultural standards that establish a contradictory relationship between the sexes.
- * recognize themselves as people who can think, feel and act independently of their sex. * learn to avoid limiting their possibilities of participating or expressing themselves because they belong to one sex or another.
- * develop feelings of self-confidence and self-reliance.

**WITH
WHAT?**

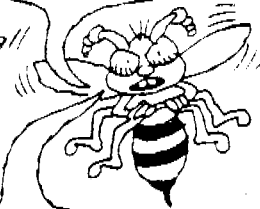
- Creativity, participation, true stories, criticism, humour and good sense.
- Scissors, string, staples, a hammer, boxes, tubes, glue sticks and leftover material.

BOY? GIRL? MAN? WOMAN?

Boys are generally taught not to express their feelings, to be aggressive and domineering; they grow accustomed to the idea early in life that they have authority and the responsibility to make all important decisions. Girls learn to show little initiative and to be content with being protected by the men of the household.

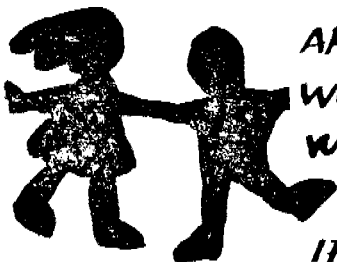
These ideas of males and females belonging to opposite worlds have caused different roles to be assigned to men and women. It is said that the role of boys is to prepare themselves to support a family, and that the role of girls is to learn everything about managing a household and raising children. However, these functions cannot be exclusively assigned to one sex or the other: raising and educating children is the responsibility of the father and the mother, and the responsibility of providing for the family can be shared by both.

THAT'S NOT
WHAT PARTICIPATING
MEANS!



SHARING IS
WHAT'S REALLY
IMPORTANT!

**IF WE UNDERSTAND THAT MEN AND WOMEN
ARE EQUAL, THAT MAN IS NOT SUPERIOR AND
WOMAN IS NOT INFERIOR, HUMAN RELATIONS
WILL BE MORE CREATIVE AND CONSTRUCTIVE.**



**IF HALF OF HUMANITY OPPOSES THE OTHER
HALF, HOW CAN ONE CONCEIVE OF THERE BEING
EQUALITY, JUSTICE AND PEACE IN THE WORLD?**