



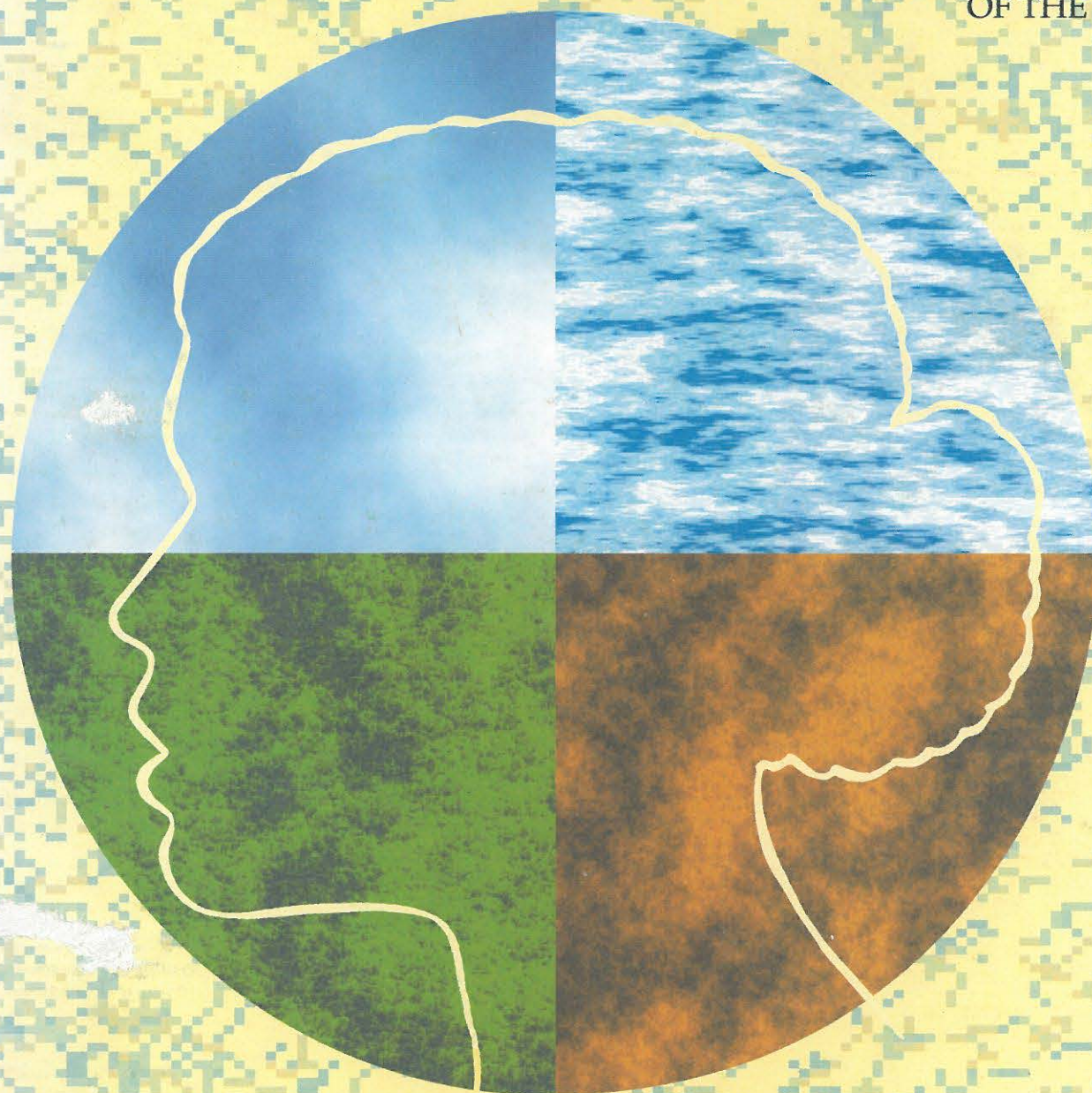
UN INSTRAW



UNITED NATIONS



INTERNATIONAL
TRAINING CENTRE
OF THE ILO



TRAINING PACKAGE

WOMEN

**ENVIRONMENTAL MANAGEMENT
AND SUSTAINABLE DEVELOPMENT**

1995 T
ENV-6LO
3/5

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Adelina Guastavi

TRAINER'S GUIDE

WOMEN ENVIRONMENTAL MANAGEMENT AND SUSTAINABLE DEVELOPMENT

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First published 1995

INSTRAW/SER. B/48/1995

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Designer / Enzo Fortarezza

Printed in Italy / ILO Turin Centre

*General Trainer's Guide
for the Training Package
"Women, Environmental Management
and Sustainable Development"*

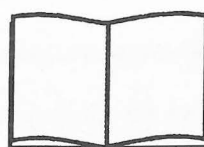


Table of Contents

General Trainer's Guide

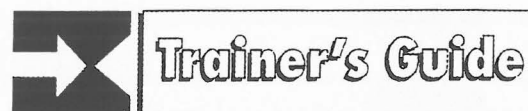
Preface

- 1. Major Aims of the Training Package**
- 2. Target Groups**
- 3. General Objectives of the Training Package**
- 4. Structure of the Modular Training Package**
- 5. How to Use this Modular Training Package**
- 6. Training methods**
 - A. Participative Presentations
 - B. Individual/Group work
 - C. Case Studies
- 7. Evaluation**
- 8. Guidelines for the Adaptation of Training Package**

Annexes

1. Check-list for effective group work
2. Group work implementation
3. Timetable for One Week seminar
4. Pedagogical Scheme of Seminar
5. Required Hardware
6. Evaluation Questionnaires
7. Validation Questionnaire





Preface

The training package on “**Women, Environmental Management and Sustainable Development**” was designed as a part of INSTRAW’s programme on Women and Sustainable Development and was prepared in response as a follow-up to the United Nations Conference on Environment and Development (UNCED), Rio de Janeiro, Brazil, June 1992, particularly to Agenda 21 and the chapters addressing women; Plan of Action from the World Summit on Social Development, Copenhagen, Denmark, 6-12 March 1995; and Platform for Action from the Fourth World Conference on Women, Beijing, People’s Republic of China, 4-15 September 1995.

This training package should be seen as a tool to address the global problems of women, environmental management and sustainable development. The subject-matter is complex, multi-disciplinary and integrated into every aspect of society. The purpose of the training package is not to tackle each issue but rather to present overall existing problems, and possible solutions and policies on various aspects of the subject-matter.

Further adaptations and modifications for specific country situations should be explored by trainers, university professors and experts in this area.

The training package was prepared on the basis of various reports and documents developed by the United Nations, Universities, research institutes, non-governmental and other institutions by **Ms. Borjana SCHIEBER**, Social Affairs Officer, UN/INSTRAW and **Ms. Martha DUEÑAS-LOZA**, Acting Director, UN/INSTRAW in association with **Ms. Mary LIAO**, **Ms. Raquel MAYSONET** and **Ms. Caroline TSE**.

The training methodology and the audio-visual support material was prepared by **Ms. Adelina GUASTAVI**, Chief, Research and Training Material Development Section, with the support of the Media Production Centre of the International Training Centre of the ILO.





1. Major Aims of the Training Package

The major aims of the training package are:

- **to contribute to an integrated approach in the organization and management of environmental policies and programmes through the integration of women's needs as well as their participation,**
- **to increase the awareness and sensitize planners, officials, trainers and experts in charge of environmental policies, programmes and projects as well as non-governmental and women's organizations, of the need to involve women in planning, management, implementation and evaluation of environmental programmes and projects.**

2. Target Groups

The training package has been developed for the following target groups:

1. Senior officials of Ministries of Environment, Natural Resources, Planning, Women's Affairs, Education, Health, etc.;
2. Development planners and provincial or local authorities in charge of environmental programmes and projects;
3. Engineers in charge of designing technologies for environmental projects;
4. University professors, trainers and managers of national training institutes and educational institutions training staff on various aspects of women, environmental management and sustainable development.
5. Representatives of non-governmental and women's organizations involved in environmental projects.



3. General Objectives of the Training Package

At the end of the training process participants will be able to:

- | | |
|-----------------------------|--|
| Introductory Module: | acquire greater knowledge on the mandates and activities of the UN system in the implementation of Agenda 21, particularly chapters relevant to women. |
| Module 1: | set the necessary macroeconomic framework to establish and/or to review national development policies that encompass women and environmental health. |
| Module 2: | integrate women's needs in the design and implementation of national development/environment sectors policies. |
| Module 3: | recommend policies, programmes and projects to involve women in environmental management and sustainable development in accordance with relevant chapters of Agenda 21. |
| Module 4: | identify gender-sensitive environmental indicators for policy-decisions; implement institutional guidelines for action at the programme and project levels, and formulate recommendations for the implementation of capacity building programme at the national level. |

A description of the specific training objectives will be found in the trainer's guide foreseen for each module.



4. The Structure of the Modular Training Package

The overall training package is made of the following elements:

- **Trainer's guide on "Women, Environmental Management and Sustainable Development"**

Introductory Module:

Implementation of Agenda 21: INSTRAW and United Nations System activities

Module One:

Women and Environmental Health

Module Two:

Women as Agents of Change in the Development Sector

Module Three:

Women as Managers of the Environment

Module Four:

Women, Environmental Indicators and Capacity Building Programmes



Each module is supported by a Trainers' Guide containing the following Training tools:

- General and Specific Objectives;
- Suggested Training Strategy;
- Optional Training Activities with Estimated Time;
- Transparencies;
- Video Programmes.

- **Training Manual on "Women, Environmental Management and Sustainable Development"**

Introduction:

Implementation of Agenda 21: INSTRAW and United Nations System activities

Part One:

Women and Environmental Health

Part Two:

Women as Agents of Change in the Development Sector

Part Three:

Women as Managers of the Environment

Part Four:

Women, Environmental Indicators and Capacity Building Programmes



Additional reading:

- ECOSOC-E/CN.6/1995/5 Add.6 Excerpts from Agenda 21
- Earth Summit. Convention on Climate Change, UN Conference on Environment and Development, Brazil, 1992
- Earth Summit. Convention on Desertification, UN Conference on Environment and Development, Brazil, 1992
- Earth Summit. Action 1994, UN Commission on Sustainable Development
- INSTRAW News N. 19. Women and Environment, 1993.



5. How to Use Modular Training Package

The modular training package has been designed to support training activities aimed at contributing to an integrated approach in the organization and management of environmental policies and programmes through the integration of women's needs as well as their participation in planning, management, implementation and evaluation of environmental programmes and projects.

The modular structure has been chosen for its flexibility and wide range of possible uses. A key feature of these modules is that each one can be used independently. The trainer should be able to use the training package and adapt it to his/her own training/information strategies. The trainer can therefore use parts of the training package or of the modules (and the relevant support material) for different types of training activities such as conferences, seminars, workshops and courses depending on the target to be trained, the objectives to be reached and the duration of the training/information activity.

Each module contains all the training tools that the trainer will need to organize, conduct and evaluate training activities.

Training tools designed to support the trainer in delivering the subject-matter are the following:

- **Training Manual on Women, Environmental Management and Sustainable Development** contains:
 - Substantive information to be presented by the trainer and studied by the participants. It is recommended that the manual be distributed to participants at the beginning of the session. The manual is in a separate binder.
- **Trainer's Guide** (light yellow paper) contains:
 - Training Objectives;
 - A training strategy highlighting the content key-points; the training method to be used and the activities to be undertaken by both the trainer and the trainees (exercises); the A.V. support material (video programmes and transparencies) to be used throughout the presentations.



➞ **Training Activities (light green paper):**

- Each training exercise contains objectives of the training activities, instructions, suggested format for the presentation of the individual and group work. In order to maintain flexibility, different optional exercises have been designed to enable the trainer to select/adapt the most appropriate ones according to the needs/expectations of the target group and the time available.

➞ **Video Programmes:**

- An outline of a series of selected video programmes produced by different UN agencies and NGOs is included, as well as a list of key issues for discussions to support the trainer for the presentation. The use of video programmes is also optional. They were selected to usefully complement the specific objectives of the training package on "Women, Environmental Management and Sustainable Development".

The following video programmes have been selected:

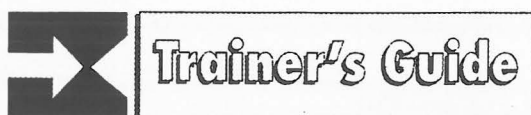
- "The Earth Summit" (UN, 1994, 28 min, English);
- "Handle with Care" (UN, 1993, 26 min, English);
- "Food and Environment" (IFAD, 1989, 5 min, English);
- "Inherit the Earth" (AIDOS, 1992, 20 min, English);
- "Gender Analysis for Forestry Development Planning" (FAO, 1994, 16 min, English).

➞ **Transparencies:**

- A list of transparencies for the overhead-projector are included in each module. In case the overhead projector is not available, they can be reproduced and distributed to the participants to focus on key points.

➞ **Additional reading:**

- Additional reading material is included in a separate binder for those users who wish to study in greater depth specific subjects related to women, environmental management and sustainable development.



The training strategy, together with the exercises and audio-visual support material, is intended to be the starting point for training purposes and to provide a participatory approach rather than a blueprint which must be rigidly applied.

The trainers/facilitator implementing the training activities should:

- anticipate trainees' needs, motivations and expectations;
- study the trainers' guide and modular structure in order to learn how to use the material;
- study the content of the training manual on "Women, Environmental Management and Sustainable Development" and decide which part to use for the planned training session;
- present in a clear and motivating way in order to encourage the participation of the group;
- use correctly the methods and the audio-visual material included in the training package (Please refer to Annex 5 for the required hardware);
- act as a facilitator during group work activities;
- monitor the overall training process to identify strong and weak points in the training package, in order to undertake appropriate revision/adaptation to the local needs;
- evaluate the results of the learning process during the plenary presentations and give appropriate feed-back.

It is envisaged that numerous working sessions are needed if the trainers use the entire training package. The training course can be:

- an intensive course of one week duration for the entire package (Time-table is included in Annex 3 and the pedagogical scheme of the Seminar is in Annex 4).
- a course of a longer duration, during which an in-depth analysis of the overall training package will be undertaken. In this case the trainer will have to build on additional training activities;
- concentrate on only one or more specific modules according to the identified training needs/expectations and objectives to be reached. The duration will vary accordingly.

Each module or part of them may also be inserted into other training programmes.



6. Training Methods

The training methods foreseen are:

- A. Participative Presentations;
- B. Individual/Group Work;
- C. Case Studies.

A. Participative Presentations

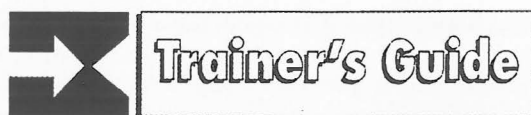
The participative presentations require a thorough preparation on the part of the trainer. The trainer should apply a participatory approach, i.e., the skills to motivate and involve the group in an active way (dialogues rather than monologues; examples, ice-breaking techniques, etc.).

B. Individual/Group Work

In planning training activities/exercises, trainer should select the most appropriate ones, if necessary adapt them to the local situation and/or add new ones. During the discussions, the trainer's role is to ensure that everyone participates.

At the end of the group work and during the presentation in plenary, trainer is expected to synthesize different key points and draw some general conclusions.

The group work method is selected to motivate and actively involve participants. A checklist for effective group-work and some guidelines on group work implementation are in Annexes 1 and 2. The trainer should present these forms at the beginning of the seminar while explaining the overall methodology.



C. Case Studies

A case study is a problem-solving exercise in which participants are given a written description of a particular situation. The trainees are asked to prepare answers to problems identified in the case study.

Upon introduction and presentation by the trainer, case studies are discussed in order to enable trainees to practice newly acquired skills.

Case studies are generally used as group discussion exercises. They can also be done individually. The outcome of the case studies should be discussed by the trainer with the participants.

8. Evaluation

The trainers should regularly review the training content and process with the participants to ensure the appropriateness of training seminar. A brief verbal evaluation should take place every day or at the end of each module. A final seminar evaluation form is provided in Annex 6 of this guide.

In Annex 7, trainer will also find a questionnaire for the validation of the training package. According to the time available, the trainer can use it either at the end of the seminar to validate the entire training package, or at the end of each module for a more systematic evaluation. This questionnaire should be used only for training of trainers course or expert meetings.

The results of formal and informal evaluations should be analyzed carefully in order to validate various aspects of the training package and revise them accordingly.

The trainers and organizers of the training activities will thus have necessary instruments to take decisions on improvements of the training content and training process.



9. Guidelines for the Adaptation of the Training Package

If planning to adapt the training material to the national and local levels, it is essential to adapt the material for users' needs and ensure its suitability in different local contexts.

Trainer and users can either use the package as is or adapt it for other target groups. This is specially applicable for the case-studies since the ones included are simply an indication of a type of situation related to the analysis of a given problem. **Trainers are highly advised to develop case-studies relevant to the particular local training context which could be included in the training package.**

Where organizations and groups in a country wish to adopt the training package into a national training package the following steps are proposed:

Planning of the Organization

- **Set up a Steering Committee**

The role of the committee would be to analyze the level of knowledge on women, environmental management and sustainable development among policy-makers, development planners, university professors, as well the degree of public awareness.

- **Define the Target Group for the Training**

Who do you want to reach with the training activity; what are the specific characteristics of the target groups you want to train? The characteristics of any target group are specific and may include the age, gender, social and economic class, educational background, knowledge, skills, experience and motivation. This will be the starting point for adaptation.

- **Set the Objectives for the Training.** Training objectives are the key to the training process determining its outcomes and directing its content and procedures. More specifically objectives provide:

- a precise description of the knowledge and skills that are to be reached by the trainers, a basis for evaluation;
- a guide to determine the most suitable methods and media; and
- an useful reference in organizing training.



Production of the First Draft

- In order to adapt the content of the training material to the national/local situation, it would entail:
 - compilation and research of existing local material;
 - reviewing the material;
 - selecting which parts to adapt and which parts of the original package could be used; and
 - producing a new, adapted version of the training package.

Take a Decision on the Extent of the Adaptation

This can vary greatly in the complexity and resources required. When adapting the training modules, decisions have to be taken on deletions, additions, or both. The costs involved should be seriously considered. A cost-effective way of adapting training material is to prepare additional, supplementary material. For example, when existing materials are satisfactory for most of the target groups, but too advanced for some, the development of supplementary targeted materials might be the best solution. The scale of the modifications required should also be taken into account in view of the calculation of the resources needed. As a general rule, the more sophisticated the media the more expensive the modifications will be. In other words: modifications of video programmes and audio-visual materials in general are more costly than modification of printed materials.

Validation or Testing of Training Material

- The process of analyzing the effectiveness of training material is called *validation*. Proof of quality can only be ascertained through a measurement of results in comparison with training objectives. The first step is to review the material with experts in the subject matter in order to check:
 - the accuracy of the technical content;
 - the composition, the sequence and relevance of the text, illustrations and the user-friendliness of the material.

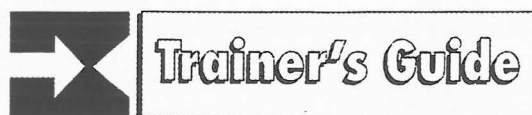


Trainer's Guide

- Questions to be asked when reviewing the material include:
 - Is the content accurate and up to date?
 - Is the content presented in a logical order?
 - Is the composition effective?
 - Is the language clear?
 - Are there unnecessary repetitions and/or ambiguity?
 - Is there an opportunity for practical applications?
 - What are the strong and the weak points?
 - Is the material easy to use?
 - What suggestions can be made for improving the material?
- Training materials should always be produced in a "draft" form and tested with small groups of people who are representatives of the target group for which it is being produced. Pre-testing and revising of the materials is, however, often neglected. This is partly because it is assumed that it will take a long time - which is not necessarily the case, and partly because producers might be resistant to possible criticism.

Revision of the Material

- Following the pre-testing of the material, it should be revised, finalized and disseminated.



ANNEXES



Annex 1

Check-list for Effective Group Work

1. Preparation

- Explain group work assignment to the group;
- Divide into smaller groups;
- Select spokesperson for each group;
- Timing;
- Clarify objectives;
- Outputs agreed by the group;
- Brainstorm to gather ideas/opinions/information.

2. Process

- Group members discuss among themselves;
- Substantive inputs by the group;
- Group decides what inputs should be used;
- Group agrees on what will be presented to the plenary.

3. Conclusion

- Prepare outputs;
- Outputs reviewed by the group;
- Outputs, as indicated in the assignment sheet, are presented in the plenary.



Annex 2

Group Work Implementation

1. Officer in charge and/or lecturer present key issues for discussion.
2. Officer in charge and/or lecturer organise 4 working groups for each module. Each working group will select a rapporteur for each module.

Officer in charge will provide groups with key issues of each module in order to stimulate group activity and to encourage each group to prepare action-oriented recommendations on key issues.

3. Each group will meet separately and, after brainstorming session and discussion, will formulate recommendations and conclusions related to the key issues presented during lectures.
4. Each group's rapporteur will prepare in appropriate form the group's conclusions and recommendations (using flip charts, transparencies), consolidating the group's report at the end of the day.
5. Each report will be discussed in plenary sessions and revised, if required (The final version will be presented at the end of the seminar).

The final report will be an action-oriented report, providing a basis for the follow-up on "how-to" enhance women's involvement and participation more effectively at all levels of planning and implementation of sustainable environmental programmes and projects.



Annex 3

Timetable for One Week Seminar

COURSE: WOMEN, ENVIRONMENTAL MANAGEMENT AND
SUSTAINABLE DEVELOPMENT

COURSE LANGUAGE: ENGLISH

WEEK No: One week

TIME	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
8:30	Administrative Arrangements	Plenary Session - Presentation of group work	Plenary Session - Presentation of group work	Plenary Session - Presentation of group work	Study visit
10:00	Opening of the Seminar	Women as Agents of Change in the Development Sectors Presentation	Women as Managers of the Environment Presentation	Women, Environmental Indicators and Capacity Building Programmes	
10:30	Presentation of lecturers and Participants	Presentation	Presentation	Presentation	Study visit
12:00	Implementation of Agenda 21: INSTRAW and United Nations System Activities (Presentation)				
13:30	Discussion	Group Work	Group Work	Group Work	Evaluation of the Seminar
15:00	Women and Environmental Health - Presentation				Final Report
15:30	Group Work	Group Work	Group Work	Group Work	Closing the Seminar
17:00				Plenary session - Presentation of group work	



Annex 4

Pedagogical Scheme of Seminar

LECTURE	THEORY 1 h 30 min - 3 h	EXPERT
SUMMING UP AND ANALYSIS OF KEY ISSUES		
ORGANISATION OF WORKING GROUPS / ELECTION OF RAPPORTEUR	3 or 4 working groups 15 min	OFFICER IN CHARGE AND EXPERTS
PRESENTATION OF KEY ISSUES FOR GROUP WORK	Different for each module	
(Start with brainstorming session) GROUP WORK	1 h 30 min - 3 h	
PRESENTATION OF THE RESULTS OF WORKING GROUPS	Presented on flipcharts Copy to be made on white paper for reproduction	RAPPORTEURS ALL GROUP PARTICIPANTS
FINAL DISCUSSION (PLENARY SESSION)	1 h 30 min	



Hardware

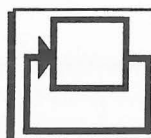
Annex 5

Required Hardware

The trainers should have available:

- Blackboard;
- Flipchart with easel;
- Overhead Projector;
- Screen;
- Spare lamps for OHP;
- Multi-standard video tape recorder with monitor.

If an OHP is not available, copy the text of the transparencies on a flipchart or make photocopies of the transparencies and distribute them to the participants.



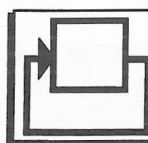
Evaluation

Annex 6

Evaluation Questionnaire - TRAINERS

Seminar:	_____
Organized by:	_____
Place:	_____
Duration of the seminar:	_____
Date:	_____
Number of participants:	_____
Objectives of the Seminar:	_____ _____ _____ _____
Evaluation of the Seminar:	_____ _____ _____ _____





Evaluation

Evaluation Questionnaire - PARTICIPANTS

Name: _____

Institution: _____

Occupation: _____

Country: _____

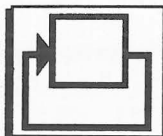
Date: _____

Please complete the final seminar evaluation questionnaire.

Mark the box which corresponds most closely to your opinion on each question.

1. Overall, how valuable did you find the seminar?
 - very valuable ☐
 - valuable ☐
 - of moderate value ☐
 - of no value ☐

2. The objectives of the seminar were:
 - very clear ☐
 - clear ☐
 - not clear ☐



Evaluation

3. Did the objectives of this seminar met all, some, or none of your expectations? Please explain.

4. Overall, the substantive issues presented during the seminar were useful:

• strongly agree

☐

• agree

☐

• disagree to some extent

☐

• strongly disagree

☐

5. What have you learned in this seminar which you can apply mostly in your work?

6. What constraints might prevent you from applying what you have learned?

7. Overall, the training methodology of the seminar was useful:

• strongly agree

☐

• agree

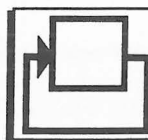
☐

• disagree to some extent

☐

• strongly disagree

☐



Evaluation

8. How useful were the group works and exercises?

- very useful ☐
- useful to some extent ☐
- not very useful ☐
- not at all useful ☐

What suggestions do you have to improve the methodology and/or group work?

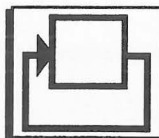
9. The audio-visual materials (such as the video programmes, transparencies, drawings and diagrams) used in this module were:

- clear ☐
- unclear ☐

10. Overall, the trainers were well prepared and their session well presented:

- strongly agree ☐
- agree ☐
- undecided/disagree ☐
- strongly disagree ☐

Do you have any suggestions for the trainers?



Evaluation

11. The general atmosphere of the seminar was constructive:

- strongly agree
- agree
- agree more or less
- strongly disagree

☐
☐
☐
☐

Do you have any suggestions for the trainers?

12. How was the seminar organized?

- very well
- well
- average
- very poorly

☐
☐
☐
☐

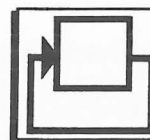
What suggestions do you have for improving the organization?

13. The length of the seminar was:

- too short
- just right
- too long

☐
☐
☐

What suggestions would you make for the time management?

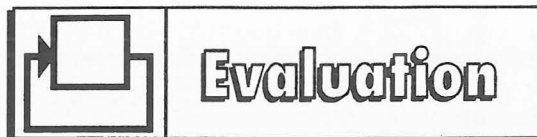


Evaluation

14. What other suggestions or comments would you like to add?

After completion, please hand in the questionnaire to the trainers

Thank you for your time





Validation

Annex 7

Validation Questionnaire (*)

Modular Training Package:
Women, Environmental Management and Sustainable
Development

NAME:	_____
INSTITUTION:	_____
COUNTRY:	_____
DATE:	_____

(*) This questionnaire should be used only for training of trainers course or expert meetings.





1. The General Trainers Guide

1.1 The information given in the General Trainers Guide is:

	++	+	-	--	
clear	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	unclear
helpful	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	unhelpful
well structured	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	unstructured

1.2 The annexes to the General Trainers Guide provided for in the General Guide are:

	++	+	-	--	
useful	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	not useful

In case your response is negative, what would you change?



2. Manual on Women, Environmental Management and Sustainable Development(*)

2.1 The content of the manual is:

	++	+	-	--	
well structured	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	badly structured
simple	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	complicated
easy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	difficult
clear	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	confused

2.2 Do you think that the contents of the manual are necessary to attain the objectives of the training course on Women, Environmental Management and Sustainable Development?

yes ☐ no ☐

If not, list the topics you would like to have treated to a lesser extent:

- 1) _____
- 2) _____
- 3) _____

2.3 List the topics not included in the training manual which you think are of particular interest to the issue of "Women, Environmental Management and Sustainable Development":

* Questions 2.1 to 2.3 should be filled by substantive experts on the subject matter.



Validation

2.4 Do you think that the sequence of the training manual is coherent?

yes

☐

no

☐

If not, what sequence would you suggest?

2.5 Language used in the manual is:

	++	+	-	--	
clear	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
precise	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
adequate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

unclear

imprecise

inadequate



3. Additional Reading

3.1 The additional reading is:

	++	+	-	--	
useful	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	unuseful

In case your response is negative, what would you add, eliminate, change?

**Introduction:
Implementation of Agenda 21
INSTRAW
and United Nations System Activities***



* *The activities of the United Nations system in the implementation of Agenda 21 were prepared by each UN agency.*



Table of Contents

Introductory Module: Implementation of AGENDA 21: INSTRAW and United Nations System Activities

TRAINING TOOLS

- **Training Package on Women, Environmental Management and Sustainable Development :**

Introduction: *Implementation of Agenda 21:
INSTRAW and UN system activities (page 3 to 62)*

- **Trainers' Guide:**

1. *General Objective*
2. *Specific Objectives*
3. *Suggested Training Strategy*

- **Training Activities:**

✓ Suggested Questions for Discussion for the Trainer

Option No. 1: *National Application of Guiding Principles on
"Women, Environment and Sustainable
Development"*

Option No. 2: *Degree of Participation of Women in the Design and
Implementation of Environmental Policies*

Option No. 3: *Follow-up on Chapter 24 of Agenda 21*

- **Outline of the Video Programme: "The Earth Summit"
and Key issues for Discussion**
- **List of Transparencies**



Trainers' Guide

1. General Objective

At the end of the module participants will acquire greater knowledge on the mandates and activities of the UN system in the implementation of Agenda 21, particularly chapters relevant to women.

2. Specific Objectives

More specifically, they will be able to:

- assess how the guiding principles and mandates on women and sustainable development are reflected in relevant policies and practical measures at the national level;
- discuss follow-up activities undertaken at the national level with particular reference to Chapter 24 of Agenda 21: Global Action for Women towards Sustainable Development;
- establish the linkages between women and sustainable development;
- identify the types of activities undertaken by the UN system and/or national institutions of particular relevance for women at the national level;
- formulate further recommendations for the implementation of Agenda 21, particularly chapters relevant to women, at the national level.



Trainer's Guide

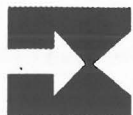
3. Suggested Training Strategy

KEY POINTS/ACTIVITIES	METHOD	MEDIA
1. Present the general and specific objectives of the Introductory Module	Presentation	Flipchart
I. INTRODUCTION	Suggested questions for discussion (see page 5)	Transparencies No. 1/2
1.1 Guiding Mandates and Principles on Women, Environment and Development	Lecture and discussion with visual aids	Transparency No. 3
1.2 The United Nations Conference on Environment and Development		
NOTE: In order to review the multi-faceted image and the intense debate of the UN Conference on Environment and Development, the trainer may decide to present the video programme: "The Earth Summit". Please refer to outline on page 15	Presentation	Video programme: "The Earth Summit"
2. Continue the presentation on:	Lecture and discussion with visual aids	Transparency No. 4
1.3 Agenda 21		Transparencies No. 5/6/7/8/9/10
1.4 Section IV: Strengthening the Role of Major Groups. Chapter 24: Global Action for Women Towards Sustainable and Equitable Development		Transparency No. 11/12
1.5 Women, Environment and Sustainable Development		Transparencies No. 13/14
1.6 Alternative Approaches to Sustainable Development	Suggested questions for discussion (see page 13)	Tr. No. 15/16/17
II. IMPLEMENTATION OF AGENDA 21		Tr. No. 18/19
2.1 INSTRAW		
2.2 UN System Activities		
NOTE: The trainer on the basis of the needs/expectations of the target group and the time constraints should select amongst the optional activities given in this module		



Trainer's Guide

KEY POINTS/ACTIVITIES	METHOD	MEDIA
3. Explain the objective of the activity that you have selected	Presentation	Flipchart
4. Distribute the instructions on the selected activity	Facilitate group work	
5. Plenary presentation and assessment of group work	Discussion	Flipchart/ Transparencies
6. Summary and review by the trainer. Link to Module One, if foreseen in your seminar	Presentation and discussion	Flipchart or review of key points on transparencies



Trainer's Guide



Suggested Questions for Discussion for the Trainer(*)

1. Objective

To undertake preliminary analysis of the national situation and the link between women and sustainable development.

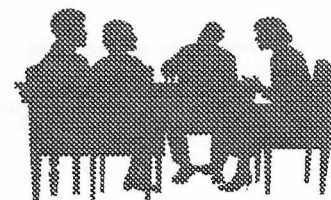
2. Key issues(**)

- How many people have access to clean water and sanitation facilities?
- How many people have access to renewable energy sources?
- How many people in your country are breathing air below standards considered acceptable by World Health Organization?
- How many women and children suffer from indoor air pollution due to burning stoves?
- How many farmers encounter difficulties in maintaining the fertility of the soils? What are the major causes?
- How many women work in the formal/informal sectors?
- What are the general environmental conditions in which people live in urban, peri-urban and rural areas?
- Has a holistic national policy been designed to transfer the linkage between women and sustainable development from a general concept into pragmatic actions at national and local levels?

* To be used during the lecture on Implementation of Agenda 21 (Introduction) to stimulate participatory approach.

** Pending on the level of participants, trainer may choose to discuss few or all key issues. Additional key issues may be added by trainer for specific national conditions.





Option No. 1: National Application of Guiding Principles on “Women, Environment and Sustainable Development”

TIME: 90 min

1. Objective

Assess how the guiding principles and mandates on women environment and sustainable development are reflected in relevant policies and practical measures at the national level.

2. Group Work

Through brainstorming with the rest of the group, discuss the following issues:

1. How would you define sustainable development?
2. What are the main principles on women, environment and development deriving from Agenda 21?
3. How are they applied in your country?
4. What kind of activities are being undertaken by the UN system and/or national institutions for the implementation of Agenda 21 in your country with particular reference to Chapter 24: *Global Action for Women towards Sustainable Development*?
5. What would you recommend for the implementation of this specific chapter?
6. What will you do to implement Chapter 24 of Agenda 21 at professional and personal levels?



3. Plenary Work

In plenary, the selected spokesperson will present the outcome of the group work for further discussion with the rest of the group and the trainer.



Option No. 2: Degree of Participation of Women in the Design and Implementation of Environmental Policies

TIME: 90 min

1. Objective

To assess the degree of participation of women in the design of relevant policies and practical measures towards the solution of environmental problems at the national level.

2. Group Work

Through brainstorming with the rest of the group, answer to the following questions:

- To what extent have the Nairobi Forward-Looking Strategies been implemented in your country in terms of women's participation in national, ecosystem management and control of environmental degradation?
- Has your country ratified the UN Convention on the Elimination of All Forms of Discrimination Against Women? If so, what are the progress that have been made in ending gender-based discrimination and ensuring women's access to legal and financial resources, education/training and safe and equal employment?
- What are the laws, policies and programmes to promote women's participation in the preservation of the environment that have been adopted at the national level resulting from Resolution 36/6 of the Commission on the Status of Women?
- How and at what level are women included in solving environmental problems?



- What efforts have been made in your country to contribute to data collection and capacity-building in the field of women, environment, and sustainable development?
- What are the policies and programmes adopted in your country to promote women's participation in the preservation of the environment?

3. Plenary Work

In plenary, the selected spokesperson will present the outcome of the group work for further discussion with the rest of the group and the trainer.



Option No. 3: Follow-up to Chapter 24 of Agenda 21

TIME: 90 min

1. Objective

To identify follow-up activities with particular reference to Chapter 24 of Agenda 21: Global Action for Women Towards Sustainable and Equitable Development undertaken at the national level.

2. Individual Work

Analyse the checklist herewith enclosed.

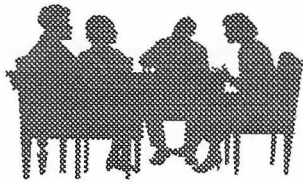
For each of the questions try to substantiate your answers with data (how many) and process (how) as well as any eventual future plans.

3. Group Work

Through brainstorming with the rest of the group, try to answer to the questions.

4. Plenary Work

In plenary, the selected spokesperson will present the outcome of the group work for further discussion with the rest of the group and the trainer.



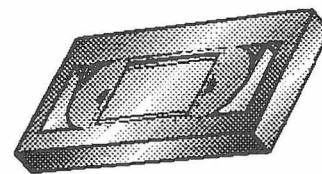


Checklist on Follow-up Activities related to Chapter 24 of Agenda 21: Global Action for Women towards Sustainable and Equitable Development

	YES	NO
• Has the access of women to all levels of education been increased?	<input type="checkbox"/>	<input type="checkbox"/>
• Has the participation of women in all levels of decision making, particularly at the highest levels increased?	<input type="checkbox"/>	<input type="checkbox"/>
• Is gender related knowledge in educational policies and curricula being disseminated?	<input type="checkbox"/>	<input type="checkbox"/>
• Are the values of women's role promoted?	<input type="checkbox"/>	<input type="checkbox"/>
• Is research and data collection focusing on women's knowledge and experience in managing natural resources and on the impact of structural adjustment programmes and environmental degradation on women being carried out?	<input type="checkbox"/>	<input type="checkbox"/>
• Are health facilities including safe and effective women centered and managed reproductive health care and family planning services strengthened and made more accessible?	<input type="checkbox"/>	<input type="checkbox"/>
• Does comprehensive health care include prenatal care and information on maternal and child health?	<input type="checkbox"/>	<input type="checkbox"/>
• Are programmes being implemented to increase equal employment opportunities and equal pay for women?	<input type="checkbox"/>	<input type="checkbox"/>
• Are these initiatives being strengthened by providing day care facilities and parental leave?	<input type="checkbox"/>	<input type="checkbox"/>



	YES	NO
• Are environmentally safe technologies being developed in consultation with women?	<input type="checkbox"/>	<input type="checkbox"/>
• Do they promote access to clear water, adequate sanitation facilities and efficient energy services?	<input type="checkbox"/>	<input type="checkbox"/>
• Are women's crucial role in changing unsustainable patterns of consumption and production being promoted?	<input type="checkbox"/>	<input type="checkbox"/>
• Have rural and urban training and resource centers been created to disseminate environmentally sound technologies to women?	<input type="checkbox"/>	<input type="checkbox"/>
• Are programmes been implemented to develop consumer awareness and encourage investment in environmentally sound productive activities?	<input type="checkbox"/>	<input type="checkbox"/>
• Have actions been taken to avert the ongoing rapid environmental and economic degradation that affect the lives of women and children in rural areas that are hampered by droughts, desertification and deforestation or armed hostilities and natural disasters?	<input type="checkbox"/>	<input type="checkbox"/>
• Has your government ratified all relevant conventions relating to the status of women and how have women's rights been transformed into legal measures to ensure the full and equal participation of women in development decisions?	<input type="checkbox"/>	<input type="checkbox"/>
• What are the national, regional and international mechanisms that have been set up to assess the implementation of and impact of development and environmental programmes on women?	<input type="checkbox"/>	<input type="checkbox"/>
• Are gender impact analysis systematically integrated as essential component in those programmes?	<input type="checkbox"/>	<input type="checkbox"/>



Presentation of Video Programme: "The Earth Summit"

1. Objective

To recall the outcomes of the United Nations Conference of Environment and Development and stimulate a debate on follow-up initiatives at the national level.

2. Outline of the Video Programme: "The Earth Summit"

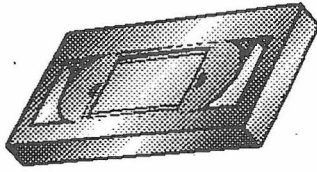
UN, 28', color, 1992, English

In June 1992 the UN Conference on Environment and Development known as "The Earth Summit" was held in Rio de Janeiro, Brazil. It was the largest UN conference ever held, gathering representatives, statesmen, environmentalists and media people from 178 nations.

The aim of the Conference was to put the concept of sustainable development at the forefront of our concerns and to seek common action to protect the planet from environmental degradation.

Many heads of states attended the Conference to share their views on the environment and to sign a range of unprecedented agreements. At the Earth Summit, two legally binding covenants were opened for signing: the Framework Convention on Climate Change, and the Biodiversity Convention.

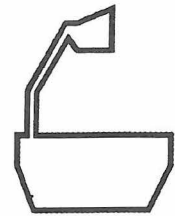
The video presents the views of developing and industrialized countries, indigenous groups, representatives of environmental and non-governmental organizations as well as the opinion of people interviewed in the streets of Rio about the environmental issues, recycling and development in general.



3. Key issues for Discussion

After having viewed the above video programme, the trainer can ask the following questions to stimulate a debate:

- Did your country sign the Convention on Climate Change and the Biodiversity Convention?
- What financial needs did your country identify to implement Agenda 21?
- How does the external debt and the economic policies in general inhibit developmental and environmental efforts in your country?
- How is the international concessional lending system helping your country to meet the environmental objectives?
- What is your country doing to cut down on deforestation and use other types of energy (e.g. solar energy)?
- What is the level of oil and coal consumption in your country?
- What activities have been undertaken in your country to reduce levels of the greenhouse gases?
- Did your country adopt a policy to stabilize the emission or reduction of emission of CO₂? How?
- What environmental reforms have been adopted in your country as a follow-up of the UN Conference on Environment and Development?
- What are the main national institutions involved in the evolving global partnership towards sustainable development?
- What are the requests of non-governmental organizations in your country?
- What are the requests of indigenous groups (if any) in your country?



List of Transparencies

- No. 1: *Guiding principles and mandates of the UN system on women, environment and sustainable development (WED) (1)*
- No. 2: *Guiding principles and mandates of the UN system on women, environment and sustainable development (WED) (2)*
- No. 3: *The United Nations Conference on Environment and Development Rio De Janeiro, Brazil, June 1992*
- No. 4: *Agenda 21*
- No. 5: *Chapter 24: Global action for women towards sustainable and equitable development (1)*
- No. 6: *Chapter 24: Global action for women towards sustainable and equitable development(2)*
- No. 7: *Chapter 24: Global action for women towards sustainable and equitable development (3)*
- No. 8: *Chapter 24: Global action for women towards sustainable and equitable development (4)*
- No. 9: *Chapter 24: Requirements (1)*
- No. 10: *Chapter 24: Requirements (2)*
- No. 11: *Women, environment and sustainable development (1)*
- No. 12: *Women, environment and sustainable development (2)*
- No. 13: *Alternative approaches to sustainable development (1)*
- No. 14: *Alternative approaches to sustainable development (2)*
- No. 15: *INSTRAW United Nations International Research and Training Institute for the Advancement of Women (1)*
- No. 16: *INSTRAW United Nations International Research and Training Institute for the Advancement of Women (2)*
- No. 17: *INSTRAW United Nations International Research and Training Institute for the Advancement of Women (3)*
- No. 18: *United Nations System in the Implementation of Agenda 21 (1)*
- No. 19: *United Nations System in the Implementation of Agenda 21 (2)*


INTRODUCTORY MODULE:
IMPLEMENTATION OF AGENDA 21
INSTRAW AND UNITED NATIONS SYSTEMS
ACTIVITIES


TRANSPARENCIES


GUIDING PRINCIPLES AND MANDATES OF THE UN SYSTEM ON WOMEN, ENVIRONMENT AND SUSTAINABLE DEVELOPMENT (WED) - 1 -


- ➡ **1975 Nairobi Forward-Looking Strategies**
- ➡ **1981 Convention on the Elimination of All
Forms of Discrimination Against
Women**
- ➡ **1985 GA Resolution 46/167 “Women,
Environment, Population, Sustainable
Development”**
- ➡ **1987 Resolution 36/6 “Women and the
Environment” (Commission on the
Status of Women)**

GUIDING PRINCIPLES AND MANDATES OF THE UN SYSTEM ON WOMEN, ENVIRONMENT AND SUSTAINABLE DEVELOPMENT (WED) - 2 -

-  **1990 World Declaration on the Survival
Protection and Development of
Children and the Plan of Action
(UNICEF)**

-  **1991 The Global Assembly of Women and
the Environment "Partners for Life"**

-  **1992 AGENDA 21**

-  **1995 Platform for Action - Fourth World
Conference on Women**

THE UNITED NATIONS CONFERENCE ON ENVIRONMENT AND DEVELOPMENT RIO DE JANEIRO, BRAZIL, JUNE 1992

- 1. THE RIO DECLARATION - 27 PRINCIPLES DEFINE THE RIGHTS AND RESPONSIBILITIES OF NATIONS**
- 2. PRINCIPLE 20 STATES "WOMEN HAVE A VITAL ROLE IN ENVIRONMENTAL MANAGEMENT AND DEVELOPMENT. THEIR FULL PARTICIPATION IS THEREFORE ESSENTIAL TO ACHIEVING SUSTAINABLE DEVELOPMENT"**
- 3. AGENDA 21- UNIVERSAL ACTION OF PLAN - 40 CHAPTERS- 115 PROGRAMME AREAS**
- 4. A STATEMENT OF PRINCIPLES TO GUIDE MANAGEMENT, CONSERVATION AND SUSTAINABLE DEVELOPMENT OF ALL FORESTS**
- 5. UN FRAMEWORK ON CONVENTION ON CLIMATE CHANGE**
- 6. CONVENTION ON BIOLOGICAL DIVERSITY**

**THE TWO CONVENTIONS WERE
NEGOTIATED SEPARATELY AND SIGNED
BY 150 GOVERNMENTS**

AGENDA 21

- ➡ **AGENDA 21 IS A UNIVERSAL PLAN OF ACTION FOR SUSTAINABLE DEVELOPMENT TO THE 21ST CENTURY. IT IS NOT A ONE-TIME PRESCRIPTION FOR SOLVING ALL THE PROBLEMS OF OUR PLANET**
- ➡ **AGENDA 21 IS DIVIDED INTO 40 CHAPTERS AND CONTAINS 115 PROGRAMME AREAS ON ALL ASPECTS OF SUSTAINABLE DEVELOPMENT**
- ➡ **THE 486 PAGE DOCUMENT IS DIVIDED INTO FOUR SECTIONS:**
 - **SOCIAL AND ECONOMIC DIMENSIONS**
 - **CONSERVATION AND MANAGEMENT OF RESOURCES FOR DEVELOPMENT**
 - **STRENGTHENING THE ROLE OF MAJOR GROUPS**
 - **MEANS OF IMPLEMENTATION**

CHAPTER 24: GLOBAL ACTION FOR WOMEN TOWARDS SUSTAINABLE AND EQUITABLE DEVELOPMENT

- 1 -

- i) Access to all levels of education and increased participation of women in all levels of decision making, particularly at the highest levels are basic requirements for this goal...**
- ii) Awareness of the needs and experiences of women are also highlighted. Thus the dissemination of gender related knowledge in educational policies and curricula must be pursued. The value of women's roles must be promoted...**
- iii) Research and data collection should also focus on women's knowledge and experience in managing natural resources and on the impact of structural adjustment programs and environmental degradation on women...**

CHAPTER 24: GLOBAL ACTION FOR WOMEN TOWARDS SUSTAINABLE AND EQUITABLE DEVELOPMENT

- 2 -

- iv) Health facilities including safe and effective women centered and managed reproductive health care and family planning services must be strengthened and made more accessible. Comprehensive health care should include prenatal care and information on maternal and child health.**
- v) Programmes should be implemented to increase equal employment opportunities and equal pay for women. Such initiatives should be strengthened by providing day care facilities and parental leave...**
- vi) To integrate women into sustainable development activities, the following steps interalia are proposed. All countries should implement the Nairobi Forward Looking Strategies which emphasize the need for women to participate in ecosystem management and control of environmental degradation.**

CHAPTER 24: GLOBAL ACTION FOR WOMEN TOWARDS SUSTAINABLE AND EQUITABLE DEVELOPMENT

- 3 -

- vii) Environmentally safe technologies should be developed in consultation with women and should promote access to clean water, adequate sanitation facilities and efficient fuel supplies. Women's crucial role in changing unsustainable patterns of consumption and production must be promoted.**

- viii) Rural and urban training and resource centers are needed to disseminate environmentally sound technologies to all women. Programmes are needed to develop consumer awareness and encourage investment in environmentally sound productive activities.**

- ix) In addition to fully involving women in decision making, another area that requires urgent action is that of averting the ongoing rapid environmental and economic degradation that affect the lives of women and children in rural areas that are hampered by drought, desertification, and deforestation or armed hostilities and natural disasters.**

CHAPTER 24: GLOBAL ACTION FOR WOMEN TOWARDS SUSTAINABLE AND EQUITABLE DEVELOPMENT

- 4 -

- x) All governments are urged to ratify all relevant conventions relating to the status of women and to transform these women's rights into legal measures to ensure the full and equal participation of women in development decisions...**
- xi) To insure that women are full participants in and beneficiaries of these processes, by 1995 there should be national, regional and international mechanisms to assess the implementation of and impact of development and environmental programmes on women. Gender impact analysis should be an essential component in programmes.**

CHAPTER 24: REQUIREMENTS - 1 -

⇒ CHAPTER 24(9) REQUESTS THE SECRETARY-GENERAL OF THE UNITED NATIONS TO:

- review the adequacy of all United Nations institutions including those with a special focus on the role of women, in meeting development and environment objectives
- make recommendations for strengthening their capacities

⇒ INSTITUTIONS THAT REQUIRE SPECIAL ATTENTION IN THIS AREA INCLUDE:

- the Division for the Advancement of Women (Centre for Social Development and Humanitarian Affairs, United Nations Office at Vienna),
- the International Research and Training Institute for the Advancement of Women (INSTRAW) and the United Nations Development Fund for Women (UNIFEM),
- the women's programmes of Regional Commissions

CHAPTER 24: REQUIREMENTS - 2 -

- ⇒ The review should consider how the environment programmes of each body of the United Nations system could be strengthened to implement Agenda 21 and how to incorporate the role of women in programmes and decisions related to sustainable development
- ⇒ Chapter 24(10) requests that *"each body of the UN system review the number of women in senior policy-level and decision making posts and, where appropriate, adopt programmes to increase that number, in accordance with Economic and Social resolution 1991/17 (of the 31 May 1991) on the improvement of the status of women in the Secretariat"*
- ⇒ Chapter 24(11) requests that *"...Bodies of the United Nations system, governments and non-governmental organizations involved in the follow-up to the conference and the implementation of Agenda 21 should ensure that gender considerations are fully integrated into all the policies, programmes and activities"*

WOMEN, ENVIRONMENT AND SUSTAINABLE DEVELOPMENT - 1 -

- ➡ **1950 WOMEN WERE SEEN AS PASSIVE
BENEFICIARIES OF DEVELOPMENT**
- ➡ **1970 WOMEN AS AGENTS OF
DEVELOPMENT CHANGE**
- ➡ **1972 UN CONFERENCE ON HUMAN
ENVIRONMENT (STOCKHOLM)
UNEP - UNITED NATIONS
ENVIRONMENT PROGRAMME**
- ➡ **1975 UN CONFERENCE ON WOMEN AND
DEVELOPMENT (MEXICO CITY,
MEXICO)**
- ➡ **1976 UN WOMEN'S DECADE**

WOMEN, ENVIRONMENT AND SUSTAINABLE DEVELOPMENT - 2 -

-  **1985** **UN Conference on Women and Development (Nairobi, Kenya)**

-  **1992** **UN Conference on Environment and Development (Rio De Janeiro, Brazil) - Agenda 21**

-  **1994** **UN International Conference on Population and Development (Cairo, Egypt)**

-  **1995** **UN World Summit on Social Development (Copenhagen, Denmark)**

-  **1995** **UN Fourth World Conference on Women (Beijing, People's Republic of China)**

ALTERNATIVE APPROACHES TO SUSTAINABLE DEVELOPMENT - 1 -

- 1. RECONCEPTUALIZATION OF SUSTAINABLE DEVELOPMENT BASED ON EQUITABLE RELATIONSHIP BETWEEN HUMAN BEINGS AND NATURE**
- 2. CURRENT ECONOMIC AND SOCIAL DEVELOPMENT MODEL AS SUCH IS AT THE VERY ROOT OF THE ECOLOGICAL CRISIS**
- 3. NEW CONCEPT OF DEVELOPMENT "SUSTAINABILITY" AND PROPOSALS FOR MAKING IT OPERATIONAL:**
 - **BRUNDTLAND REPORT: "Sustainable development is development which meets the needs of the present without compromising the ability of future generations to meet their own needs ..."**
 - **ECOLOGICAL MOVEMENTS: "Sustainable development is linked to participatory democracy that would reduce the scale of different forms of social organization and transfer State powers to local communities"**

ALTERNATIVE APPROACHES TO SUSTAINABLE DEVELOPMENT - 2 -

- **ENVIRONMENTAL ECONOMISTS:** "Attempting to put monetary values on the environment and to include these measures in cost/benefit analysis of development proposals"
- **SOCIAL ECOLOGY:** "Sees the integration and cooperation with nature as the fundamental social model, with a heavy emphasis on equality at the local level, i.e. participatory democracy"
- **ENVIRONMENTAL ECONOMISTS:** "Attempting to put monetary values on the environment and to include these measures in cost/benefit analysis of development proposals"
- **DEEP ECOLOGY:** "Based on the concept of the mutual interdependence of human society and the environment and derives from some Eastern traditions"
- **ECOFEMINISM:** "Seeks environmental sustainability through the decentralization of power and a reordering of the relationship between nature and the community. The main emphasis here, however, is on countering male domination over both women and nature"

**INSTRAW
UNITED NATIONS INTERNATIONAL
RESEARCH AND TRAINING
INSTITUTE FOR THE
ADVANCEMENT OF WOMEN - 1 -**

- ⇒ AUTONOMOUS INSTITUTION WITHIN THE
FRAMEWORK OF THE UNITED NATIONS
SYSTEM**
- ⇒ THE ONLY UNITED NATIONS RESEARCH AND
TRAINING INSTITUTE FOR THE
ADVANCEMENT OF WOMEN**
- ⇒ SINCE 1986 TRAINING MATERIALS AND
SEMINARS ON WOMEN, WATER SUPPLY AND
SANITATION AND WOMEN, NEW AND
RENEWABLE SOURCES OF ENERGY**
- ⇒ MORE THAN 600 PEOPLE TRAINED
WORLDWIDE**
- ⇒ INSTRAW PROGRAMME ON WOMEN AND
SUSTAINABLE DEVELOPMENT CONSISTS OF
POLICY COORDINATION, RESEARCH,
TRAINING/CAPACITY BUILDING AND
INFORMATION**

INSTRAW UNITED NATIONS INTERNATIONAL RESEARCH AND TRAINING INSTITUTE FOR THE ADVANCEMENT OF WOMEN - 2 -

- ➡ **INSTRAW IS APPLYING A HOLISTIC APPROACH TO TRANSFORM WOMEN AND SUSTAINABLE DEVELOPMENT FROM A GENERAL CONCEPT INTO PRAGMATIC ACTIONS**
- ➡ **INSTRAW PREPARED A STUDY WOMEN, ENVIRONMENT AND SUSTAINABLE DEVELOPMENT: TOWARDS A THEORETICAL SYNTHESIS IN COOPERATION WITH THE UNIVERSITY OF UTRECHT AND THE INSTITUTE OF SOCIAL STUDIES IN THE NETHERLANDS**
- ➡ **INSTRAW NEWS 19 - WOMEN, ENVIRONMENT AND SUSTAINABLE DEVELOPMENT**

**INSTRAW
UNITED NATIONS INTERNATIONAL
RESEARCH AND TRAINING
INSTITUTE FOR THE
ADVANCEMENT OF WOMEN - 3 -**

- ➡ **INSTRAW/DDSMS/STATE SCIENCE AND TECHNOLOGY COMMISSION/ALL CHINA FEDERATION OF WOMEN - INTERREGIONAL WORKSHOP ON THE ROLE OF WOMEN IN ENVIRONMENTALLY SOUND AND SUSTAINABLE DEVELOPMENT, BEIJING, 1992. OUTCOME OF THE WORKSHOP WAS THE DEVELOPMENT OF 86 PROJECT PROPOSALS BASED ON AGENDA 21**
- ➡ **INSTRAW TRAINING PACKAGE- WOMEN, ENVIRONMENTAL MANAGEMENT, SUSTAINABLE DEVELOPMENT, 1995**

UNITED NATIONS SYSTEM IN THE IMPLEMENTATION OF AGENDA 21

- 1 -

- ➡ DEPARTMENT OF HUMANITARIAN AFFAIRS
- ➡ DEPARTMENT FOR DEVELOPMENT SUPPORT AND MANAGEMENT SERVICES
- ➡ DEPARTMENT FOR POLICY COORDINATION AND SUSTAINABLE DEVELOPMENT
- ➡ FOOD AND AGRICULTURE ORGANIZATION
- ➡ GENERAL AGREEMENT OF TARIFFS AND TRADE
- ➡ GLOBAL ENVIRONMENT FACILITY
- ➡ UNITED NATIONS CENTRE FOR HUMAN SETTLEMENTS
- ➡ INTERNATIONAL ATOMIC ENERGY AGENCY

UNITED NATIONS SYSTEM IN THE IMPLEMENTATION OF AGENDA 21

- 2 -

- ➡ **INTERNATIONAL CIVIL AVIATION
ORGANIZATION**
- ➡ **INTERNATIONAL FUND FOR
AGRICULTURAL DEVELOPMENT**
- ➡ **INTERNATIONAL LABOUR
ORGANIZATION**
- ➡ **INTERNATIONAL MONETARY FUND**
- ➡ **UNITED NATIONS CONFERENCE ON
TRADE AND DEVELOPMENT**
- ➡ **UNITED NATIONS DEVELOPMENT
PROGRAMME**
- ➡ **UNITED NATIONS ENVIRONMENT
PROGRAMME**
- ➡ **UNITED NATIONS EDUCATIONAL
SCIENTIFIC AND CULTURAL
ORGANIZATION**

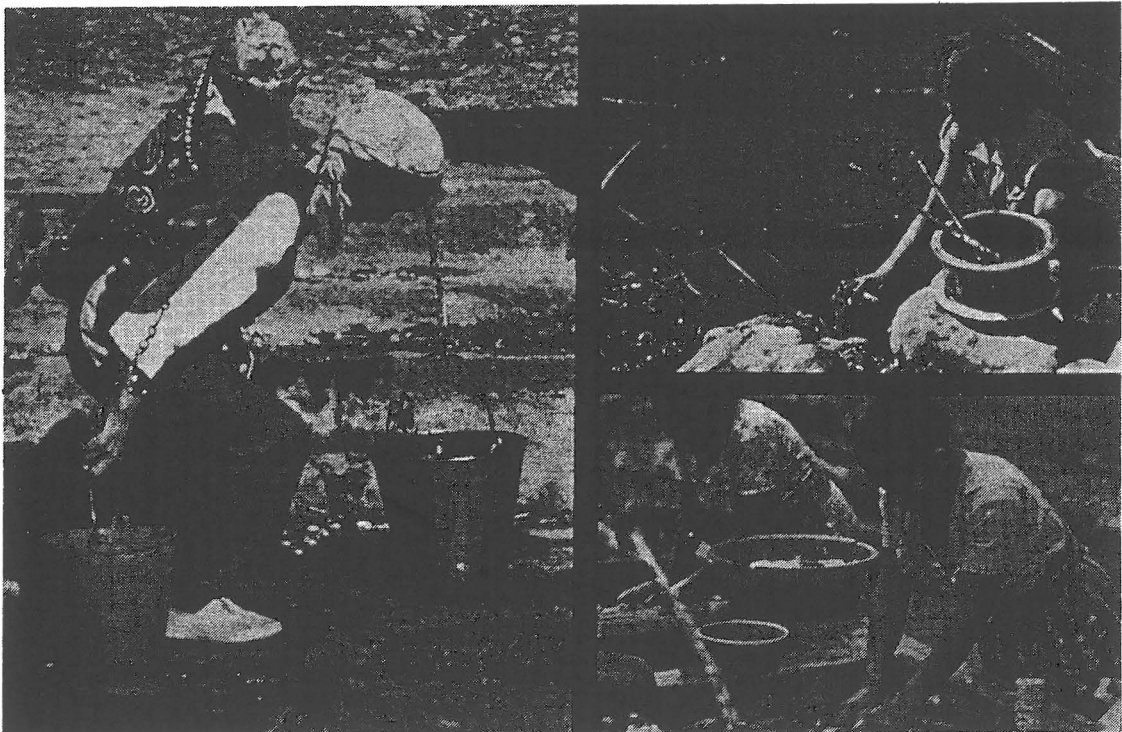
UNITED NATIONS SYSTEM IN THE IMPLEMENTATION OF AGENDA 21

- 3 -

- ➡ **UNITED NATIONS POPULATION FUND**
- ➡ **UNITED NATIONS CHILDREN'S FUND**
- ➡ **UNITED NATIONS INDUSTRIAL
DEVELOPMENT ORGANIZATION**
- ➡ **UNITED NATIONS FUND FOR WOMEN**
- ➡ **UNITED NATIONS UNIVERSITY**
- ➡ **WORLD BANK**
- ➡ **WORLD FOOD PROGRAMME**
- ➡ **WORLD HEALTH ORGANIZATION**
- ➡ **WORLD INTELLECTUAL PROPERTY**

Module One

Women and Environmental Health*



* This modular unit is based primarily on the "Report of the WHO Commission on Health and Environment", WHO/EHE/92.1, 1992 and the WHO report "Our Planet, Our Health", 1992.



Module One: Women and Environmental Health

TRAINING TOOLS

- **Training Package on Women, Environmental Management and Sustainable Development:**

Part One: *"Women and Environmental Health"*
 (page 65 to 142)

- **Trainers' Guide:**

1. *General Objective*
2. *Specific Objectives*
3. *Suggested Training Strategy*

- **Training Activities:**

Option No. 1: *Primary Environmental Factors Affecting the Health of Women. Discuss an Outline of Possible Strategies*

Option No. 2: *Analysis/Design of an Overall Strategy and Plan of Action*

- **Outline of Video Programme: "Handle with Care" and Key issues for Discussion**
- **List of Transparencies**



Trainers' Guide

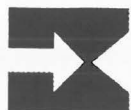
1. General Objective

At the end of this module participants will acquire the knowledge on macroeconomic frameworks in order to establish and/or review national sectoral development policies that encompass women and environmental health.

2. Specific Objectives

More specifically, they will be able to:

- recognize that human health is essential for sustainable development;
- understand the linkages between women's health, environment and sustainable development;
- identify main challenges to health and the environment at national and local levels;
- list the main environmental factors affecting the health of women at the national level;
- propose possible solutions to the identified problems;
- analyse the international strategies and recommendations made by UN to improve environmental health and sustainable development.



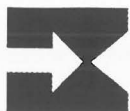
Trainer's Guide

3. Suggested Training Strategy

KEY POINTS/ACTIVITIES	METHOD	MEDIA
1. Present the general and specific objectives of Module One	Presentation	Flipchart
2. Based on the previous reading of the Training Package on Women, Environmental Management and Sustainable Development "Part One: Women and Environmental Health" (page 65 to 142) and with the support of transparencies, present the following points: I. INTRODUCTION 1.1 Health and the Environment 1.2 Integrating Development, the Environment and Health	Lecture and discussion with visual aids	Transparency No. 1 Transparencies No. 2/3 Transparencies No. 4/5
NOTE: In order to stimulate a debate on women and environmental health, particularly on hazardous and toxic waste management through the visualization of a concrete case study, the trainer may decide to present the video programme : "Handle with care". Please refer to outline on page 25	Presentation	Video programme "Handle with Care"
Continue the presentation : II. GLOBAL CHALLENGES TO HEALTH AND THE ENVIRONMENT 2.1 Population 2.1.1 Population Pressure and Resource Degradation 2.2 Poverty 2.3 Resource Use 2.4 Macroeconomic Frameworks 2.5 Poverty, Environmental Degradation and Malnutrition 2.6 Women, Health and the Environment 2.7 Health and Agenda 21	Lecture and discussion with visual aids	Transparency No. 6 Transparency No. 7 Transparency No. 8 Transparency No. 9 Transparency No. 10 Transparencies No. 11/12 Transparency No. 13



KEY POINTS/ACTIVITIES	METHOD	MEDIA
III. FOOD AND AGRICULTURE 3.1 Degradation of Agricultural Land and Impacts on Women 3.2 Food, Diet and Health 3.3 Food Contamination 3.4 Biological Agents 3.5 Occupational Hazards and Accidents 3.6 Agricultural Chemicals 3.7 Agricultural Development	Lecture and discussion with visual aids	Transparency No. 14 Transparency No. 15
IV. ENERGY 4.1 Energy Use and Health 4.2 Environmental and Health Effects of Energy Production and Use 4.2.1 Fossil Fuels and Air Pollution 4.2.2 Hydropower 4.2.3 Nuclear Power 4.2.4 Additional Problems in Developing Countries 4.2.5 Indoor Pollution from Fossil Fuels 4.2.6 Indoor Pollution from Biomass Fuels 4.3 Air Pollution 4.4 Degradation of Forest and Impacts on Women		Tr. No. 16/17/18 Tr. No. 19/20 Transparency No. 21 Tr. No. 22 Transparency No. 23 Transparency No. 24 Transparency No. 25
V. WATER AND SANITATION 5.1 Water Scarcity 5.2 Water and Impacts on Women 5.3 Other Effects 5.4 Impact of Farming on Water Quality 5.5 Communicable Diseases Associated with Water		Tr. No. 26/27 Transparency No. 28 Tr. No. 29/30



Trainer's Guide

KEY POINTS/ACTIVITIES	METHOD	MEDIA
VI. INDUSTRY, HUMAN SETTLEMENTS, URBANIZATION, AND BASIC SERVICES 6.1 Industry 6.2 Human Settlements, Urbanization, And Basic Services VII. TRANSBOUNDARY AND INTERNATIONAL ISSUES 7.1 Acid Precipitation 7.2 The Ozone Layer 7.3 Greenhouse Gases 7.4 Solid and Hazardous Wastes 7.5 Oceans 7.6 Biodiversity VIII. STRATEGY AND RECOMMENDATIONS	Lecture and discussion with visual aids	Transparency No. 31 Transparency No. 32 Transparency No. 33 Tr. No. 34/35/36/37
NOTE: The trainer on the basis of the needs/expectations of the target group and the time constraints, should select amongst the optional activities given in this module		
3. Explain the objective of the activity that you have selected	Presentation	
4. Distribute the instruction of the activity that you have selected	Facilitate group work	
5. Plenary presentation and assessment of group work	Discussion	Flipchart
6. Summary and review by the trainer. Link to Module Two, if foreseen in your seminar	Presentation and discussion	Flipchart



Option No. 1: Primary Environmental Factors Affecting the Health of Women

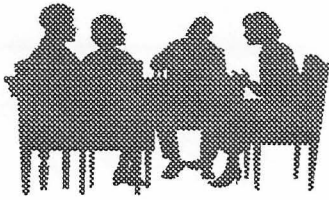
TIME: 90 min

1. Objective

To list the main environmental factors affecting the health of women at the national level and discuss strategies to improve the overall health situation of women, in accordance with the recommendations of Chapter 6 of Agenda 21.

2. Group Work

- Through brainstorming with the rest of the group, discuss the following issues:
 1. What are the main components of environmental health?
 2. What are the main challenges to health and the environment in your country? What sectors affect mostly population's health?
 3. List main environmental effects on the health of women in your country. What actions would you propose to improve the existing situation?
 4. What strategies would you recommend to improve the overall environmental health situation of women?
- You may use the attached form for the presentation in plenary.

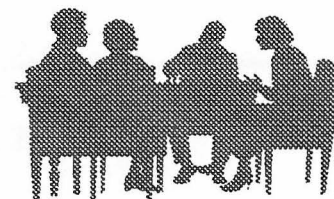


3. Plenary Work

- In plenary, the selected spokesperson will present the outcome of the group work for further discussion with the rest of the group and the trainer.



PRIMARY ENVIRONMENTAL PROBLEMS	EFFECTS ON WOMEN'S HEALTH	POSSIBLE SOLUTIONS	STRATEGY RECOMMENDATIONS



Option No. 2: Analysis/Design of an Overall Strategy and Plan of Action

TIME: 180 min

1. Objective

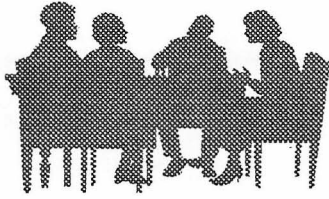
Analysis/design of an overall strategy and a plan of action to improve the environmental health situation of women, in accordance with the recommendations of Chapter 6 of Agenda 21.

2. Individual Work

In order to facilitate your analysis, please read the enclosed summary of main issues presented in this module and select the relevant issues for your group work discussion.

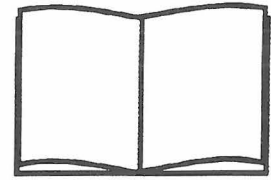
3. Group Work

- Through brainstorming with the rest of the group, try to answer to the different questions contained in the enclosed summary.
- On the basis of the identified environmental health problems that affect women in your country, review the recommendations of the World Health Organization (WHO) Commission on Health and Environment and Chapter 6 of Agenda 21 (See Additional Reading).
- How can these recommendations be integrated in your national policies.
- Analyse/design a possible strategy and a plan of action to improve the environmental health situation of women.



4. Plenary Work

In plenary, the selected spokesperson will present the outcome of the group work for further discussion with the rest of the group and the trainer.



Summary of Main Issues

1. General Aspects

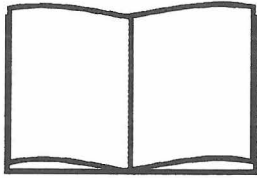
- What are the main causes of environmental degradation in your country?
- What is the population trend in your country?
- The United Nations established a World Commission of Environment and Development which has defined **sustainable development** as development "that meets the needs of the present without compromising the ability of future generations to meet their own needs". This definition has evolved to encompass **economic, human, environmental and technological dimensions**. Are these principles included in the environmental policy of your country?
- Has development significantly and detrimentally affected women's lives in your country? Why?

1.1 *Health and the Environment*

- What are the major environmental causes of ill health and/or disabilities in your country?
- Are women in your country the primary victims of poor environmental management?
- Do policy makers keep in mind women's needs when considering environmental health issues?
- Do poor people in rural areas overexploit natural resources and what are the actions that your government has taken to promote sustainable development?

1.2 *Integrating Development, the Environment and Health*

- What changes should occur in the way planning and management of the environmental health is undertaken at the national level?



2. Global Challenges to Health and the Environment

2.0 Population

- ✓ Healthier environment and lower death rates are not inconsistent with the goal of reducing population growth rates.
- What are the policies, programmes/projects undertaken in your country to reduce infant and child death rates?

2.1 Population Pressure and Resource Degradation

- What are the main factors bringing environmental degradation in your country?

2.2 Poverty

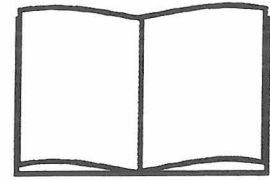
- ✓ If **poverty** is measured by the **number of people lacking a standard of living that includes adequate food, safe and sufficient water, sanitation, a secure shelter and access to education and health care.**
- How many people live in **poverty in your country**? Are the majority women? If so, why?

2.3 Resource Use

- What are the types and levels of resources in your country and how are they used?
- How is waste generation and waste management organized?
- Can improved health be separated from increasing consumption and how can this be achieved?

2.4 Macroeconomic Frameworks

- Have macroeconomic policies in your country been established with some consideration given to the health or environmental consequences?
If so, how?
- Do these policies minimize conflicts between economic, environmental and health goals, as well as take into consideration



women's needs or concerns with regard to health and well being of their children and families?

2.5 *Poverty, Environmental Degradation and Malnutrition*

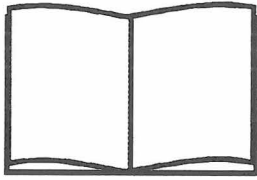
- How is the complex cycle of poverty, inappropriate development, environmental degradation and malnutrition tackled at the national level?
- Within the outlined strategies of Agenda 21 what are the recommendations that can be integrated into policies to combat poverty?

2.6 *Women, Health and the Environment*

- What are the environmental factors that impair women's health in your country?
- Why are women and children often more vulnerable to the health risks associated with poverty and inadequate standards of living?
- What are the major causes of maternal deaths in your country?
- How could existing programmes aimed at improving maternal health through family planning be modified to reduce maternal mortality and morbidity?
- How can the effects of pathogenic, physical and chemical agents be diminished by human interventions in your country?

2.7 *Health and Agenda 21*

- What are the basic concepts of Agenda 21 as it relates to health?
- What are the major developmental strategies indicated?
- Chapter 6 of Agenda 21 is dedicated to protecting and promoting human health. Has your country developed a national health action plan to reflect the main actions?
- What are the policies, programmes or projects being implemented in your country to reach the global objective to achieve a 10 to 40% improvement in health indicators by the year 2000?



3. Food and Agriculture

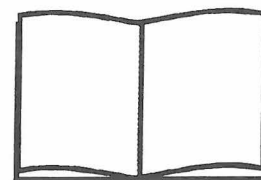
- What are the main causes of population undernutrition and the infections it in your country?
- What measures are undertaken to enable farmers to sustain production and meet future demands in your country?
- What are the most common occupational health risks in agriculture and the consequences of chemical misuse in your country?
- What are the strategic principles that can promote health and sustainable patterns of production in your country?

3.1 *Degradation of Agricultural Land and Health Effects on Women*

- What are the main factors causing the degradation of land in your country?
- Are the effects of degradation of agricultural lands almost confined to women in your country?
- ✓ A decrease in productive farmlands threatens the livelihood of communities in the agricultural sector.
- What are the agricultural procedures and technologies that cause adverse health effects in your country?
- What are the main health consequences of pesticide exposure for women who work in agricultural lands in your country?
- The World Health Organization has made some specific recommendations on this issue. How are they being integrated in policies/programmes and projects in your country?

3.2 *Food, Diet and Health*

- ✓ Malnutrition remains the major cause of mortality and morbidity to a large part of the world's population.
- ✓ Specific forms of nutritional deficiency affect millions of people particularly children and women.
- What are the major dietary deficiencies in your country and what are the major causes?



- What are the main diseases that malnutrition causes in your country?
- What is the role that the food industry plays in planning of food and nutrition policies and in the provision of food?
- ✓ Interaction between nutrition and infection creates the greatest public health problem in the world with heavy consequences on health.
- What are the policies/programmes and projects being implemented in your country to improve water supplies, sanitation, and safe-food, to reduce water-related and foodborne diseases and to control disease vectors to eliminate malnutrition? How are these programmes monitored?
- Are women included in the design, implementation, management and monitoring of policies/programmes and projects in this area? How?

3.3 Food Contamination

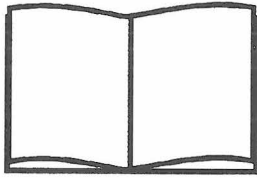
- What are the main causes of foodborne diseases and how is the impact on their health measured in your country?

3.4 Biological Agents

- What is the range of biological and chemical contaminants who have a significant impact on health in your country?
- How can biological contaminants of food be eliminated or considerably reduced in your country?
- ✓ One reason why many bacterial foodborne diseases have become an increasing public health and clinical problem in recent years is linked to agricultural practices.
- How can agricultural practices be improved to reduce/eliminate this public health problem?

3.5 Occupational Hazards and Accidents

- Who are the main groups at risk from occupations hazards in your country in the agricultural sector?

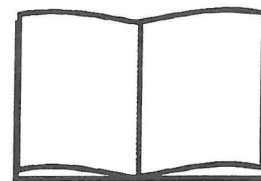


3.6 *Agricultural Chemicals*

- ✓ Many pesticides have been banned in developed countries as a result of studies that revealed the serious health and environmental implications from exposure to them.
 - Are there similar research programmes being implemented in your country?

3.7 *Agricultural Development*

- ✓ The most serious health effects linked to new agricultural developments are associated with irrigation's schemes.
 - Is an integrated approach to promote and protect human health and the avoidance of undesirable environmental change from expansion of food production, processing and marketing being implemented in your country? How?
- ✓ The World Health Organization has recommended some key strategies related to agriculture.
 - How are these recommendations integrated into the national policies/programmes and projects in relation to point 3 to 3.7?



4. Energy

- How is electricity generated in your country?
- What are the policies for efficient use of various energy sources in your country?

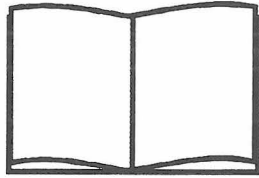
4.1 *Energy Use and Health*

- ✓ Apart from the indirect relationship between energy and health, many energy-dependent processes offer direct benefits to health. For example reduction of health risks from food contamination due to improved food handling, storing, packaging and cooking which depend on fossil fuels or electricity.
- ✓ Provision of health care is highly energy dependent.
 - How is the situation in your country in relation to energy services and health issues?

4.2 *Environmental and Health Effect of Energy Production and Use*

The scale and nature of health risks vary considerably depending on the energy source:

- ✓ Fossil fuels are the largest source of atmospheric pollution.
- ✓ Most of the world's population is exposed to a mixture of air pollutants that may represent a health risk.
- ✓ Urban residents are exposed to outdoor air pollution levels higher than those recommended by WHO.
- ✓ Airborne lead remains a major problem in many cities where lead is still used as an additive in petrol.
- ✓ High levels of sulphur dioxide in combination with smoke and particulates in urban air have been associated with increased mortality.
- ✓ The major secondary pollutant is ozone within photochemical smog.
 - How is the situation in your country in relation to the above problems?



4.2.2 *Hydropower*

- ✓ The health effects of hydropower are mostly indirect and relate to the environmental changes arising from the construction of large hydroelectric dams. There may be large health costs, mostly affecting poorer rural households.
- Do such cases exist in your country? Are irrigation schemes introducing or increasing the transmission of vector borne and water related diseases?

4.2.3 *Nuclear Power*

- ✓ More than 80% of the occupational exposure to radiation in the nuclear fuel cycle is associated with reactor operations. The highest individual doses are incurred by those engaged in maintenance and repair work, especially of heat exchange installations.
- Does such problem exist in your country? If so, how is it being tackled?

4.2.4 *Additional Problems in Developing Countries*

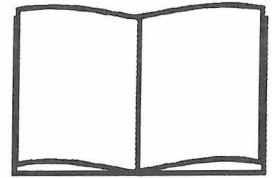
- ✓ The most serious health problem associated with energy in developing countries arises from the use of coal and processed biomass fuel. An estimated 700 million women in the world are likely to be affected by indoor air pollutants arising from the use of biomass fuel, making this the largest occupational health problem for women.
- How is the situation in your country?

4.2.5 *Indoor Pollution from Fossil Fuels*

- ✓ Fossil fuels are widely used for space or water heating in the home or for cooking.
- ✓ Coal fumes are a major cause of indoor air pollution when coal is used for cooking or heating an open fire or in poorly designed stoves with inadequate attention to venting of flue gases.
- What is the situation in your country?

4.2.6 *Indoor Pollution from Biomass Fuels*

- ✓ Nearly half the world's population rely mainly or exclusively on biomass fuel for their daily energy needs.



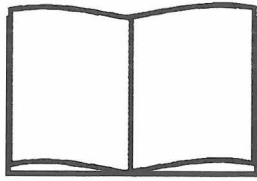
- ✓ The most serious health risks are from burns and smoke inhalation, the severity of risks from the latter depending on the length and level of exposure.
- ✓ Women who spend 2-4 hours a day at the stove have high levels of exposure to suspended particulates and benzo(a)pyrene.
 - What is the situation in your country?

4.3 *Air Pollution*

- ✓ Emission from industry and transport and from domestic energy consumption impose serious costs for health and productivity.
 - What is the level of air pollution in your country?

4.4 *Degradation of Forest and Impacts on Women*

- ✓ Stripping the land for firewood causes wind and water erosion of the soil, estimated to be 7 per cent worldwide and as high as 13 per cent in Africa.
- ✓ Exposure to indoor fuel emissions is the most important occupational health hazard for women in developing countries.
 - How have the WHO priorities for a national strategy been implemented in your country?
 - What are the policies/programmes and projects being implemented in your country in relation to point 4 to 4.4?
 - Are women integrated in the design and implementation of policies, programme and projects? How?



5. Water and sanitation

- ✓ A high proportion of life threatening and health threatening infections are transmitted through contaminated water or food.
- ✓ Nearly half the world's population suffers from diseases associated with insufficient or contaminated water. 1 billion people in developing countries do not have access to clean water and 1.7 billion lack access to sanitation.
 - What is the situation in your country?

5.1 Water Scarcity

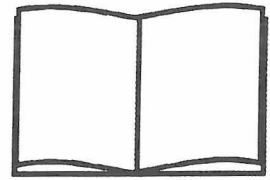
- ✓ Water scarcity is often a regional problem.
 - How is the situation in your country? How is the management of water demand from different sectors of the economy integrated into development policy?

5.2 Water and Impacts on Women

- ✓ Water is needed in households for personal hygiene, sanitation waste disposal, child care, crop growing and food processing, yet supplies commonly are inadequate and unsanitary.
 - What is the situation in your country and how are women affected by it?
- ✓ Groundwater is also contaminated by pesticides and fertilizers used in agricultural processes.
 - How does this affect women and children?

5.3 Other Effects

- ✓ The costs of water pollution include the damage it does to fisheries, which provide the main source of protein in many countries and to the livelihoods of many rural people.
- ✓ Excessive water withdrawal contributes to other environmental problems.
 - What is the situation in your country?

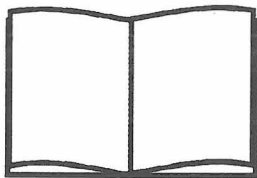


5.4 *Impact of Farming on Water Quality*

- ✓ One of the most direct effects of farming on health is contamination of groundwater, aquifers, and surface waters by fertilizers, biocides and animal wastes.
 - What is the situation in your country?

5.5 *Communicable Diseases Associated with Water*

- ✓ Most of the disease agents that contaminate water and food are biological and come from animal or human faeces.
- ✓ Most of the diseases associated with water are communicable: Waterborne diseases - Water-washed diseases - Water-based diseases. Water related diseases.
- ✓ Water may provide a habitat for water related insect vectors of disease.
- ✓ Other diseases are carried by insects that breed in water.
 - How are the recommendation of the WHO integrated in the national policy?
 - What are the policies/programmes and projects being implemented in your country in relation to point 5 to 5.5?
 - Are women involved in the design of policies/programmes and projects? How?



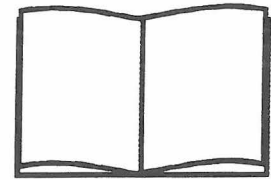
6. Industry, Human Settlements, Urbanization and Basic Services

6.1 Industry

- ✓ Industrial activities carry the risk of adverse health consequences for the workforce and the general population, either directly through exposure to harmful agents or practices or indirectly through environmental degradation.
- ✓ Industrial practices in both developed and developing countries produce adverse environmental health consequences through the release of air and water pollutants and the generation of hazardous wastes.
- ✓ Industrial emissions have polluted many rivers, lakes and coastal environments.
 - How are WHO recommendations integrated in the national policy?

6.2 Human Settlements, Urbanization and Basic Services

- ✓ Environmental management is needed in all settlements to provide water, protect public spaces, remove wastes and protect air and water quality.
- ✓ Rapidly growing urban centres are a particular challenge for environmental health.
- ✓ In the absence of government action to ensure that the infrastructure and services are in place and pollution controlled, environmental health problems are greatly exacerbated.
- ✓ More than 2000 million people live in life-threatening and health-threatening housing and living environments.
- ✓ In urban areas a high proportion of housing is illegal settlements built of flammable materials.
 - Most people in some developed and in developing countries have no health service to turn when they are sick or injured. What is the situation in your country?
 - How are the WHO recommendations integrated in your national policy?
 - What are the policies/programmes and projects being implemented in your country in relation to point 6 to 6.2?



7. Transboundary and International Issues

7.1 *Acid Precipitation*

- ✓ Sulphur and nitrogen oxides emitted from tall chimney stacks by fossil fuel-fired power stations are transported long distances often across national boundaries.

7.2 *The Ozone Layer*

- ✓ The stratospheric ozone layer is being damaged by the release into atmosphere of various chemicals.

7.3 *Greenhouse Gases*

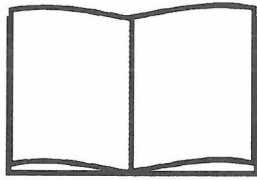
- ✓ Carbon dioxide emissions mostly from fossil fuel combustion are responsible for more than half of the total warming effect.
- ✓ The seriousness of the possible health and environmental consequences of global warming is such that every effort should be made to reduce greenhouse gas emissions now.

7.4 *Solid and Hazardous Wastes*

- ✓ Many cities generate more solid wastes than they can collect or dispose of. The volume increases with income.
- ✓ Generation of hazardous materials and wastes is increasing but the amounts vary enormously amongst countries.

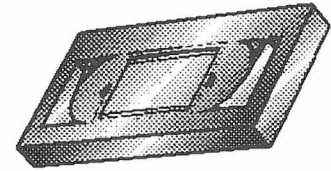
7.5 *Oceans*

- ✓ Large stretches of coastal waters, especially in semi-enclosed seas and where tidal flushing is limited, are heavily polluted by industrial and domestic wastes from rivers and outfalls, land run-off and accidental spills.



7.6 *Biodiversity*

- ✓ Biodiversity is acknowledged as a condition for the long-term sustainability of the environment and its current destruction must be halted.
- What are the international conventions agreements signed by your country in relation to point 7 to 7.6 and how are they reflected in national policies/programmes and projects?



Outline of the Video Programme: “Handle with Care”

UN, 1993, 26 min, English

What is the cost of the post war economic growth to humankind? While there have been benefits to humankind, a high price is paid in terms of the environment and sustainable development.

The Nordic Sami Institute in Norway is one such organization involved in trying to preserve their environment. Chemical dumping, toxic wastes and the health effects on the population of Love Canal near the world famous Niagara Falls is highlighted.

Key issues for Discussion

1. Are there national policies against toxic waste in your country? Are you aware of any situations as presented in the video that affect your environment?
2. How do peri-urban and urban areas cope with waste disposals in your country?
3. What kind of legislation related to toxic and hazardous waste exist in your country?
4. How are scientific approaches with reference to waste management applied in your country?



List of Transparencies

- No. 1: *Health and the environment*
- No. 2: *Consequences (1)*
- No. 3: *Consequences (2)*
- No. 4: *Women in developing countries*
- No. 5: *Integrating development, the environment and health*
- No. 6: *Global challenges to health and the environment*
- No. 7: *Global population growth (1950-2025)*
- No. 8: *Poverty*
- No. 9: *Resource use*
- No. 10: *Macroeconomic frameworks*
- No. 11: *Women health and the environment (1)*
- No. 12: *Women health and the environment (2)*
- No. 13: *Health and Agenda 21*
- No. 14: *Changes in global land use*
- No. 15: *Degradation of agricultural land and impacts on women's health (1)*
- No. 16: *Degradation of agricultural land and impacts on women's health (2)*
- No. 17: *Trends in energy consumption in selected countries (1971-1990)*
- No. 18: *Energy consumption by country group: an "energy-efficient" scenario, 1970-2030*
- No. 19: *Energy use and health (1)*
- No. 20: *Energy use and health (2)*
- No. 21: *Air pollution problems in 20 "megacities" (late 1980's)*
- No. 22: *Urban air pollution levels and trends*
- No. 23: *Wood fuel in national energy consumption in selected countries*
- No. 24: *Burns and smoke inhalation*
- No. 25: *Respiratory disorders*

WOMEN AND ENVIRONMENTAL HEALTH

TRANSPARENCIES
MODULE ONE

HEALTH AND THE ENVIRONMENT

- ➡ **BETWEEN 1990 AND 2030 - WORLD'S POPULATION GROWS BY 3.7 BILLION**
- ➡ **FOOD PRODUCTION WILL NEED TO DOUBLE**
- ➡ **INDUSTRIAL OUTPUT AND ENERGY USE TRIPLE WORLDWIDE AND INCREASE FIVEFOLD IN DEVELOPING COUNTRIES**

THE MOST IMMEDIATE PROBLEMS IN THE
WORLD ARE ALL HEALTH AND
PREMATURE DEATH BY BIOLOGICAL
AGENTS IN HUMAN ENVIRONMENT:
WATER, FOOD, AIR, SOIL
(World Development Report 1992, page 2)

CONSEQUENCES - 1

- ➡ **HUNDREDS OF MILLIONS OF PEOPLE SUFFER FROM RESPIRATORY DISEASES CAUSED BY INDOOR OR OUTDOOR AIR POLLUTION**
- ➡ **HUNDREDS OF MILLIONS EXPOSED TO UNNECESSARY PHYSICAL AND CHEMICAL HAZARDS IN THE WORKPLACE OF HOME**
- ➡ **FOUR MILLION INFANTS AND CHILDREN DIE EVERY YEAR FROM DIARRHOEAL DISEASES**
- ➡ **HUNDREDS OF MILLION OF PEOPLE SUFFER FROM DEBILITATING INTESTINAL PARASITE BURDENS (WHO/EHE/92.1, page 1)**

CONSEQUENCES - 2

- ➡ **TWO MILLION DIE FROM MALARIA EVERY YEAR AND 267 MILLION WHO ARE ILL FROM THE DISEASE**
- ➡ **THREE MILLION DIE EVERY YEAR FROM TUBERCULOSIS AND OTHER 20 MILLION IN WHOM THE DISEASE IS ACTIVE**
- ➡ **HUNDREDS OF MILLIONS SUFFER FROM UNDERNUTRITION**
- ➡ **300 TO 700 MILLION WOMEN AND CHILDREN SUFFER FROM SEVERE INDOOR AIR POLLUTION FROM COOKING FIRES**
(World Development Report 1992, page 2)

WOMEN IN DEVELOPING COUNTRIES



PRIMARY VICTIMS OF POOR ENVIRONMENTAL MANAGEMENT:

- **PREPARATION OF FOOD (INDOOR AIR POLLUTION, FOOD PATHOGENS)**
- **CARING OF CHILDREN (WATER RESOURCES POLLUTION, POOR HEALTH FROM POVERTY AND MALNUTRITION)**
- **TILLING OF LAND (SOIL AND LAND CONTAMINATION)**
- **MAINTENANCE OF HOME (ENERGY POLLUTION, WASTE CONTAMINATION)**

**SUSTAINABLE DEVELOPMENT WILL NOT
BE ACHIEVED IF ENVIRONMENTAL
HEALTH CONSIDERATIONS FAIL TO BE
ADDRESSED SPECIFICALLY AS THEY
RELATE TO WOMEN AND CHILDREN
(WHO/EHE/92.1, page 1)**

INTEGRATING DEVELOPMENT, THE ENVIRONMENT AND HEALTH

⇒ TWO CONCERNS ARE VITAL:

- DEVELOPMENT ADDRESSING PEOPLE'S NEEDS, ESPECIALLY FOR HEALTH; AND
- ECOLOGICAL SUSTAINABILITY SO THAT NATURAL RESOURCES ARE NOT DEPLETED AND NATURAL SYSTEMS NOT DAMAGED OR DEGRADED

⇒ LOCAL PARTICIPATION NEEDS:

- NATIONAL AND GLOBAL FRAMEWORKS TO ENSURE THAT ADEQUATE KNOWLEDGE AND RESOURCES ARE AVAILABLE, AND
- LOCAL ACTIONS DO NOT RESULT IN AN UNSUSTAINABLE BURDEN ON NATURAL CYCLES AND SYSTEMS

GLOBAL CHALLENGES TO HEALTH AND THE ENVIRONMENT

⇒ POPULATION

⇒ POVERTY

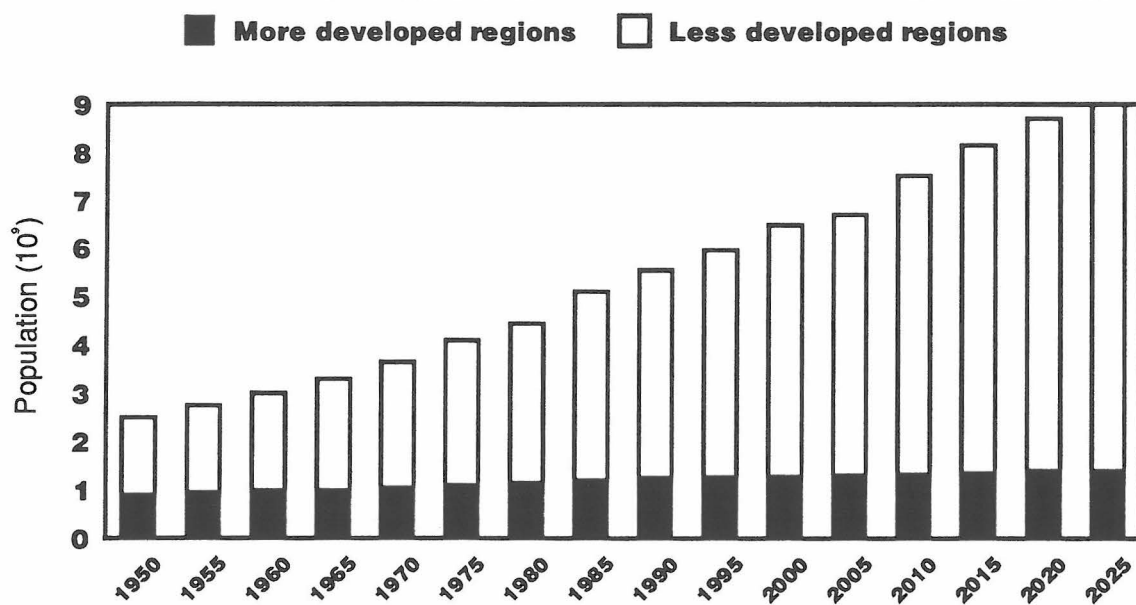
⇒ RESOURCE USE

⇒ MACROECONOMIC FRAMEWORKS

⇒ POVERTY; ENVIRONMENTAL
DEGRADATION; MALNUTRITION

⇒ WOMEN

GLOBAL POPULATION GROWTH (1950-2025)



*Population growth in developing and developed countries,
1950-2025*

Source: Based on UNDESIPA, Environmental Data Report 1993-94 p. 203 1993a

MAIN CAUSES

- ➡ **WIDESPREAD BREAKDOWN OF
TRADITIONAL SYSTEMS OF RESOURCE
MANAGEMENT**
- ➡ **COMMERCIALIZATION**
- ➡ **INEQUALITY OF ACCESS TO LAND AND
OTHER NATURAL RESOURCES**

POVERTY

- ➡ AT LEAST 1115 MILLION PEOPLE WERE CLASSIFIED AS POOR IN THE 1985 AND 630 MILLION OF THESE ARE LIVING IN EXTREME POVERTY
- ➡ IF POVERTY IS MEASURED BY THE NUMBER OF PEOPLE LACKING A STANDARD OF LIVING:
 - ADEQUATE FOOD,
 - SAFE AND SUFFICIENT WATER AND SANITATION,
 - SECURE SHELTER,
 - ACCESS TO EDUCATION AND HEALTH CARE
- ➡ OVER 2000 MILLION PEOPLE LIVE IN POVERTY- SOME 40% OF THE WORLD'S POPULATION
- ➡ A HIGH PROPORTION ARE WOMEN AND CHILDREN WHO ARE MORE VULNERABLE TO ENVIRONMENTAL HEALTH RISKS
- ➡ WOMEN ALSO FACE DISCRIMINATION (WHO/EHE/92.1, page 4)

RESOURCE USE

- ➡ THE IMPACT OF ANY POPULATION ON THE ENVIRONMENT DEPENDS ON THE TYPE AND LEVEL OF ITS RESOURCE USE AND ON ITS WASTE GENERATION AND MANAGEMENT
- ➡ MOST OF THE WORLD'S CONSUMPTION OF NON-RENEWABLE SOURCES IS CONCENTRATED IN EUROPE, NORTH AMERICA AND JAPAN
- ➡ PER CAPUT CONSUMPTION LEVELS IN THE RICHEST COUNTRIES ARE 50 OR MORE TIMES HIGHER THAN IN THE POOREST COUNTRIES
- ➡ THE OECD NATIONS WITH 15% OF THE WORLD'S POPULATION ARE RESPONSIBLE FOR 77% OF ALL HAZARDOUS INDUSTRIAL WASTE
- ➡ MORE THAN 80% OF THE GASES IN THE ATMOSPHERE THAT CONTRIBUTE TO THE GREENHOUSE EFFECT ARISE FROM PRODUCTION OR CONSUMPTION IN THE DEVELOPED WORLD

(WHO/EHE/92.1, page 4)

MACROECONOMIC FRAMEWORKS

- ➡ **MACROECONOMIC POLICIES ARE MAJOR INFLUENCES ON THE STATE OF HEALTH AND OF THE ENVIRONMENT WITHIN ALL COUNTRIES**
- ➡ **THEY ARE USUALLY ESTABLISHED WITH LITTLE OR NO CONSIDERATION GIVEN TO THEIR HEALTH, ENVIRONMENTAL CONSEQUENCES, OR WOMEN'S NEEDS OR CONCERNS**
- ➡ **MACROECONOMIC POLICIES INFLUENCE THE EXTENT TO WHICH HEALTH CARE AND HEALTH RELATED SERVICES ARE FUNDED**
- ➡ **MACROECONOMIC POLICIES SHOULD MINIMIZE CONFLICTS BETWEEN ECONOMIC, ENVIRONMENTAL AND HEALTH GOALS**

WOMEN, HEALTH AND THE ENVIRONMENT - 1 -

- ➡ **WOMEN IN MANY DEVELOPING COUNTRIES PLAY THE PIVOTAL ROLE IN MAINTAINING THE BALANCE BETWEEN HUMAN HEALTH AND SUSTAINING THE ENVIRONMENT**
- ➡ **ENVIRONMENTAL FACTORS THAT IMPAIR HEALTH INCLUDE:**
 - **PATHOGENIC AGENTS AND THEIR VECTORS**
 - **PHYSICAL AND CHEMICAL AGENTS PRESENT IN THEIR ENVIRONMENT**
 - **PHYSICAL AND CHEMICAL AGENTS ADDED TO THE ENVIRONMENT BY HUMAN ACTIVITIES**
- ➡ **WOMEN AND CHILDREN ARE OFTEN MORE VULNERABLE TO THE HEALTH RISKS ASSOCIATED WITH POVERTY AND INADEQUATE STANDARDS OF LIVING**
- ➡ **WOMEN'S VULNERABILITY DURING PREGNANCY AND CHILDBIRTH IS ALSO EVIDENT FROM THE VERY HIGH LEVELS OF MATERNAL MORTALITY IN MOST DEVELOPING COUNTRIES**

WOMEN HEALTH AND THE ENVIRONMENT - 2 -

- ➡ **ABOUT HALF A MILLION WOMEN DIE IN
CHILDBIRTH EACH YEAR. 99% OF THEM
IN DEVELOPING COUNTRIES**
- ➡ **WOMEN SUFFER MORE FROM THE
DISEASES ASSOCIATED WITH
INADEQUATE WATER AND SANITATION
AND FROM THE RESPIRATORY
PROBLEMS ASSOCIATED WITH SMOKY
LIVING ENVIRONMENTS**
- ➡ **MOST PREGNANT WOMEN IN
DEVELOPING COUNTRIES ARE ANAEMIC
AND MANY TEENAGE MOTHERS ARE
NOT FULLY GROWN**
- ➡ **IMPROVING WOMEN'S INCOME,
EDUCATION, HEALTH, NUTRITION
COULD GREATLY REDUCE MATERNAL
MORTALITY AND MORBIDITY**

HEALTH AND AGENDA 21

➡ HUMAN HEALTH IS THE FIRST PRINCIPLE OF THE RIO DECLARATION:

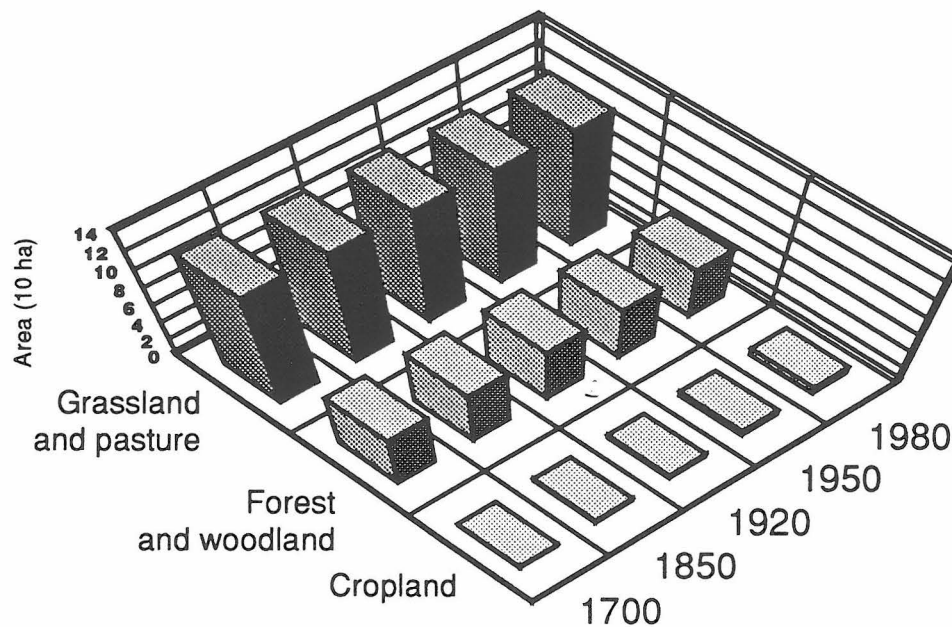
"HUMAN BEINGS ARE AT THE CENTRE OF CONCERN FOR SUSTAINABLE DEVELOPMENT. THEY ARE ENTITLED TO A HEALTHY AND PRODUCTIVE LIFE IN HARMONY WITH NATURE"

➡ THE CONCEPT OF IMPROVED HEALTH IS ADDRESSED THROUGHOUT AGENDA 21

➡ IMPROVED HEALTH IS AT THE CENTRE OF THE MAJOR DEVELOPMENTAL STRATEGIES

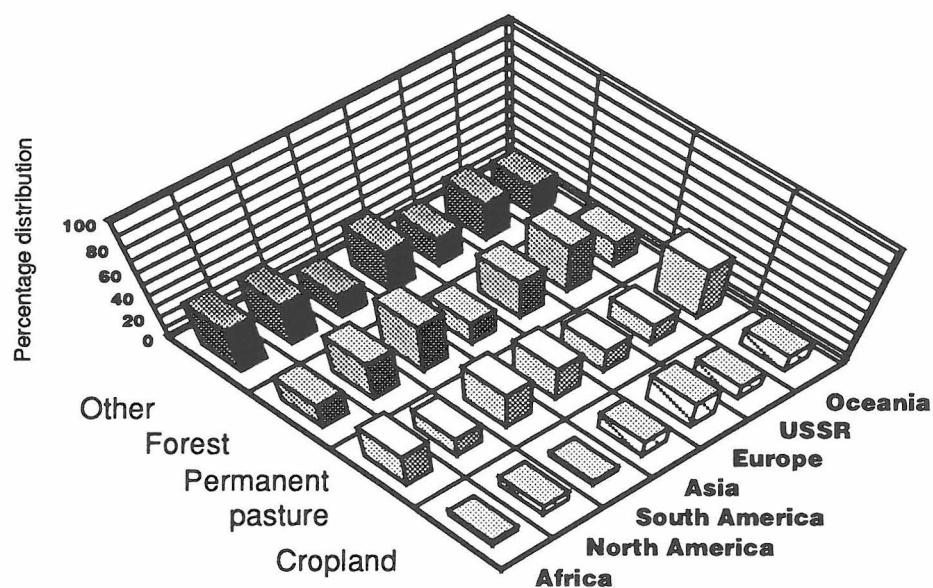
➡ IMPROVED HEALTH IS EQUALLY A CENTRAL CONCERN OF OTHER MAJOR PROGRAMMES OF AGENDA 21: WATER, ATMOSPHERE, HOUSING, AGRICULTURE, TOXIC CHEMICALS, HAZARDOUS AND RADIOACTIVE WASTES

CHANGES IN GLOBAL LAND USE



Long-term changes in global land use, 1700-1980

Source: After Richards, 1990 - Environmental Data Report 1993-94 p. 132



Percentage distribution of land use in major world regions' 1988-1990 (mean annual values)

Source: Data from Table 3.1 - Environmental Data Report 1993-94 p. 132

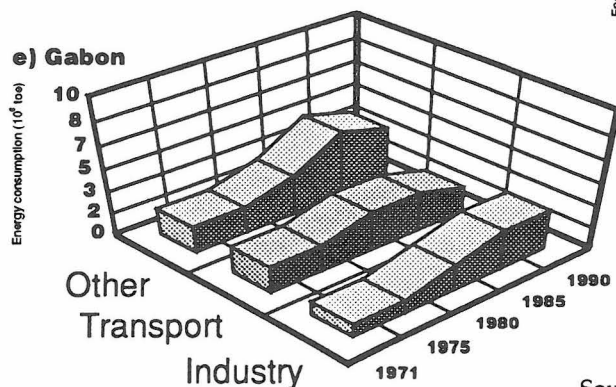
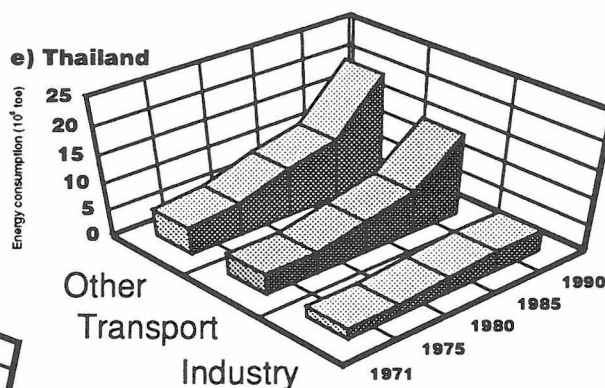
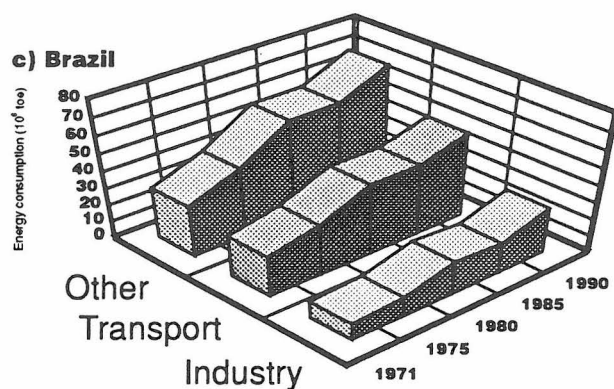
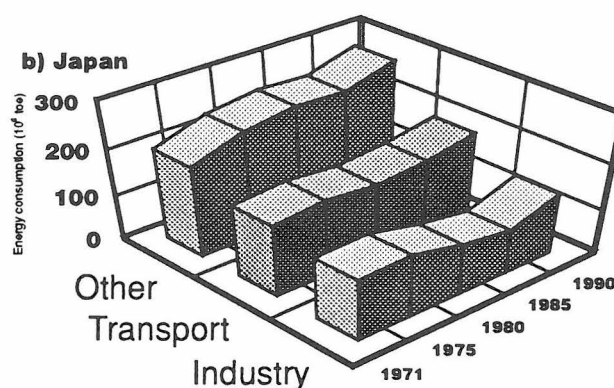
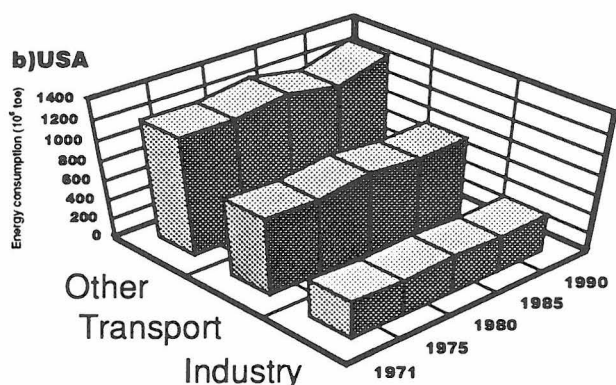
DEGRADATION OF AGRICULTURAL LAND AND IMPACTS ON WOMEN'S HEALTH - 1

➡ **THE DEGRADATION OF AGRICULTURAL LANDS IN DEVELOPING COUNTRIES IS CAUSED BY A NUMBER OF FACTORS, INCLUDING OVERGAZING BY LIVESTOCK (35 PER CENT) AGRICULTURAL PROCEDURES AND TECHNOLOGIES (28 PER CENT) DEFORESTATION (30 PER CENT) OVEREXPLOITATION FOR FUELWOOD (7 PER CENT) AND INDUSTRIALIZATION (1 PER CENT)**

DEGRADATION OF AGRICULTURAL LAND AND IMPACTS ON WOMEN'S HEALTH - 2

- ➡ DECREASE IN THE FOOD SUPPLY IS PARTICULARLY THREATENING TO THE HEALTH OF TWO-THIRDS OF WOMEN IN DEVELOPING COUNTRIES WHO SUFFER FROM MALNUTRITION
- ➡ THE ENVIRONMENTAL HEALTH OF WOMEN IS ALSO THREATENED BY EXPOSURE TO PESTICIDES USED IN AGRICULTURAL ACTIVITIES
- ➡ MALNUTRITION IS THE MOST PREVALENT SERIOUS PROBLEM CONTRIBUTING TO DISEASE SUSCEPTIBILITY IN DEVELOPING COUNTRIES

TRENDS IN ENERGY CONSUMPTION IN SELECTED COUNTRIES (1971-1990)

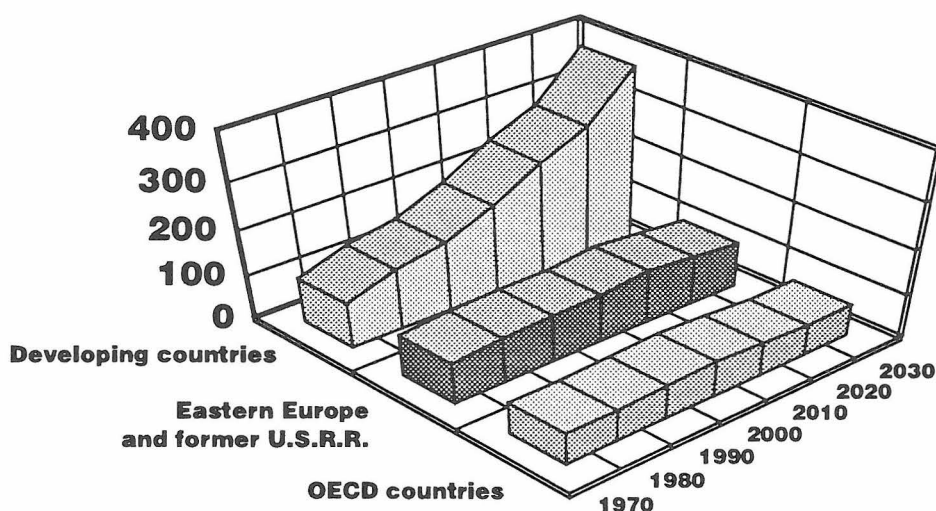


Source: IEA/OCED, 1992 - Environmental Data Report
1993-94 p.276

ENERGY CONSUMPTION BY COUNTRY GROUP: AN "ENERGY-EFFICIENT" SCENARIO, 1970-2030

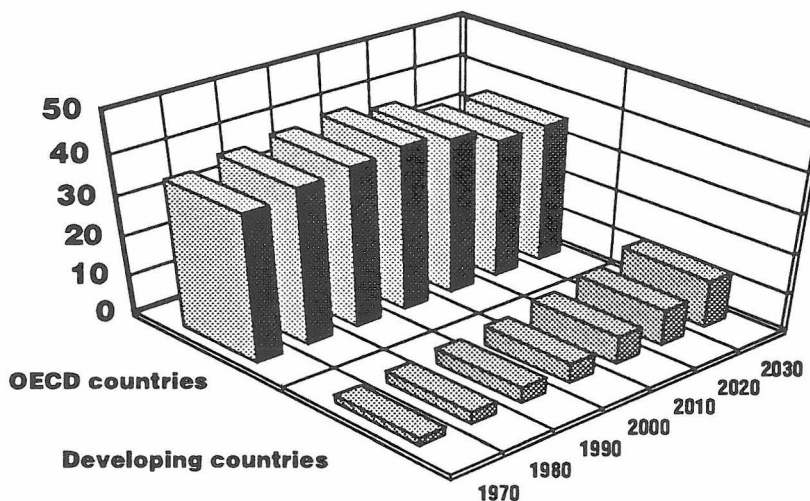
TOTAL CONSUMPTION

Millions of barrels of oil equivalent per day



PER CAPITA CONSUMPTION

Barrels of oil equivalent per year



Source: Anderson 1991a - World Development Report 1992 p. 115

ENERGY USE AND HEALTH - 1 -

- ➡ **ALMOST ALL FORMS OF ENERGY PRODUCTION AND USE HAVE THE POTENTIAL TO PRODUCE ENVIRONMENTAL CHANGES THAT MAY GIVE RISE TO DIRECT OR INDIRECT ADVERSE EFFECTS ON HUMAN HEALTH**
- ➡ **THE SCALE AND NATURE OF THE HEALTH RISKS AND THEIR LOCATION VARY CONSIDERABLY DEPENDING ON THE ENERGY SOURCE**
- ➡ **FOSSIL FUELS ARE THE LARGEST SOURCE OF THE ATMOSPHERIC POLLUTION**
- ➡ **THE HEALTH EFFECTS OF HYDROPOWER ARE MOSTLY INDIRECT AND RELATE TO THE ENVIRONMENTAL CHANGES ARISING FROM THE CONSTRUCTION OF LARGE HYDROELECTRIC DAMS**

ENERGY USE AND HEALTH - 2 -

➡ **THE MOST SERIOUS PROBLEMS ASSOCIATED WITH ENERGY IN DEVELOPING COUNTRIES ARISES FROM THE USE OF COAL AND PROCESSED BIOMASS FUELS**

AN ESTIMATED 700 MILLION WOMEN IN THE WORLD ARE LIKELY TO BE AFFECTED BY INDOOR POLLUTANTS ARISING FROM THE USE OF BIOMASS FUEL MAKING THIS THE LARGEST SINGLE OCCUPATIONAL HEALTH PROBLEM FOR WOMEN (WHO/EHE/92.1, page 10)

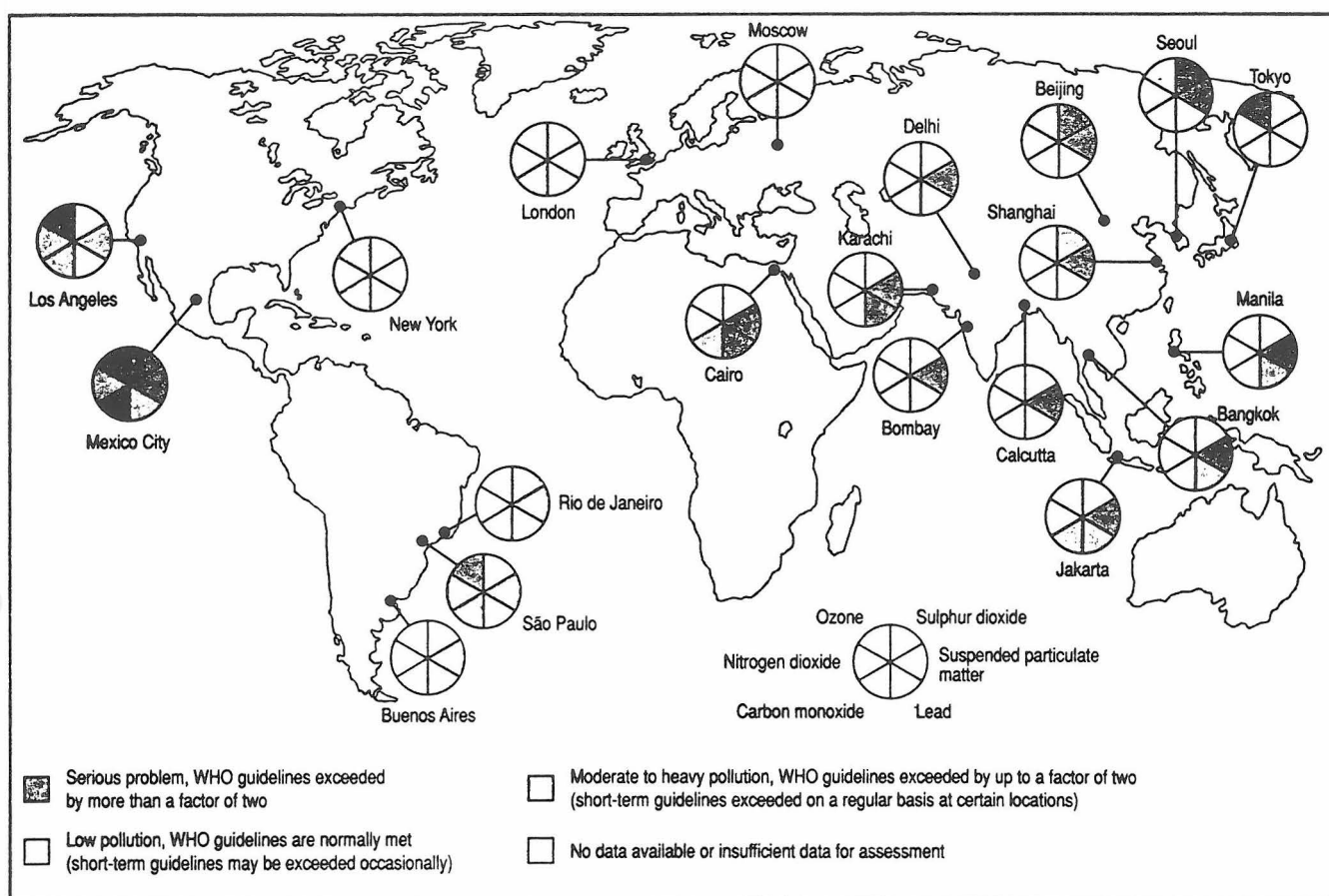
➡ **INDOOR POLLUTION FROM FOSSIL FUELS**

➡ **INDOOR POLLUTION FROM BIOMASS FUELS**

➡ **AIR POLLUTION**

➡ **DEGRADATION OF FOREST**

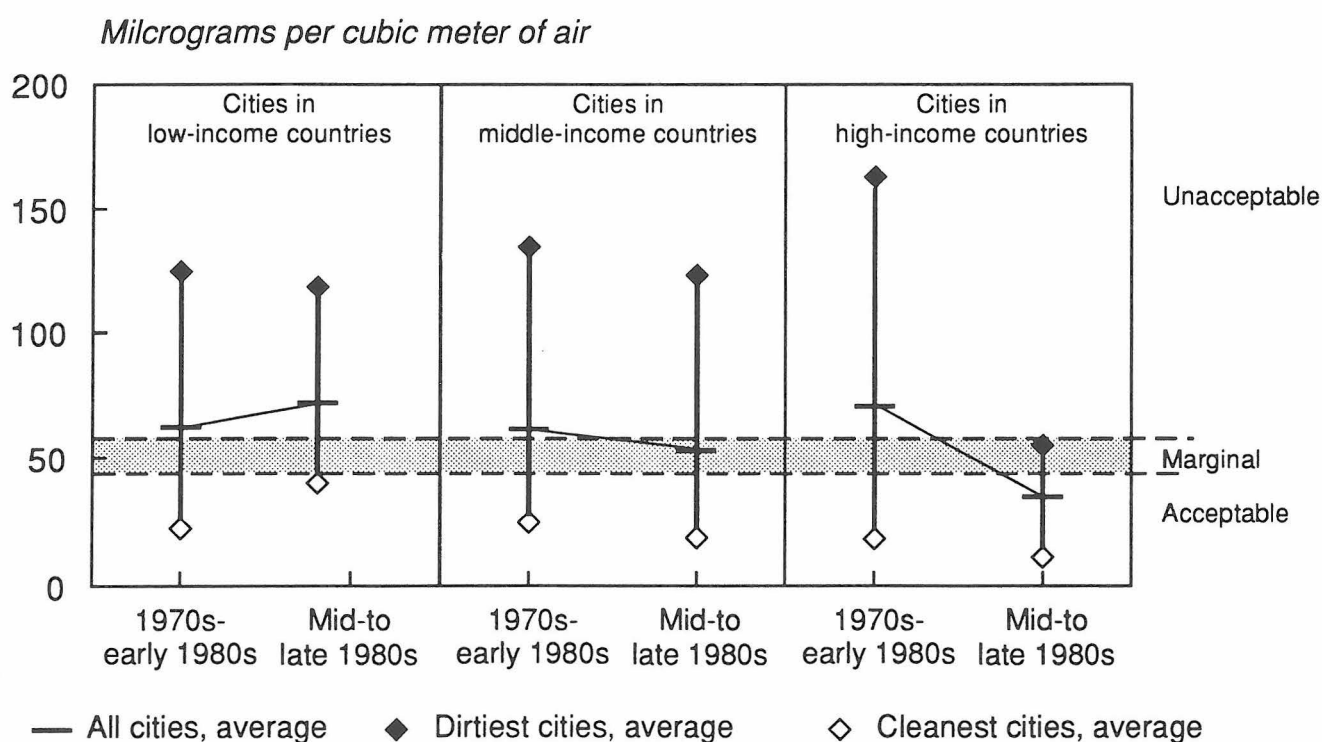
AIR POLLUTION PROBLEMS IN 20 "MEGACITIES"(LATE 1980'S)



Source: Adapted from WHO/UNEP, 1992 - Environmental Data Report 1993-94 p. 27

URBAN AIR POLLUTION LEVELS AND TRENDS

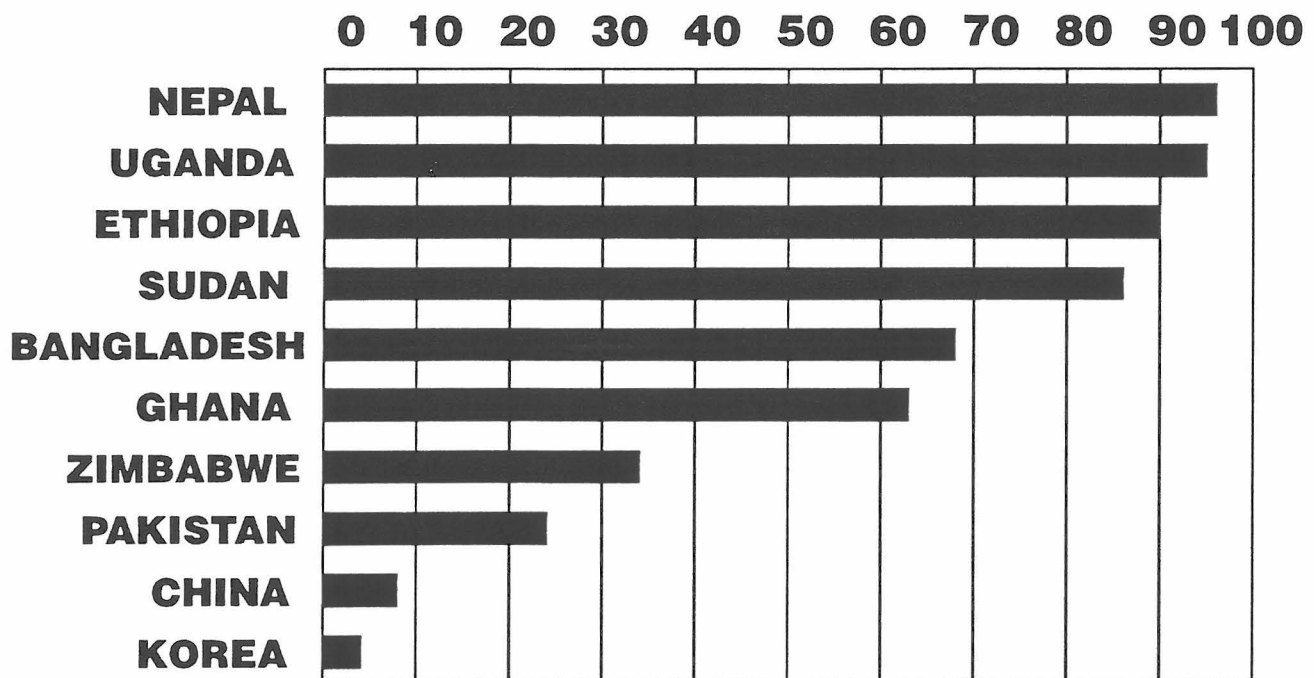
CONCENTRATIONS OF SULPHUR DIOXIDE ACROSS COUNTRY INCOME GROUPS:



Source: Environmental data appendix table A.5. - World Development Report 1992 p. 54

WOOD FUEL IN NATIONAL ENERGY CONSUMPTION IN SELECTED COUNTRIES

ENERGY CONSUMPTION (% OF TOTAL)



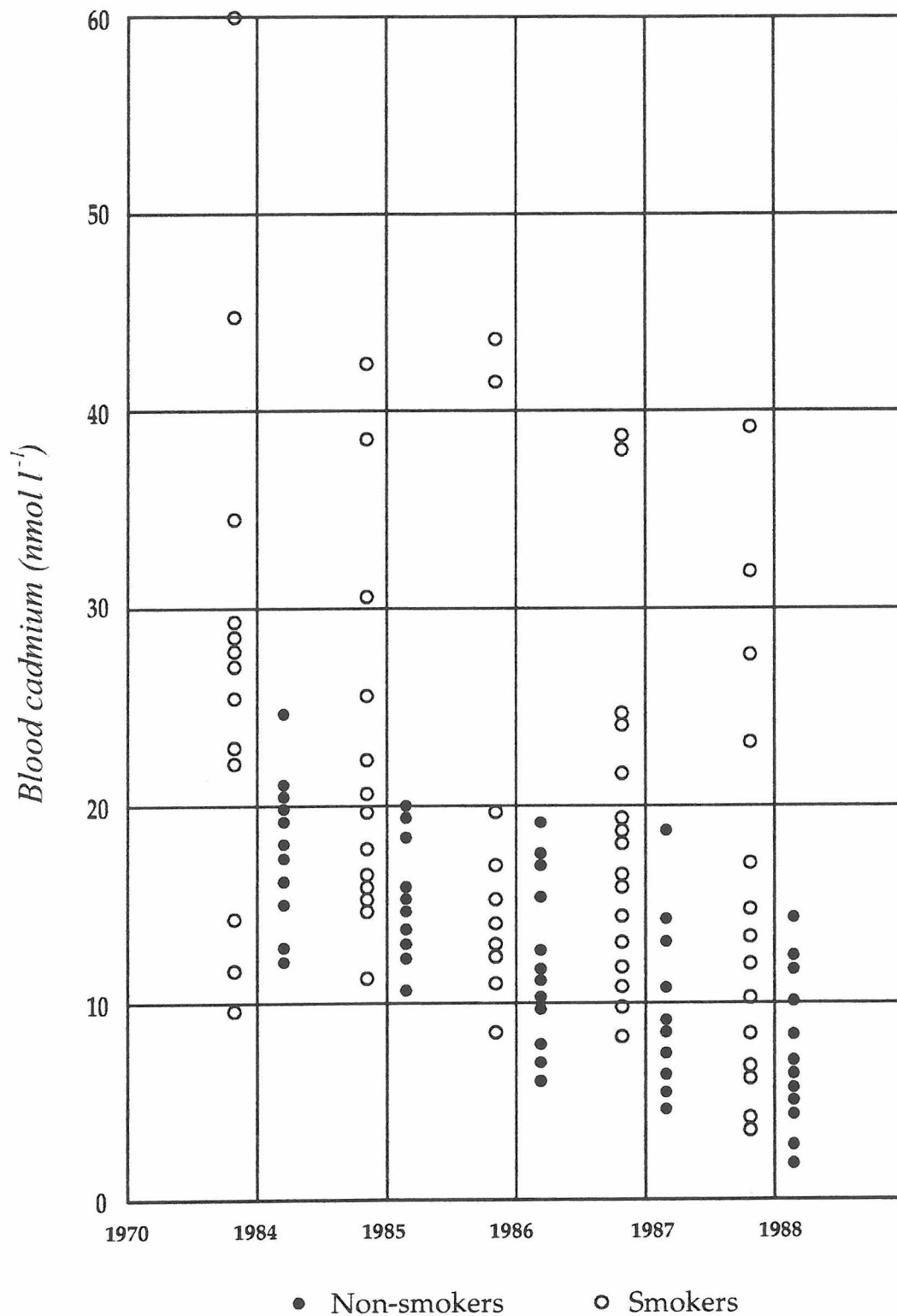
Source: UNEP, 1990 - Environmental Data Report p. 273

BURNS AND SMOKE INHALATION

		CONCENTRATION ($\mu\text{g m}^3$)	
REGION	FUEL	MEAN	MAXIMUM
AFRICA	WOOD	2,300	6,200
ASIA	WOOD	15,800	30,000
	WOOD/DUNG	18,400	30,000
LATIN AMERICA	WOOD		30,000
OCEANIA	WOOD	1,300	4,800
THE ABOVE VALUES MAY BE LOOSELY COMPARED WITH THE WHO AIR QUALITY GUIDELINES FOR PARTICULATES; THESE ARE $120 \mu\text{g m}^3$ FOR ANNUAL AVERAGE (WHO, 1987)			

Source: WHO, 1992b - Environmental Data Report 1993-94 p. 103

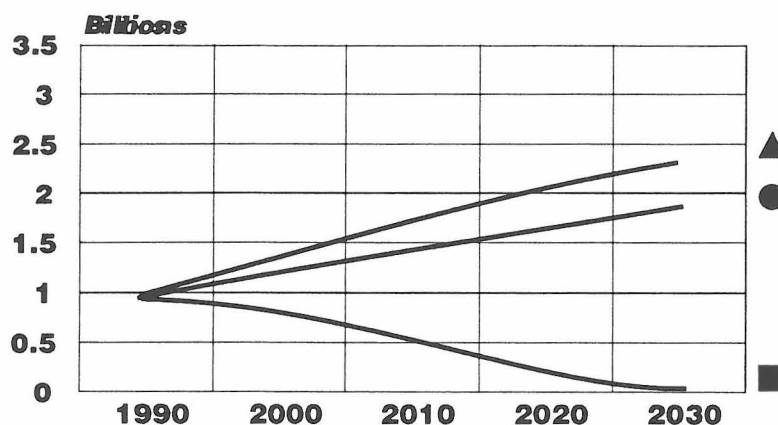
RESPIRATORY DISORDERS



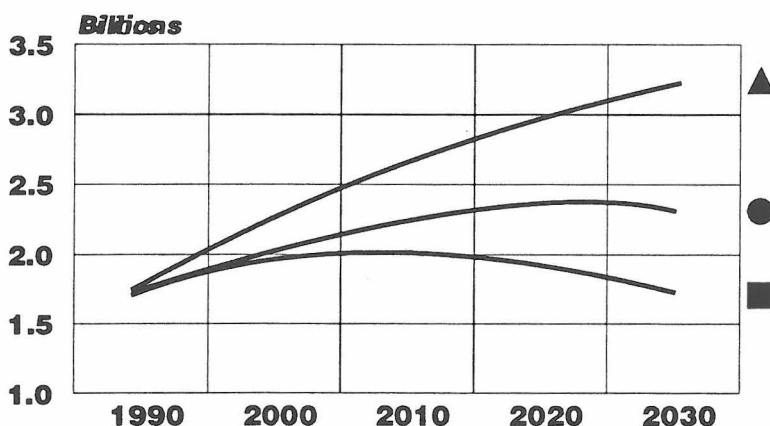
Source: Ducoffre et al., - Environmental Data Report 1993-94 p. 104

SAFE WATER AND ADEQUATE SANITATION: THREE SCENARIOS, 1990-2030

Population without safe water



Population without adequate sanitation

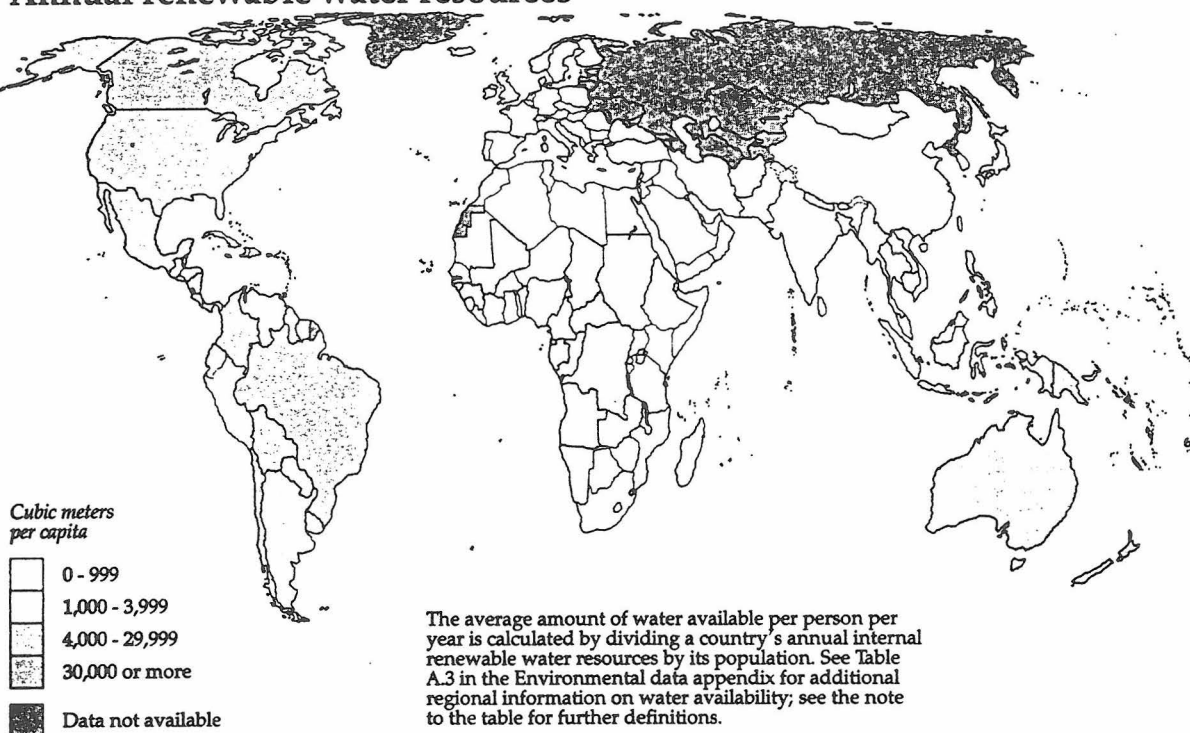


- ▲ "Business as usual" scenario
- Scenario with accelerated investment in water supply and sanitation services (a)
- Scenario with accelerated investment and efficiency reforms (b)

Source: World Bank estimates, based on Anderson and Cavendish, background paper. World Development Report p. 112

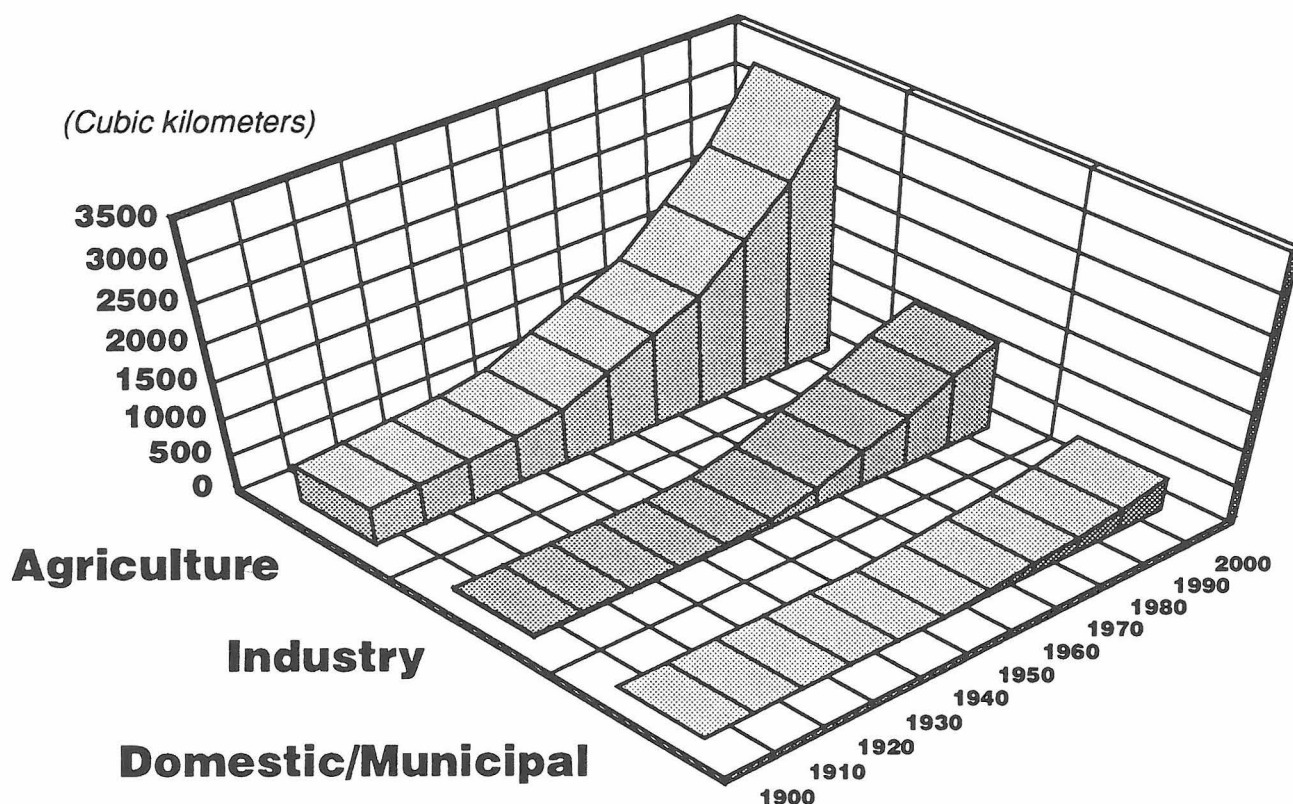
RENEWABLE FRESH WATER RESOURCES

Annual renewable water resources



Source: Data supplied by WRI, Washington DC - World Development Report 1992 p. 217

GLOBAL WATER WITHDRAWAL BY SECTOR, 1900-2000



Source: Igor A. Shiklomanov, "World Fresh Water Resources," in *Water in Crisis*, Peter H. Gleick, ed. (Oxford University Press, New York, 1993), p 20

WATER AND IMPACTS ON HEALTH

- 1

- ⇒ A HIGH PROPORTION OF LIFE THREATENING AND HEALTH THREATENING INFECTIONS ARE TRANSMITTED THROUGH CONTAMINATED WATER OR FOOD**
- ⇒ 1 BILLION PEOPLE IN DEVELOPING COUNTRIES DO NOT HAVE ACCESS TO CLEAN WATER**
- ⇒ 1.7 BILLION PEOPLE LACK ACCESS TO SANITATION**
- ⇒ 2000 MILLION PEOPLE ARE AT RISK FROM WATERBORNE AND FOOD BORNE DISEASES**

WATER AND IMPACTS ON HEALTH

- 2

- ⇒ 900 MILLION CASES OF DIARRHOEAL DISEASES EVERY YEAR**
- ⇒ 5 MILLION CHILDREN DIE DUE TO DIARRHOEAL DISEASE**
- ⇒ 200 MILLION INFECTED WITH SCHISTOSOMIASIS**
- ⇒ 10 MILLION INFECTED WITH GUINEA WORM**
- ⇒ 267 MILLION INFECTED WITH MALARIA**
- ⇒ 90 MILLION INFECTED WITH FILARIASIS**
- ⇒ 18 MILLION INFECTED WITH ONCHOCERCIASIS**

INDUSTRY

- ➡ **INDUSTRIAL PRACTICES IN BOTH DEVELOPED AND DEVELOPING COUNTRIES PRODUCE ADVERSE ENVIRONMENTAL HEALTH CONSEQUENCES THROUGH THE RELEASE OF AIR AND WATER POLLUTANTS AND THE GENERATION OF HAZARDOUS WASTES**
- ➡ **OCCUPATIONAL DISEASES INCLUDE LEAD AND MERCURY POISONING, HEARING LOSS AND SKIN DISEASE. SERIOUS HEALTH RISKS ARE ALSO FACED BY WORKERS IN SMALL-SCALE INDUSTRIES WHERE EXPOSURE TO TOXIC CHEMICALS AND ACCIDENT RATES ARE OFTEN HIGHER THAN IN LARGE INDUSTRIES**
- ➡ **INDUSTRIAL EMISSIONS HAVE POLLUTED MANY RIVERS, LAKES AND COASTAL ENVIRONMENTS ESPECIALLY IN DEVELOPING COUNTRIES**
- ➡ **IN MOST COUNTRIES TOO LITTLE ATTENTION IS GIVEN TO CONTROLLING THE DISPOSAL OF HAZARDOUS INDUSTRIAL AND COMMERCIAL WASTE SO AS TO PREVENT HUMAN EXPOSURE AND LEAKAGE INTO THE ENVIRONMENT**

HUMAN SETTLEMENTS

- ➡ ENVIRONMENTAL MANAGEMENT IS NEEDED IN ALL SETTLEMENTS TO PROVIDE WATER, PROTECT PUBLIC SPACES, REMOVE WASTES AND PROTECT AIR AND WATER QUALITY
- ➡ RAPIDLY GROWING URBAN CENTRES ARE A PARTICULAR CHALLENGE FOR ENVIRONMENTAL HEALTH
- ➡ MORE THAN 2000 MILLION PEOPLE LIVE IN LIFE-THREATENING AND HEALTH-THREATENING HOUSING AND LIVING ENVIRONMENTS
- ➡ AN ESTIMATED 30-50% OF THE SOLID WASTES GENERATED IN URBAN AREAS IN DEVELOPING COUNTRIES IS LEFT UNCOLLECTED
(WHO/EHE/92.1, page 15)

TRANSBOUNDARY AND INTERNATIONAL ISSUES

- ⇒ ACID PRECIPITATION**
- ⇒ THE OZONE LAYER**
- ⇒ GREENHOUSE GASES**
- ⇒ SOLID AND HAZARDOUS WASTES**
- ⇒ OCEANS**
- ⇒ BIODIVERSITY**

STRATEGY

➡ **THREE MAIN GLOBAL OBJECTIVES:**

- **ACHIEVING A SUSTAINABLE BASIS FOR HEALTH FOR ALL**
- **PROVIDING AN ENVIRONMENT THAT PROMOTES HEALTH**
- **MAKING ALL INDIVIDUALS AND ORGANIZATIONS AWARE OF THEIR RESPONSIBILITY FOR HEALTH AND ITS ENVIRONMENTAL BASIS**

➡ **TWO PRINCIPLES ARE CENTRAL TO A HEALTHIER AND MORE SUSTAINABLE PLANET:**

- **MORE EQUITABLE ACCESS TO RESOURCES WITHIN AND BETWEEN COUNTRIES**
- **CITIZEN PARTICIPATION**

RECOMMENDATIONS - 1 -

- ➡ **ALL GOVERNMENTS AND INTERNATIONAL AGENCIES SHOULD HAVE HIGHER PRIORITY TO DEVELOPING A SUSTAINABLE BASIS FOR THE HEALTH OF THEIR PEOPLE AND COUNTRIES**
- ➡ **HIGHER PRIORITY MUST BE GIVEN TO PRIMARY HEALTH CARE (INCLUDING FAMILY PLANNING) AND EDUCATION FOR ALL GROUPS**
- ➡ **RESPONSIBLE ACTION SHOULD BE TAKEN AT ALL LEVELS FROM THE INDIVIDUAL CITIZEN TO THE GOVERNMENT TO REDUCE OVERCONSUMPTION AND THE GENERATION OF WASTES, ESPECIALLY WASTES WITH SERIOUS ADVERSE HEALTH AND ENVIRONMENTAL EFFECTS**

RECOMMENDATIONS - 2 -

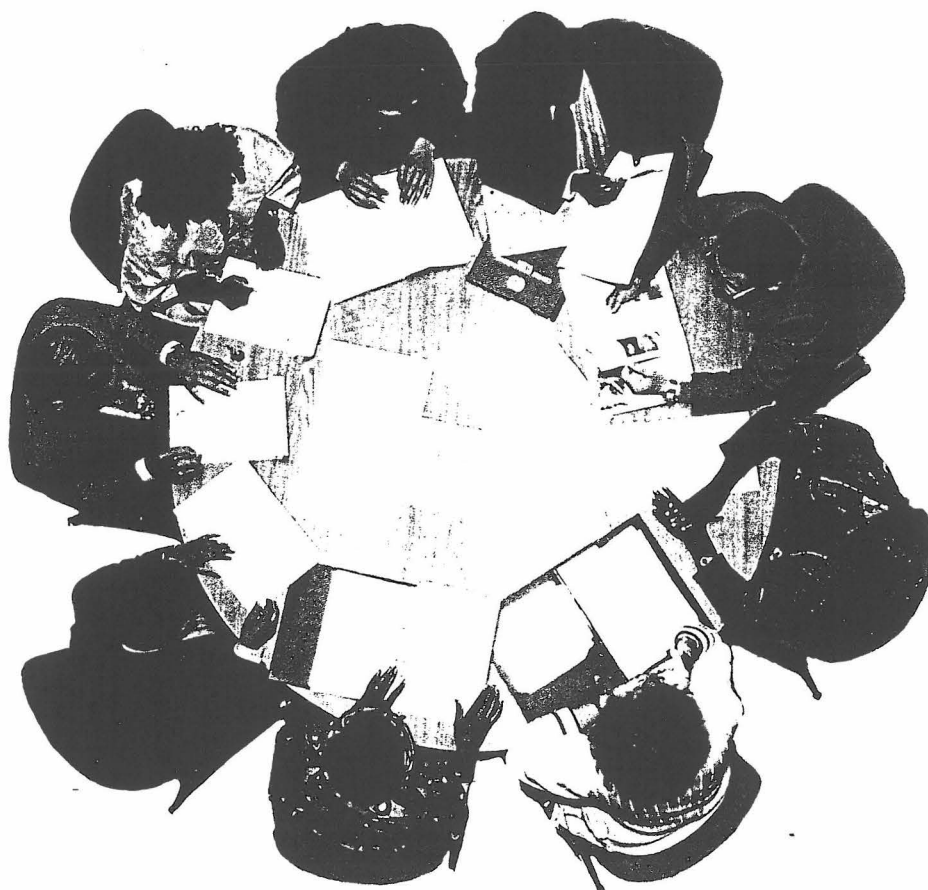
- ➡ **GOVERNMENT STRUCTURES SHOULD BE CHANGED TO GIVE GREATER PRIORITY AND SUPPORT TO PARTICIPATION AND COMMUNITY-BASED INITIATIVES**
- ➡ **CHANGES SHOULD BE MADE IN PLANNING PROCESS FOR SOCIAL AND ECONOMIC DEVELOPMENT AND IN THE INSTITUTIONAL AND REGULATORY STRUCTURES OF GOVERNMENTS TO GIVE STRONGER EMPHASIS TO PREVENTION OF ENVIRONMENTAL POLLUTION, INTERSECTORAL DECISION-MAKING AND PARTICIPATION**
- ➡ **GOVERNMENTS AND AID AGENCIES SHOULD GIVE HIGH PRIORITY TO PROVIDING THE MEANS AND BUILDING UP THE CAPACITY NEEDED BY EACH LOCALITY TO MAKE THE BEST USE OF LOCAL KNOWLEDGE, SKILLS AND RESOURCES TO PROMOTE HEALTH AND ENVIRONMENTAL QUALITY**

RECOMMENDATIONS - 3 -

- ⇒ GOVERNMENTS AND INTERNATIONAL AGENCIES SHOULD GIVE HIGHER PRIORITY TO CREATING THE BASIS OF AN INTERNATIONAL CONSENSUS ON ENVIRONMENTAL, HEALTH AND ECONOMIC ISSUES WITH THE AIM OF ALLEVIATING POVERTY AND SUSTAINING THE QUALITY OF ENVIRONMENT**

- ⇒ GOVERNMENTS, INTERNATIONAL AGENCIES AND PUBLIC AND PRIVATE INSTITUTIONS SHOULD DEVELOP THE NATIONAL CAPACITY FOR THE SYSTEMATIC COLLECTION, ANALYSIS AND MONITORING OF ENVIRONMENTAL EFFECTS OF HEALTH IN THE CONTEXT OF DEVELOPMENT**

Module Two: Women as Agents of Change in the Development Sectors





Module Two: Women as Agents of Change in the Development Sectors

TRAINING TOOLS

- **Training Package on Women, Environmental Management and Sustainable Development:**

Part Two: *"Women as Agents of Change in the Development Sectors" (page 145 to 246)*

- **Trainers' Guide:**

1. *General Objective*
2. *Specific Objectives*
3. *Suggested Training Strategy*

- **Training Activities:**

Option No. 1: *Recommendations for a More Effective Involvement of Women in the Design and Implementation of Development Policies and Programmes*

Option No. 2: *Recommendations for a Policy Framework at the National Level*

- **Outline of Video Programmes: "Food and Environment" and "Inherit the Earth" (for African Region) and Key issues for Discussion**
- **List of Transparencies**



Trainers' Guide

1. General Objective

Discussing major policies and policy frameworks developed by the UN system, participants will be able to analyze women's roles and to integrate women's needs in the design and implementation of various national development/environment sectors policies.

2. Specific Objectives

More specifically, they will be able to:

- Review the state of the global environment by analyzing key indicators;
- Identify within the key environmental sectors of the national context the main roles of women and present problems;
- Understand the role of women as agents of change in various development sectors;
- Analyze the degree of women's participation in the design, implementation of policies, programmes and projects related to development sectors at the national level;
- Formulate recommendations in view of a more effective involvement of women in policies and projects related to the development sectors at the national level.



3. Suggested Training Strategy

KEY POINTS/ACTIVITIES	METHOD	MEDIA
1. Present the general and specific objectives of Module Two	Presentation	Flipchart
NOTE: In order to create awareness and recognize women as major agents of change in environmental management and sustainable development, with specific reference to agriculture, the trainer may decide to present the Video Programme "Inherit the Earth". Please refer to outline on page 33	Presentation	Video Programme "Inherit the Earth" for African region
<p>1. Based on the previous reading of the Training Package on Women, Environmental Management and Sustainable Development "Part Two: Women as Agents of Change in the Development Sectors" (page 145 to 246) and with the support of transparencies, present the following points:</p> <p>I. INTRODUCTION</p> <p>1.1 The State of the Global Environment</p> <p>1.2 Energy</p> <p>1.3 Human Settlements</p> <p>1.4 Food and Agriculture</p> <p>1.5 Forestry</p> <p>1.6 Water Resources</p> <p>1.7 Waste Management</p> <p>1.8 Population Trends</p> <p>II. WOMEN IN THE DEVELOPMENT SECTORS</p> <p>2.0 Introduction</p> <p>2.1 Women and Population</p> <p>2.1.1 Issues</p> <p>2.1.2 Policy Framework</p>	Lecture and discussion with visual aids	<p>Transparency No. 1</p> <p>Transparency No. 2</p> <p>Transparencies No. 3/4</p> <p>Transparencies No. 5/6</p> <p>Transparencies No. 7/8</p> <p>Tr. No. 9/10</p> <p>Transparency No. 11</p> <p>Transparency No. 12</p> <p>Transparency No. 13</p> <p>Tr. No. 14/ 15/ 16/ 17/ 18/ 19/ 20/21/ 22/23/ 24/ 25/26/27/28/29</p>



Trainer's Guide

KEY POINTS/ACTIVITIES	METHOD	MEDIA
<p>2.2 Women and Human Settlements</p> <p>2.2.1 Issues</p> <p>2.2.2 Policy Framework</p> <p>2.2.3 Women as Agents of Change</p> <p>2.3 Women and Energy</p> <p>2.3.1 Issues</p> <p>2.3.2 Policy Framework</p> <p>2.3.3 Women as Agents of Change</p> <p>2.4 Women and Water Resources</p> <p>2.4.1 Issues</p> <p>2.4.2 Policy Framework</p> <p>2.4.3 Women as Agents of Change</p>	Lecture and discussion with visual aids	<p>Transparency No. 30</p> <p>Tr. No. 31/32</p> <p>Tr. No. 33/34/35/36/37</p> <p>Transparency No. 38</p> <p>Transparency No. 39/40</p> <p>Tr. No. 41/42</p> <p>Tr. No. 43/44</p>
<p>Note: In order to debate on relationship between poverty and environmental degradation, the trainer may decide to present the Video Programme "Food and Environment - World Food Day". Please refer to outline on page 35</p>		<p>Video Programme "Food and Environment - World Food Day"</p>
<p>2.5 Women, Food and Agriculture</p> <p>2.5.1 Issues</p> <p>2.5.2 Policy Framework</p> <p>2.5.3 Women as Agents of Change</p> <p>2.6 Women and Forestry</p> <p>2.6.1 Issues</p> <p>2.6.2 Policy Framework</p> <p>2.6.3 Women as Agents of Change</p> <p>2.7 Women and Transport</p> <p>2.7.1 Issues</p> <p>2.7.2 Policy Framework</p> <p>2.8 Women and Science and Technology</p> <p>2.8.1 Issues</p> <p>2.8.2 Policy Framework</p>	Presentation	<p>Tr. No. 45/46/47</p> <p>Tr. No. 48/49</p> <p>Transparency No. 50</p> <p>Transparency No. 51</p> <p>Transparency No. 52</p> <p>Transparency No. 53</p> <p>Transparency No. 54</p> <p>Transparency No. 55</p>
<p>NOTE: The trainer on the basis of the needs/expectations of the target group and the time constraints, should select amongst the optional activities given in this module</p>		



KEY POINTS/ACTIVITIES	METHOD	MEDIA
3. Explain the objective of the activity that you have selected	Presentation	
4. Distribute the instruction of the activity that you have selected	Facilitate group work	
5. Plenary presentation and assessment of group work	Discussion	Flipchart
6. Summary and review by the trainer. Link to Module Three if foreseen in your seminar	Presentation and discussion	Flipchart



Option No. 1: Recommendations for a More Effective Involvement of Women in the Design and Implementation of Development Policies and Programmes

TIME: 90 min

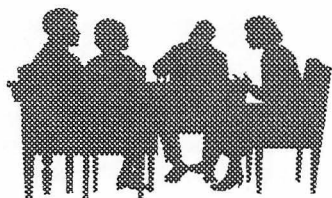
1. Objective

Identify the degree of involvement of women in the design and implementation of policies, programmes and projects related to the development sectors and formulate recommendations for a more effective integration of women at the national level.

2. Group Work

Through brainstorming with the rest of the group, answer the following questions:

- What are the main sectors of environment in your country and the main problems experienced?
- Who affects population growth rates and population control in your country?
- Are women involved in the sectors of: energy, human settlements, food and agriculture, forestry, water resources and waste management? How?
- What kind of participation did women have in policies, programmes and projects related to various development sectors in your country?
- Has the government or any external support agencies incorporated women's needs in any of their activities or programmes?

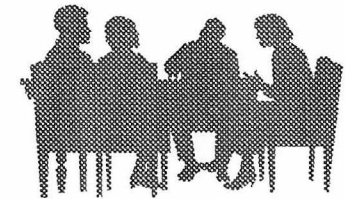


- What would you recommend for a more effective involvement of women in policies and projects related to the main development sectors presented in this module?

You may use the attached form for the presentation in plenary.

3. Plenary Work

In plenary, the selected spokesperson will present the outcome of the group work for further discussion with the rest of the group and the trainer.



MAIN SECTORS OF ENVIRONMENT/ DEVELOPMENT	PRIORITY PROBLEMS	WOMEN'S INVOLVEMENT IN POLICIES/ PROGRAMMES/ PROJECTS	RECOMMENDATIONS



Option No. 2: Recommendations for a Policy Framework at the National Level

TIME: 180 min

1. Objective

To undertake an in-depth analysis of the main issues and international policy frameworks related to women in the development sectors and make recommendations on the adoption of a policy framework at the national level.

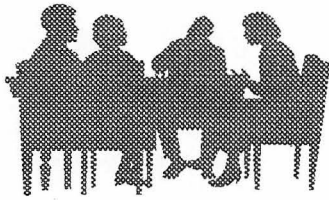
2. Individual Work

In order to facilitate your analysis, please read the enclosed summary containing the main issues related to women in the development sectors and the relevant policy frameworks presented in this module. Select the relevant issues for your groupwork.

3. Group Work

Through brainstorming with the rest of the group, try to reach a consensus on the following questions:

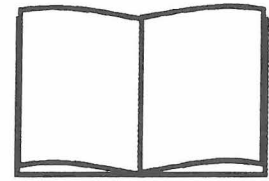
- How do the main issues outlined in this module relate to your national context?
- How are the policy frameworks regarding women in the development sectors applied at the national level?
- What are the programmes/projects being implemented in your country which reflect the international policy framework?



- Make recommendations on the adoption of a policy framework at the national level.

4. Plenary Work

In plenary, the selected spokesperson will present the outcome of the group work for further discussion with the rest of the group and the trainer.



Summary of Main Issues and Policy Framework

2. Women in the Development Sector

2.1 Women and Population

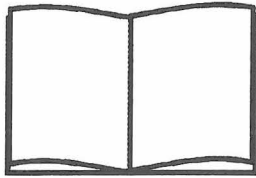
2.1.1 Issues

- (1) Empowerment and status of women;
- (2) The girl child;
- (3) Male responsibility and participation as fathers, husbands and as sons;
- (4) Safe motherhood; and
- (5) Reproductive rights and family planning.

2.1.2 Policy Framework

International and national governments have moved to enact policies and laws to address the issues identified. Some of the more important policies as identified for the **Programme of Action of the International Conference on Population and Development** (Cairo 1994) include:

- (a) Establishing mechanisms for women's equal participation and equitable representation at all levels of the political process and public life in each community and society and enabling women to articulate their concerns and needs;
- (b) Promoting the fulfilment of women's potential through education, skill development and employment, giving paramount importance to the elimination of poverty, illiteracy and ill health among women;
- (c) Eliminating all practices that discriminate against women; assisting women to establish and realize their rights [...including those that relate to sexual and reproductive health...];
- (d) Adopting appropriate measures to improve women's ability to earn income beyond traditional occupations, achieve economic



self-reliance, and ensure women's equal access to labour market and social security systems;

- (e) Eliminating violence against women;
- (f) Eliminating discriminatory practices by employers against women, such as those based on proof of contraceptive use or pregnancy status;
- (g) Making it possible, through laws, regulations and other appropriate measures, for women to combine the roles of child-bearing, breastfeeding and child-rearing with participation in the workplace.

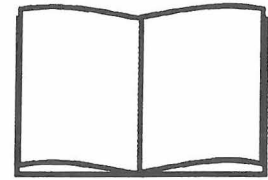
The Programme continues with a number of further **recommendations for action by governments** to establish and implement in order to improve the status of women.

In regards to the girl child, the Programme of Action of the International Conference on Population and Development calls for countries to:

- (a) Eliminate all forms of discrimination against the girl child and the root causes of son preference, which results in harmful and unethical practices regarding female infanticide and prenatal sex selection;
- (b) Increase public awareness of the value of the girl child, and concurrently, to strengthen the girl child's self-image, self-esteem and status;
- (c) Improve the welfare of the girl child, especially in regard to health, nutrition and education.

Programmes need to be implemented which:

- (1) Speak for and broaden the value of girl children beyond their potential child-bearing and caretaker role;
- (2) Promote equitable treatment of girls and boys with respect to nutrition, health care, inheritance rights, education and social, economic and political activity;
- (3) Ensure the widest and earliest possible access by girls and women to secondary and higher levels of education, as well as vocational education and technical training;
- (4) Enforce laws to ensure that marriage is only entered into with the free and full consent of the intending spouses and to enforce laws



concerning the minimum legal age of consent and minimum age of marriage;

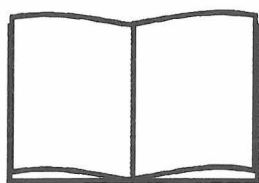
- (5) Prohibit female genital mutilation where it exists;
- (6) Take necessary measures to prevent infanticide, prenatal sex selection, trafficking in girl children and use of girls in prostitution and pornography.

To encourage male education, responsibility and participation, the Programme of Action of the International Conference on Population and Development urges countries to promote gender equality in all spheres of life, including family and community life, and to encourage men to take responsibility for their sexual and reproductive behavior and their social and family roles. Programmes need to be implemented which:

- (a) Encourage the equal participation of women and men in all areas of family and household responsibilities, including family planning, child-rearing and housework through information, education, communication employment legislation and by fostering an enabling economic environment, such as family leave for both men and women so that they may have more choice regarding the balance of their domestic and public responsibilities;
- (b) Emphasize men's shared responsibility and their active involvement in responsible parenthood, including sexual and reproductive health, family planning, prenatal, maternal and child health, prevention of sexually transmitted diseases, including HIV, the prevention of unwanted and high-risk pregnancies, shared control and contribution to family income, children's education, health and nutrition, and recognition and promotion of the equal value of children of both sexes. Special emphasis must be given to the prevention of violence against women and children;
- (c) Enforce measures which ensure the appropriate financial support of children by fathers.

To promote safe motherhood, the Programme of Action of the International Conference on Population and Development calls for all countries to:

- (a) Promote women's health and safe motherhood to achieve a rapid and substantial reduction in maternal morbidity and mortality

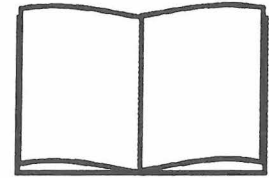


and reduce the differences observed between developing and developed countries and within countries, and to greatly reduce the number of deaths and morbidity from unsafe abortions;

- (b) Improve the health and nutritional status of women, especially of pregnant and nursing women;
- (c) Promote child health and survival and to reduce disparities between developed and developing countries and within countries with particular attention to eliminating the pattern of excess and preventable mortality among girl infants and children;
- (d) Improve the health and nutritional status of infants and children;
- (e) Promote breastfeeding as a child-survival strategy.

In regards to reproductive rights and family planning, the Programme of Action for the International Conference on Population and Development urges countries to:

- (a) Strive to make accessible through primary health-care systems, programmes in family planning counselling, information, education, communication and services; education and services for prenatal care, safe delivery, pregnancy termination and post-natal care, especially breastfeeding, infant and mother's health care; prevention and appropriate treatment of infertility; treatment of reproductive tract infections; sexually transmitted diseases; and information, education and counselling, as appropriate, on human sexuality. Active discouragement of female genital mutilation should also be an integral component of such programmes.
- (b) Ensure that reproductive and sexual health programmes are designed to serve the needs of women and adolescent females and that women are involved in the leadership, planning, decision making, management, implementation, organization and evaluation of such services.
- (c) Implement innovative programmes to make information, counselling and services for sexual and reproductive health accessible to adolescent and adult men. Such programmes must both educate and enable men to share more equally in family planning, domestic and child-rearing responsibilities and to accept the major responsibility for the prevention of sexually-transmitted diseases.



- (d) Identify and remove all remaining barriers to the utilization of family planning services.
- (e) Take appropriate steps to help women avoid abortion, which in no case should be promoted as a method of family planning, and wherever possible, provide for the humane treatment and counselling of women who have had to recourse to abortion.
- (f) Establish, at an international level, an efficient coordination systems and global, regional and subregional facilities for the procurement of contraceptive and other commodities essential to reproductive health programmes of developing countries. The international community should also consider measures such as the transfer of technology to developing countries enabling them to produce and distribute high-quality contraceptives and other commodities essential for reproductive health.
- (g) Prevent, reduce the incidence of, and provide treatment for, sexually transmitted diseases, including HIV/AIDS, and the complications of sexually transmitted diseases such as infertility, with special attention given to girls and women.

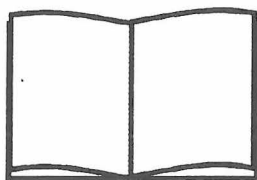
2.2 Women and Human Settlements

2.2.1 Issues

- lack of social services
- unsanitary conditions
- unsafe working environments
- inadequate or inappropriate housing

2.2.2 Policy Framework

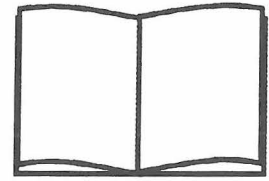
In 1975, at the start of the UN Decade for Women, the Plan of Action of the Mexican Conference referred to the special role of women in human settlements. Official recognition came in the 1976 UN Habitat Conference in Vancouver. Ten years later at the Nairobi Conference, documents stressed the need for women to participate in and benefit from plans, programmes and projects related to the development of human settlements. The resolutions adopted in Nairobi, published as the *Forward-Looking Strategies for the Advancement of Women*, called for a number of major changes in policy and practice:



- (1) The enrolment of women in architectural, engineering and related fields should be encouraged, and qualified women graduates in these fields should be assigned to professional, policy-making and decision-making positions. The shelter and infrastructural needs of women should be assessed and specifically incorporated in housing, community development, and slum and squatter projects (paragraph 209).
- (2) Women and women's groups should be participants in and equal beneficiaries of housing and infrastructure projects. They should be consulted on the choice of design and technology of construction and should be involved in the management and maintenance of the facilities. To this end, women should be provided with construction, maintenance and management skills and should be participants in related training and educational programmes. Special attention must be given to the provision of adequate water to all communities, in consultation with women (paragraph 210).
- (3) Housing credit schemes should be reviewed and women's direct access to housing construction and improvement credits secured. In this connection, programmes aimed at increasing the possibilities of sources of income for women should be promoted and existing legislation or administrative practices endangering women's ownership should be revoked (paragraph 211).
- (4) Special attention should be paid to women who are the sole supporters of families. Low cost housing and facilities should be designed for such women (paragraph 212).

The Earth Summit continued with this policy approach to integrate women's needs in human settlement. Chapter 7 of Agenda 21 continues:

- (1) Generate employment for the urban poor, particularly women, through provision, improvement and maintenance of urban infrastructure and services and the support of economic activities in the informal sector such as repairs, recycling, services and small commerce [7.16 b (i)].
- (2) Institutionalize a participatory approach to sustainable urban development, based on continuous dialogue between the actors involved in urban development (public sector, private sector and communities), especially women and indigenous people [7.20 (a)].

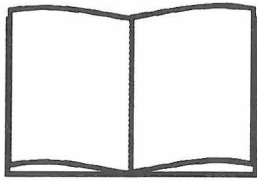


- (3) Establish appropriate forms of land tenure which provide security of tenure for all land-users, especially indigenous people, women, local communities, the low income urban dweller and the rural poor [7.30 (f)].
- (4) Provide direct assistance for human settlement development at the community level inter alia by [7.77 9d]):
 - (i) Strengthening and promoting programmes for social mobilization and awareness raising of the potential of women and youth in human settlements activities;
 - (ii) Facilitating coordination of the activities of women, youth, community groups, and non-governmental organization in human settlements development;
 - (iii) Promoting research on women's programmes and other groups, evaluating progress made with a view to identify bottlenecks and needed assistance.

2.3 Women and Energy

2.3.1 Issues

- Lack of education and training;
- Lack of participation in energy planning, programming and project design;
- Lack of information and awareness-raising methodologies;
- Lack of financial means and access to credit;
- Lack of access to choice with regard to various types of technologies;
- Lack of availability of secure energy resources and access to decentralized renewable energy services;
- Costs of energy services;
- Impacts of deforestation and afforestation on the quality of life for women;
- Victims of energy scarcity and related environmental degradation which is accompanied by a decline in life support systems;
- Managers of energy services and other natural sources, producing and using the majority of energy resource used in developing countries, in households, agriculture and small industry;



- Marginalized by development programmes generally, including those in energy with less access to land, services, education, extension, marketing, technology and credit; and
- Actors and activist in developing innovative strategies, in taking remedial action and in disseminating new ideas, at the local, national and global levels.

2.3.2 Policy Framework

Perhaps the most important policy statement with respect to women and energy is the *Nairobi Forward-Looking Strategies*, which states:

Paragraph 218

Measures developed to rationalize energy consumption and to improve energy systems, especially of hydrocarbons, and to increase technical training should be formulated with a view to women as producers, users and managers of energy sources.

Paragraph 219

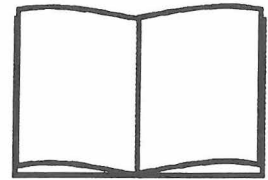
In conventional and non-conventional national energy programmes, women should be integrated as contributors and beneficiaries with a view to their needs, as determined by specific socio-cultural factors at local and national levels and in both rural and urban contexts. Assessment of new energy sources, energy technologies and energy-delivery systems should specifically consider the reduction of the drudgery that constitutes a large part of the work of poor urban and rural women.

Paragraph 220

The grassroots participation of women in energy-needs assessment, technology and energy conservation, management and maintenance efforts should be supported.

Paragraph 221

Priority should be given to substituting energy for muscle in the performance of the industrial and domestic work of women without loss of their jobs and tasks to men. In view of the high percentage of domestic use in total energy consumption in low-income countries, the implications of increasing energy costs, and the current threats posed by inflation, immediate attention should be directed towards action concerning adapted technologies, fuel conservation and improved or new sources of energy such as biomass, solar and wind energy,



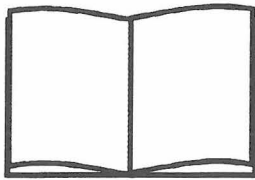
geothermal and nuclear energy, as well as mini-hydroelectric power plants. Improved stoves should be designed and disseminated to reduce the drudgery involved in the collection of fuel by women.

Paragraph 222

In order to prevent depletion of forest areas on which most rural women rely for much of their energy needs and income, **innovative programmes, such as farm woodlot development, should be initiated with the involvement of both women and men. In commercialization of fuelwood energy, measures should be taken to avoid the loss of women's income to middlemen and urban industries.** Development of fuelwood plantations, diffusion of fast-growing varieties of trees and technologies for more efficient production of charcoal should be accelerated with a view to **poor rural and urban women being the major beneficiaries.** The use of **solar energy and biogas** should be promoted with due regard to affordability, as well as to use and management by **women** who are the principle consumers.

Paragraph 223

The **involvement of women at all levels of decision-making and implementation of energy-related decisions including peaceful use of nuclear energy should be enhanced.** Special efforts should be made by Governments and non-governmental organizations to provide women and women's organizations with information on all sources and uses of energy, including nuclear energy. Special incentives should be provided to enable women to obtain advanced levels of education and training in all energy-related areas in order to expand their participation in decision-making relating to the application of nuclear technology for peaceful uses especially in high priority development areas of water, health, energy, food production and nutrition. To achieve these goals, **increased opportunities and encouragement should be given to women to study science, mathematics and engineering at the university level and for girls to study mathematics and science at the pre-university level.**

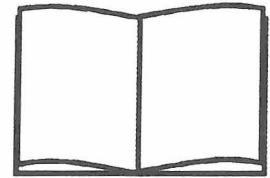


2.4 Women and Water Resources

2.4.1 Issues

A number of issues central to women's roles in water resource management have emerged. These include:

- (1) **Women are hardest and earliest hit by environmental degradation in general and water scarcity in particular.** The fulfilment of survival tasks is becoming increasingly difficult, due to degradation of the environment. Deforestation, irrigation and the heavy use of groundwater for commercial farming are some of the reasons why drinking water sources are drying up. This increases women's workload, because they have to walk longer distances or wait longer. **Shortages of basic resources such as water and firewood and excessive time needed for collection often force women to reduce other economic activities.**
- (2) **The need for an integrated watershed management approach in which women play a central role is increasingly being stressed.** Women use the whole watershed as a resource base and are important partners for integrated planning and development and water resources management. **Projects should not be limited to physical restoration of a degraded environment, but focus on the creation of strong village institutions which can take action and manage land and water use. Involvement of women can be enhanced by including functional education programmes on watershed management for them in the project.** In addition, adapted programmes should be developed for each watershed, based on local needs. **Research on watersheds should be interdisciplinary and look at a whole range of activities, with a special focus on women.** Gender analysis should precede the drawing up of the research agenda.
- (3) **Access to resources such as water, energy, and land is an important prerequisite for women's involvement in the improvement and management of their environment.**
- (4) **Men's resistance to women's involvement in water resources management activities and projects is a constraint women face.** Women need to be empowered to protect and maintain their own water resources.



- (5) The introduction of modern technologies in water resource projects can have negative impacts on women's roles and position in the community, particularly if they have had no say in project design. Women's participation and needs should be taken into account if projects are to be successful.

2.4.2 Policy Framework

The New Delhi Statement and Dublin Statement both provide explicit policy statements in regards to the important role of women in water resources management.

2.4.2.1 The New Delhi Statement

The New Delhi Global Consultation confirmed renewed support of the objectives of the Water Decade. The need to more fully integrate women into water supply and sanitation programmes was strongly emphasized in the Statement in the second and third principles on people and institutions and community management. In emphasizing the need for strong institutions and well trained human resources to ensure sound management of the environment, it is written that:

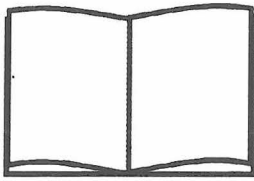
Women must be trained and guaranteed equal employment opportunities at all levels of staff and management. Community management is seen to be the key for sustaining services for the rural poor and poor urban settlements. Communities should have prominent roles in planning, resource mobilization and all subsequent aspects of development and within these strategies, women should be encouraged to play influential roles in both water management and hygiene education.

2.4.2.2 The Dublin Statement

The third governing principle of the Dublin Statement states:

Women play a central part in the provision, management and safeguarding of water. This pivotal role of women as providers and users of water and guardians of the living environment has seldom been reflected in institutional arrangements for the development and management of water resources. Acceptance and implementation of this principle requires positive policies to address women's specific needs and to equip and empower women to participate at all levels in water resources programmes, including decision-making and implementation, in ways defined by them.

From January 26 - 31, 1992, 500 participants attended the International Conference on Water and Environment (ICWE) in Dublin, Ireland. The



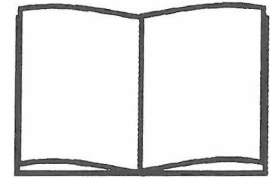
Conference participants saw the emerging global water resources picture as critical and called for fundamental new approaches to the assessment, development and management of freshwater resources. In its closing session, the Conference adopted the Dublin Statement on Water and Sustainable Development and commended it to the world leaders assembled in Rio de Janeiro in June 1992.

2.4.2.3 Agenda 21

Perhaps the most comprehensive policy statement relating to women and water resource management is Agenda 21.

Chapter 18: the Protection of the Quality and Supply of Freshwater Resources: Application of Integrated Approaches to the Development, Management and Use of Water Resources of Agenda 21 recommends that:

- (1) Integrated water resources management, including the integration of land- and water-related aspects, should be carried out at the level of the catchment basin or sub-basin... and to design, implement and evaluate projects and programmes that are both economically efficient and socially appropriate within clearly defined strategies, based on an approach of full participation, including that of women, youth, indigenous people, local communities, in water management policy-making and decision-making [18.9 (c)].
- (2) To improve integrated water resource management, develop public participatory techniques and their implementation in decision-making, particularly the enhancement of the role of women in water resources planning and management [18.12 (n)].
- (3) Delegate water resources management to the lowest appropriate level which then necessitates educating and training water management staff at all levels and ensuring that women participate equally in the education and training programmes... [18.19].
- (4) An enabling environment for the lowest level appropriate level management which includes the role of government in mobilizing financial and human resources, legislation, standard setting and other regulatory functions... and creating opportunities for public participation... This should include... donor support to local levels in



- developing countries, including community-based organizations, **non-governmental organizations and women's groups** [18.22].
- (5) **Education and training programmes** be established and strengthened on water-related topics... for all categories of staff involved in water resources assessment activities, using advanced educational technology, where appropriate and **involving both men and women** [18.33 (b)].
 - (6) **Action is carried out at the national level to strengthen the managerial capabilities of water-user groups, including women, youth, indigenous people and local communities, to improve water-use efficiency at the local level** [18.34 (d)].
 - (7) Implicit in virtually all of the recommendations of Chapter 18 of Agenda 21 is the need for progressive enhancement of training and career development of personnel in sector institutions. It is **urged that special provision be made for mobilizing and facilitating the active participation of women... and that special education and training programmes for women should be launched with regard to the protection of water resources and water quality within urban areas** [18.62].
 - (8) The key to holistically and integrated environmentally sound management of water resources in the rural context includes the participation of local communities in all phases of water management, **ensuring the full involvement of women in view of their crucial role in the practical day-to-day supply, management and use of water** [18.68 (b)].

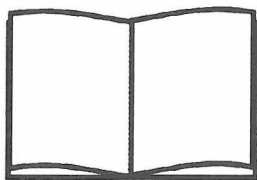
2.5 Women, Food and Agriculture

2.5.1 Issues

Women are particularly active in all phases of the production cycle, including the conservation, storage, processing and marketing of food and agricultural products. Women, therefore, make a vital contribution to economic development.

Women remain responsible for the bulk of household work even when employed outside the home.

The effects of the degradation of agricultural lands are not limited to women, but many such effects are confined to them because of the



gender-specific division of labor in many rural agricultural societies. (Ibid., p.12).

The central role of women as primary farmers in rural areas of developing countries has often been ignored in rural development programmes and projects. Extension services, new technologies, and access to credit for farmers have often been directed only to male head of households, while ignoring the fact that it is the woman who is responsible for food and agricultural production for her family.

Experience has shown, however, that in order to alleviate poverty, improve the lot of small producers, and increase food crop production, rural women must be at the centre of rural development programmes and policies. Greater attention to, and support for, rural women farmers in agricultural and rural development will improve their productivity, raise their families' standard of living, and maintain a sustainable use of the land, soil and water resources upon which their livelihood depends.

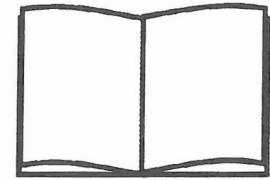
Women have title to only one per cent of the world's land. Yet they produce more than half of the world's food - and in countries of food scarcity, that figure is even higher.

It is estimated that rural women in Africa contribute two-thirds of all hours spent in traditional agriculture and three-fifths of the hours spent in marketing agricultural produce.

2.5.2 Policy Framework

To promote and achieve sustainable agriculture and rural development, Agenda 21 urges governments at the appropriate level, with the support of the relevant international and regional organizations to:

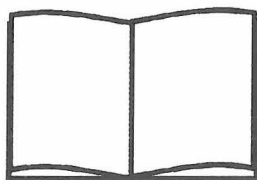
- (1) Establish legal measures to **promote access of women to land** and remove biases in their involvement in rural development [14.14 (b)].
- (2) To **promote greater public awareness of the role of people's participation and people's organizations, especially women's groups, youth, indigenous people and people under occupation, local communities and small farmers, in sustainable agriculture and rural development** [14.17 (a)].
- (3) To ensure equitable access of rural people, particularly women... to land, water and forest resources and to technologies, financing, marketing, processing and distribution [14.17 (b)].



- (4) Review existing measures to achieve wider access to land, water and forest resources and ensure equal rights to women... [14.18 (b)].
- (5) **Develop and disseminate to farming households integrated farm management technologies** such as crop rotation, organic manuring and other techniques involving reduced use of agricultural chemicals, multiple techniques for sources of nutrients and the efficient utilization of external inputs, while enhancing techniques for waste and by-product utilization and prevention of pre- and post-harvest losses, **taking particular note of the role of women** [14.27 (a)].
- (6) **Train extension agents and involve farmers and women's groups in crop health** and alternative non-chemical ways of controlling pests in agriculture [14.81 (b)].
- (7) **Train farmers and women's groups in plant nutrition management**, with special emphasis on topsoil conservation and production [14.91 (b)].

In Chapter 32 of Agenda 21 it continues:

- (1) The rural household, indigenous people and their communities, and the family farmer, **a substantial number of whom are women, have been the stewards of much of the Earth's resources**. Farmers must conserve their physical environment as they depend on it for sustenance... [32.3].
- (2) **To support and enhance the legal capacity of women and vulnerable groups with regard to access, use and tenure of land** [32.6 (b)].
- (3) **To enhance the participation of farmers, men and women, in the design and implementation of policies...** [32.6 (f)].
- (4) **Protect, recognize and formalize women's access to tenure and use of land**, as well as rights to land, access to credit, technology, inputs and training [32.7 (d)].
- (5) **Governments and farmer's organizations** should develop pilot projects and extension services that would **seek to build on the needs and knowledge base of women farmers** [32.9 (c)].
- (6) Governments should... establish mechanisms **to increase access of farmers, in particular women and farmers from indigenous**



groups, to agricultural training, credit and use of improved technology for ensuring food security [32.15 (c)].

2.6 *Women and Forestry*

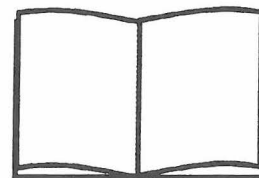
2.6.1 *Issues*

- (1) Women are active users and managers of forest and tree resources, but as forestry is often considered a man's field, women's roles are often invisible to project designers and managers;
- (2) Women and men often have differing uses for forest resources, which influence their motives for participating in various forestry activities; and
- (3) Women may have special cultural constraints in regard to land and natural resources (beyond those that men have), which may hamper their ability to participate in decision making and project activities.

2.6.2 *Policy Framework*

Chapter 11 "Combating Deforestation" of Agenda 21 defines the policy framework for women and forestry. It stipulates:

- 11.2 ...More effective measures and approaches are often required at the national level **to improve and harmonize policy formulation, planning and programming; legislation measures and instruments; development patterns; participation of the general public, especially women and indigenous people; involvement of youth; roles of the private sector, local organizations; non-governmental organizations and cooperatives...** It is especially important to ensure a **rational and holistic approach to the sustainable and environmentally sound development of forests.**
- 11.4 ...Some of the major activities... are as follows:
- (b) **Promoting participation of the private sector, labour unions, rural cooperatives, local communities, indigenous peoples, youth, women, user groups and non-governmental organizations in forest-related activities, and access to information and training programmes within the national context.**
 - (c) **Establishing and/or strengthening institutions for forest education and training as well as forestry industries, for developing an adequate cadre of trained and skilled staff at the**



professional, technical and vocational levels, with **emphasis on youth and women.**

11.14 **Governments, with the participation of... women... should act to maintain and expand existing vegetative cover...** major activities should include:

- (i) **Launching or improving opportunities** for participation of all people including youth, **women... in the formulation, development and implementation of forest-related programmes and other activities...**

11.19 **Essential means** for effectively implementing the activities include **training and development of appropriate skills**, working facilities and condition, public motivation and awareness. Specific activities include:

- (c) Supporting local organizations, communities, non-governmental organizations and private land owners, **in particular women**, youth, farmers and indigenous people/shifting cultivators, **through extension and provision of inputs and training.**

11.28 The **success and effectiveness** of the programme depends on the **availability of skilled personnel**. Specialized training is an important factor in this regard. New emphasis should be given to the incorporation of women.

2.7 Women and Transport

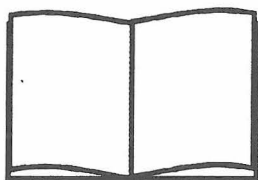
2.7.1 Issues

Women are the largest users of public transportation. In rural areas, women have the responsibility of transporting produce and resources to and from market places, their home and collections areas.

Women are forced to carry their resources, produce and children by themselves; on their backs, heads, and in their arms.

Women's work is increased in the time it takes to find adequate resources, collect what is needed for their families and to transport it home, by foot, usually with the help of their children.

The consequences for women's health are serious. The long hours women spend in water collection and in all of their many daily tasks render them chronically tired, further deteriorating the health of women who may already be undernourished, anaemic, or requiring additional food due to frequent pregnancies. The negative effects of carrying heavy



loads of water on the skeletal health of women and children and of the dangers that water collection holds for pregnancies have been documented in a number of WHO reports.

In urban areas, women need to travel to work just like men, but are faced with gender-based constraints different to men. For example, women's income levels are typically lower than men's and women in many cases are wholly supporting dependent children. Women spend even more of their salaries on transportation, proportionally, than do men. Women also face threats to their physical and sexual safety travelling on public transportation during the night hours.

It is urgent that safe reliable and inexpensive transportation forms of transport be provided for women and the poor in order to reduce their daily work burdens.

2.7.2 Policy Framework

The Nairobi Forward-Looking Strategies summarizes the issues and policy requirements needed regarding women and transport.

Paragraph 213

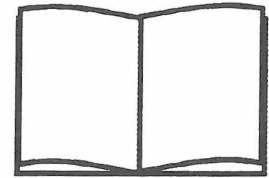
All measures to increase efficiency of land, water and air transportation should be formulated with due regard to women as producers and consumers. All national and local decisions concerning transportation policies, including subsidies, pricing, choice of technology for construction and maintenance, and means of transport, should consider women's needs and should be based on consideration of the possible impact on the employment, income and health of women.

Paragraph 214

Women's roles as operators and owners of means of transport should be promoted through greater access to credit for women and other appropriate means and equal consideration with regard to the allocation of contracts. This is particularly important for women's groups and collectives, especially in rural areas, that are usually well organized but are cut off from serviceable means of transport and communication.

Paragraph 215

Rural transportation planning in developing countries should aim at reducing the heavy burden on women who carry agricultural produce, water and fuelwood as heavy loads. In exploring modes of transportation, efforts should be made to avoid loss of income and



employment for women by introducing costs that may be too high for them.

Paragraph 216

In the choice of modes of transportation and the design of transport routes, **the increasing ratio of women** whose income is essential for family survival **should be taken into account**.

Paragraph 217

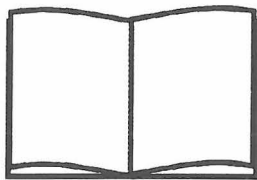
In the design and choice of both commercial and appropriate vehicular technology, the needs of women, especially those with young children, **should be taken into consideration**. Institutional support to give women access to appropriate vehicles should be provided.

2.8 Women and Science and Technology

2.8.1 Issues

Women face a number of constraints to their equal participation in the science and technology sector. These include:

- (1) The formal education system in most countries is gender-biased and strongly discourages girls and women from studying science and technology subjects. Girls and women tend to be enrolled in the humanities and social sciences while boys and men are concentrated in the natural sciences and technology. Enrolment of girls and women in formal education also sharply drops compared to that of boys and men after primary and secondary levels. Thus girls and women generally do not receive as much education as boys and men in general. This influences women's future participation in employment in the science and technology fields.
- (2) Science and technology employment tend to be competitive and goal oriented. To get ahead in the field, great amounts of time and commitment are required. Women, due to their social roles, as mothers and wives, often do not have the necessary time on a daily basis or motivation to commit to their work. Women also face absences from work due to pregnancies and birth. The odds are very much against women climbing up the ladder to the top-level positions in any field of work.



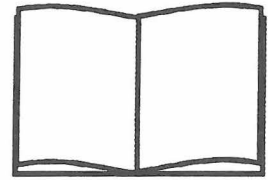
- (3) Stereotyped attitudes towards women and girls often discourage them from enrolling in technical training courses or in formal education in the science and technology fields. From early childhood, girls are taught to nurture home and family while boys are given freedom to play and develop interests in technical skills. There are very strong social forces in place which discourages deviation from these gender-based roles.
- (4) Women are not generally clear targets for participation in technical training programmes and projects in the fields of science and technology. Where training courses in, for example, agriculture, animal husbandry, housing, and basic infrastructure (water, sanitation, electricity) are introduced, typically men are invited to attend before women, or if enrolment is open, social attitudes discourage women from participating.

In 1979 the United Nations held a conference entitled **Science and Technology for Development** which adopted a resolution on "Women, Science and Technology". This resolution invited member states to:

- (1) **The equal distribution of the benefits of scientific and technological development and its applications to men and women in society.**
- (2) **The participation of women in the decision-making process** related to science and technology, including planning and setting priorities for research and development and in the choice, acquisition, adaptation, innovation, and application of science and technology for development.
- (3) **The equal access for women and men to scientific and technological training** and to the respective professional careers.

Internationally, it is recognized that women have a very unequal role in the science and technology sector. This inequity needs to be addressed, not just for the sake of women who are discriminated against in terms of access to new scientific and technological development, as well as in employment and educational opportunities in the sector, but also for the sake of global welfare. It is felt that if women had an equal role in decision-making in the selection of, and use of scientific and technological developments, more peaceful and less destructive uses and innovations would be achieved.

2.8.2 Policy Framework



The *Nairobi Forward-Looking Strategies* contains policy statements in regards to women and science and technology.

Paragraph 200

The full and effective participation of women in the decision-making and implementation process related to science and technology, including planning and setting priorities for research and development, and the choice, acquisition, adaptation, innovation and application of science and technology for development should be enhanced. Governments should reassess their technological capabilities and monitor current processes of change so as to anticipate and ameliorate any adverse impact on women, particularly adverse effects upon the quality of job.

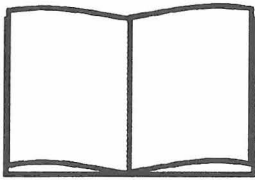
Paragraph 201

The involvement of women in all of the peaceful uses of outer space should be enhanced and effective measures should be undertaken to integrate women into all levels of decision-making and the implementation of such activities. In all countries, special efforts should be made by Governments and non-governmental organizations to provide women and women's organizations with information on the peaceful uses of outer space. Special incentives should be provided to enable women to obtain advanced education and training in areas related to outer space in order to expand their participation in the application of outer space technology for peaceful uses, especially in the high-priority development areas of water, health, energy, food production and nutrition. To achieve these goals, increased opportunities and encouragement should be given to women to study science, mathematics and engineering at the university level and to girls to study mathematics and science at the pre-university level.

Paragraph 202

Women with appropriate skills should be employed at managerial and professional levels and not restricted to service-level jobs. Special measures should be taken to improve working conditions for women in the science and technology fields, to eliminate discriminatory classification of jobs and to protect the right of women to promotion. Efforts should be made to ensure that women obtain their fair share of jobs at all levels in new technology industries.

Paragraph 203



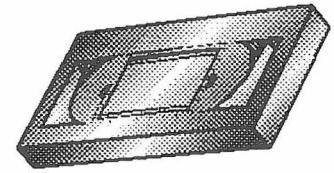
Major efforts should be undertaken and effective incentives created to **increase the access of women to both scientific and technological education and training**. To achieve these goals, efforts should be made by Governments and women themselves to enhance, where necessary, the change of attitudes towards women's performance in scientific fields.

Paragraph 204

The potential and actual impact of science and technology on the developments that affect women's integration into the various sectors of the economy, as well as on their health, income and status, should be assessed. **Relevant findings should be integrated in policy formulation to ensure that women benefit fully from available technologies and that any adverse effects are minimized.**

Paragraph 205

Efforts in the design and delivery of appropriate technology to women should be intensified, and attention should be given to the achievement of the best possible standard in such technologies. In particular, the implications of advances in **medical technology for women** should be carefully examined.



Presentation of the Video Programme: “Inherit the Earth”

1. Objective

To recognize women as major agents of change for environmental management and sustainable development with specific reference to agriculture.

2. Outline of the Video Programme: “Inherit the Earth”

AIDOS, 1992, 16', English

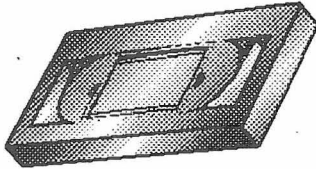
Women have a special relation to land and play a fundamental role in agriculture. The role is particularly evident in areas where men, in search for jobs, leave their families to the complete responsibility of women. Women maintain ecological balance. They know how to find water, use herbs, and identify what trees are the best for fuel.

In urban areas of Latin America women organized themselves in recycling garbage, pressing government to promulgate better policies.

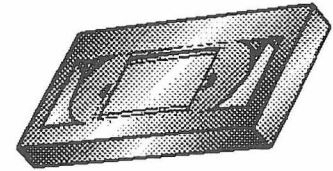
Women are major agents for environmental and sustainable agriculture.

3. Key issues for Discussion

1. What kind of traditional knowledge have women in your country related to herbs, trees?
2. Are women organized in water conservation management in your country?



3. Are women organized in regards to environmental issues in urban areas in your country?
4. Are women engaged in waste recycling management in your country?
5. Are women organized in pressure groups and/or associations with regards to environmental issues in your country?



Presentation of the Video Programme: “Food and Environment - World Food Day”

1. Objective

To establish the relationship between poverty and environmental degradation and identify actions that could be undertaken to overcome the problem.

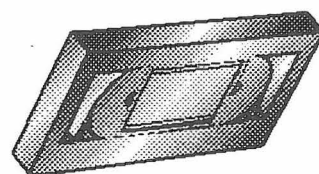
2. Outline of the Video Programme: “Food and Environment - World Food Day”

IFAD, 1989, 5 min, English

The rural poor are trapped in a vicious circle. Poverty exacerbates environmental degradation which in turn leads to further poverty. Most factors in rural poverty are caused naturally and can be reduced - even eliminated - if the environmental aspect of under-development is taken into consideration. IFAD's short and long term programmes are specifically designed to emphasize sustainable development - working with nature for the lasting benefit of all.

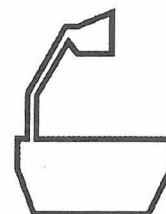
3. Key issues for Discussion

1. What is the rate of population growth in your country?
2. What is the rate of economic growth in your country?
3. What is the rate of land and forest degradation in your country?
4. What kind of projects exist in your country with regard to agricultural education for women?
5. How did international community respond to poverty and population problems in your country?



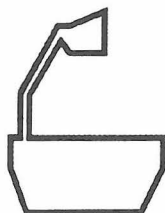
MODULE TWO

*Women, Environmental Management
and Sustainable Development*



List of Transparencies

- No. 1: *The state of the global environment*
- No. 2: *Energy*
- No. 3: *Human settlements (1)*
- No. 4: *Human settlements (2)*
- No. 5: *Food and agriculture*
- No. 6: *Food supply*
- No. 7: *Forest coverage (1990)*
- No. 8: *Change in forest coverage*
- No. 9: *Global total water and freshwater reserves*
- No. 10: *Access to safe water and adequate sanitation in developing countries, 1980 and 1990.*
- No. 11: *Waste management*
- No. 12: *Population*
- No. 13: *Women in the development sectors*
- No. 14: *Population density*
- No. 15: *Rural and urban population in developing regions and high-income countries, 1960-2025*
- No. 16: *Total fertility rates, 1965-90*
- No. 17: *Fertility and mortality*
- No. 18: *Women and population*
- No. 19: *Women's average earnings as a percentage of men's, selected countries, 1980 and 1990*
- No. 20: *Empowerment and status of women*
- No. 21: *Girl child*
- No. 22: *Female and male adult literacy rates, 1990*
- No. 23: *Male responsibility and participation (1)*
- No. 24: *Male responsibility and participation (2)*
- No. 25: *Maternal mortality risks in regions of Africa, Asia and Latin America, 1983 and 1988*
- No. 26: *Safe motherhood (1)*



- No. 27: *Safe motherhood (2)*
- No. 28: *Reproductive patterns and family planning (1)*
- No. 29: *Reproductive patterns and family planning (2)*
- No. 30: *Women and human settlements*
- No. 31: *Policy framework (1)*
- No. 32: *Policy framework (2)*
- No. 33: *Women and energy*
- No. 34: *Time spent gathering fuel (early 1980s)*
- No. 35: *Scenarios for allocating capacity to emit carbon dioxide if greenhouse gas warming effect is stabilized at $2\times\text{CO}_2$*
- No. 36: *Expansion of electric power in developing countries: pollution effects and investment requirement under three scenarios, 1990-2030*
- No. 37: *Trends in emissions of CO_2 from industrial sources in major world regions, 1950-1990*
- No. 38: *Issues*
- No. 39: *NFLS policy framework (1)*
- No. 40: *NFLS policy framework (2)*
- No. 41: *Women and water resources*
- No. 42: *Hours women spend drawing and carrying water, 1975-82*
- No. 43: *Policy framework (1)*
- No. 44: *Policy framework (2)*
- No. 45: *Women, food and agriculture*
- No. 46: *Food production by region, 1970-92*
- No. 47: *Gender labor division in Africa, early 1980s*
- No. 48: *Policy framework (1)*
- No. 49: *Policy framework (2)*
- No. 50: *Women and forestry*
- No. 51: *Policy framework*
- No. 52: *Women and transport*
- No. 53: *Policy framework*
- No. 54: *Women and science and technology*
- No. 55: *Policy framework*

TRANSPARENCIES

MODULE TWO

*WOMEN AS AGENTS OF CHANGE
IN THE DEVELOPMENT SECTORS*

THE STATE OF THE GLOBAL ENVIRONMENT

- ➡ ENERGY
- ➡ HUMAN SETTLEMENTS
- ➡ FOOD AND AGRICULTURE
- ➡ FORESTRY
- ➡ WATER RESOURCES
- ➡ WASTE MANAGEMENT
- ➡ POPULATION

ENERGY

➡ **DEMAND FOR ENERGY WILL INCREASE**

➡ **INDUSTRIALIZED COUNTRIES CONSUME
4 TO 7 TIMES MORE ENERGY PER PERSON**

Source: (UNEP, State of the Environment Report, 1972-1992).

➡ **ENERGY PRODUCTION AND
CONSUMPTION A MAJOR CAUSE OF
ENVIRONMENTAL DEGRADATION.**

➡ **HYDROELECTRIC SCHEMES OFTEN
RESULT IN FORMS OF ENVIRONMENTAL
DEGRADATION**

➡ **NON-COMMERCIAL SOURCES OF ENERGY**

➡ **NUCLEAR POWER**

HUMAN SETTLEMENTS - 1 -

- ⇒ IN 1990, WORLD URBAN POPULATION WAS 2.4 BILLION, OUT OF WHICH TWO-THIRDS LIVING IN DEVELOPING COUNTRIES**
- ⇒ ACCELERATING URBANIZATION WILL RESULT IN URBAN POPULATION EXCEEDING 4000 MILLION BY 2010**
- ⇒ MEGA CITIES WILL CONTINUE TO GROW PARTICULARLY IN DEVELOPING COUNTRIES**

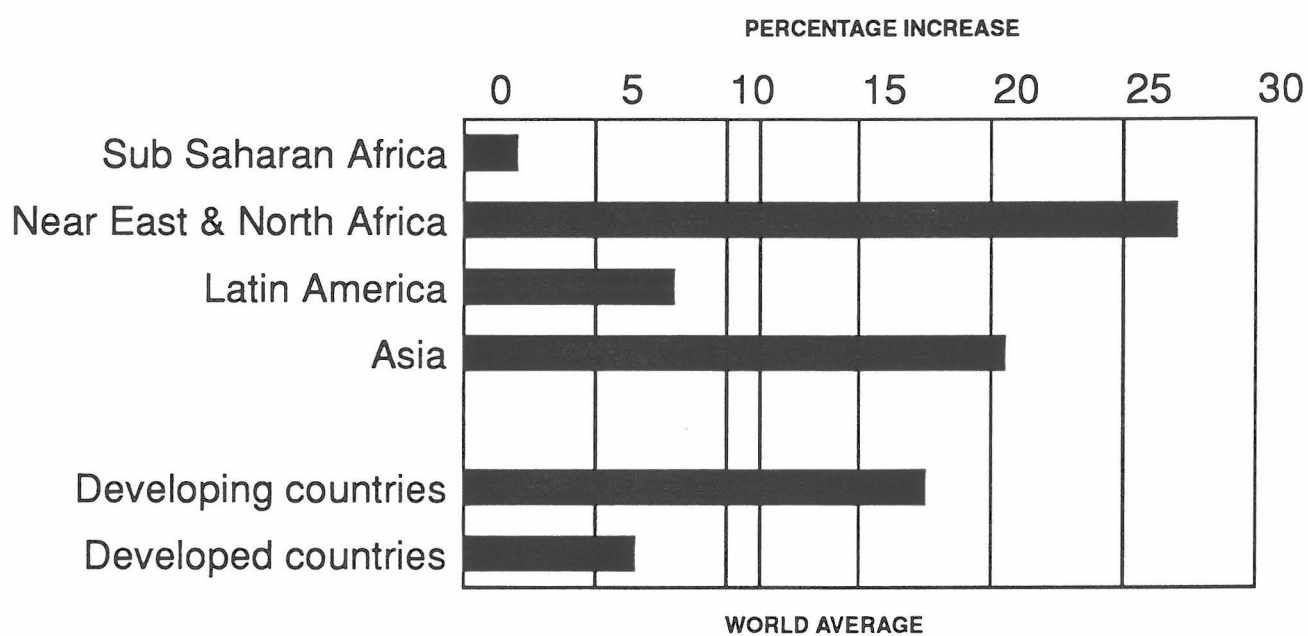
HUMAN SETTLEMENTS - 2 -

- ⇒ URBAN POPULATIONS CONSUME VAST QUANTITIES OF NATURAL RESOURCES AND GENERATE ENORMOUS AMOUNTS OF WASTE**
- ⇒ MANY MIGRANTS IN URBAN AREAS LIVE IN ABJECT POVERTY**
- ⇒ ONE OF WORLD GREATEST THREATS TO SOCIAL DEVELOPMENT AND ECONOMIC GROWTH COMES FROM A MUTUALLY REINFORCING CYCLE OF POVERTY AND ENVIRONMENTAL DEGRADATION**

FOOD AND AGRICULTURE

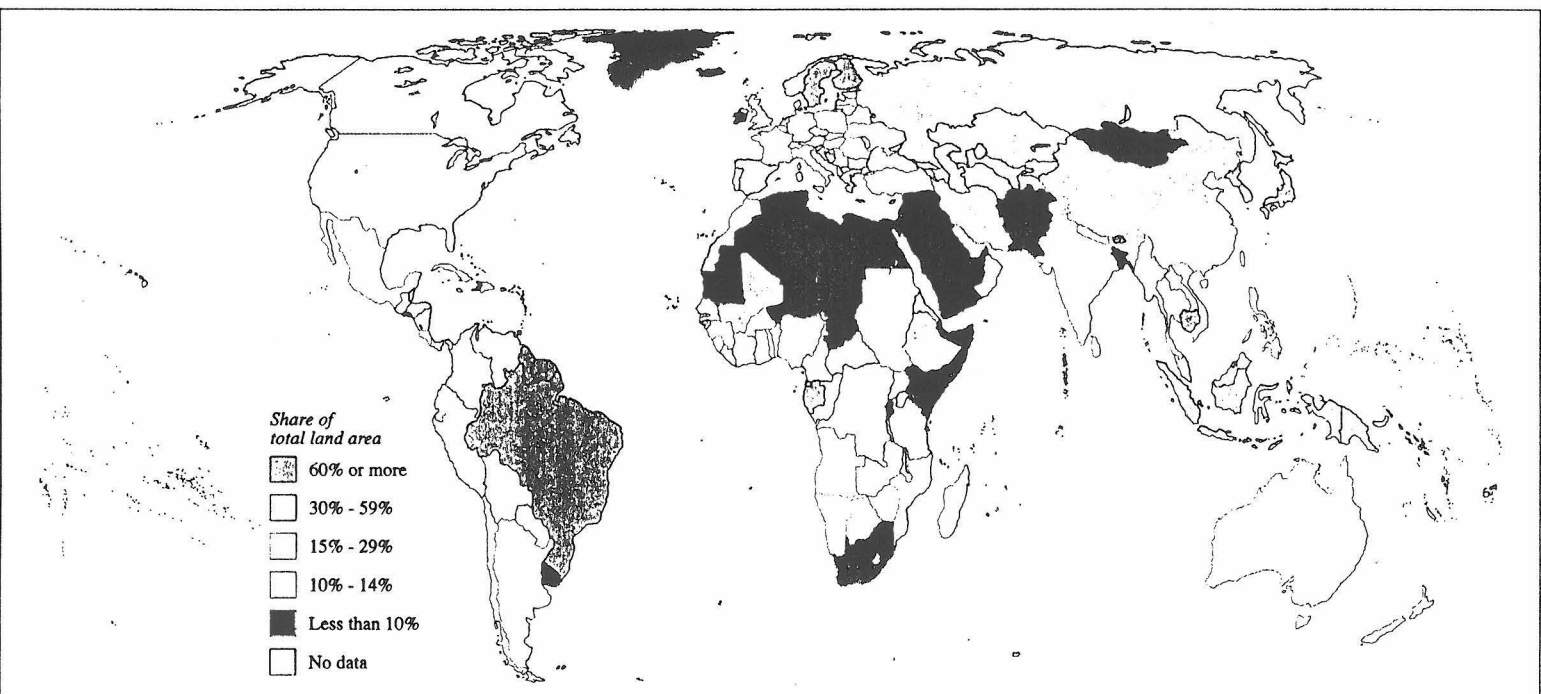
- ➡ WORLD FOOD SECURITY**
- ➡ LEAPFROGGING OF HIGH TECHNOLOGY SOLUTIONS**
- ➡ RISING POPULATIONS**
- ➡ ARABLE LAND DECREASING**
- ➡ BIODIVERSITY**

FOOD SUPPLY



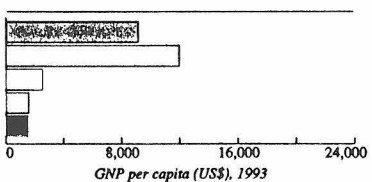
Source: FAO, 1992 - Environmental Data Report 1993-94 p. 137

FOREST COVERAGE (1990)

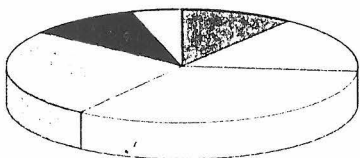


Forest coverage, 1990	Number of economies	GNP (US\$000,000) 1993	Population (000,000) 1993	GNP per capita (US\$) 1993
60% or more	22	5,227,000	570	9,160
30% - 59%	60	10,604,000	885	11,980
15% - 29%	53	4,681,000	1,846	2,540
10% - 14%	12	2,214,000	1,393	1,590
Less than 10%	44	869,000	572	1,520
No data	18	662,000	259	2,560

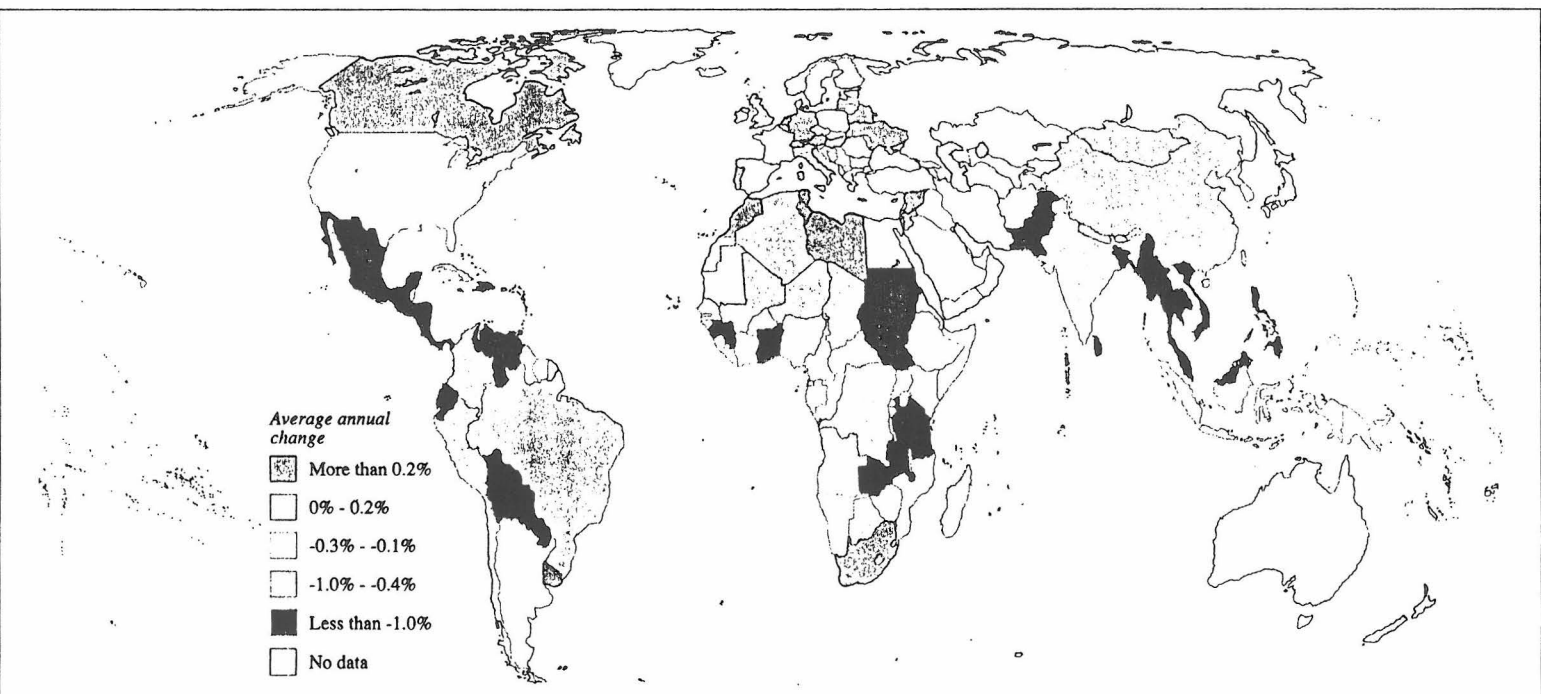
Average GNP per capita of groups of economies with different forest coverage



Shares of world population living in economies with different forest coverage

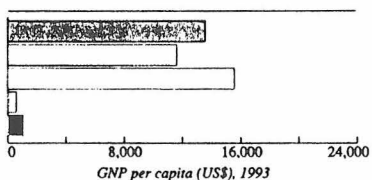


CHANGE IN FOREST COVERAGE

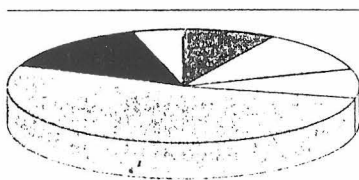


Change in forest coverage, 1981-90	Number of economies	GNP (US\$000,000) 1993	Population (000,000) 1993	GNP per capita (US\$) 1993
More than 0.2%	29	6,368,000	469	13,580
0% - 0.2%	62	7,488,000	644	11,620
-0.3% - -0.1%	21	7,086,000	455	15,560
-1.0% - -0.4%	43	1,803,000	2,899	620
Less than -1.0%	36	850,000	799	1,060
No data	18	662,000	259	2,560

Average GNP per capita of groups of economies with different percentage changes in forest area

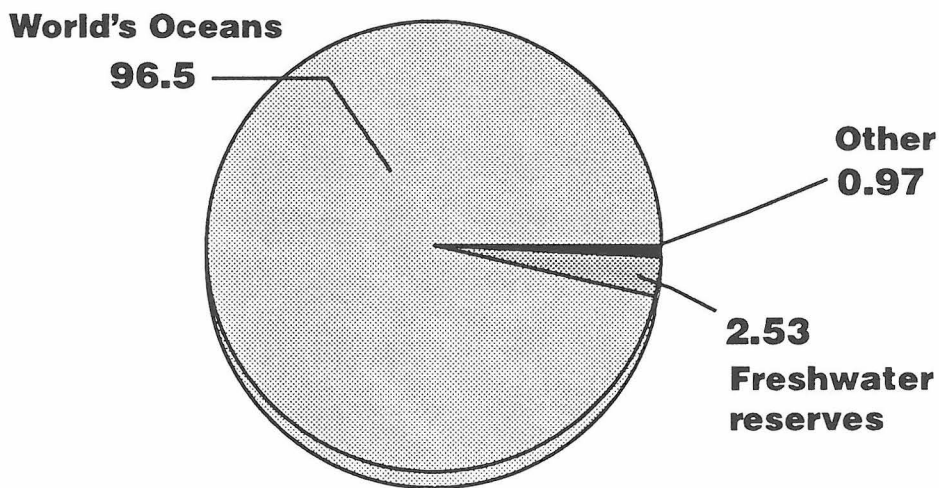


Shares of world population living in economies with different percentage changes in forest area

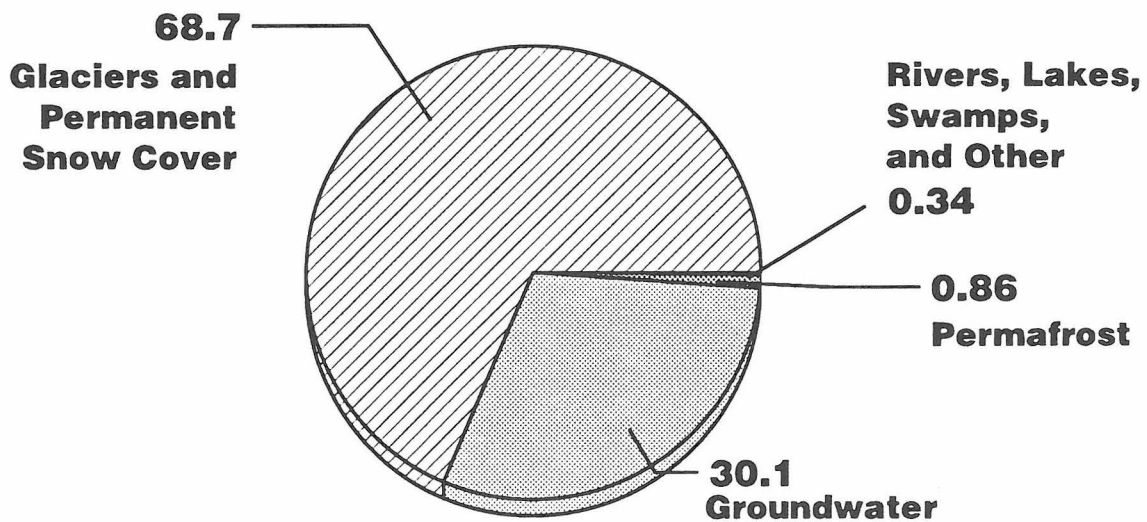


GLOBAL TOTAL WATER AND FRESHWATER RESERVES

Total water Resources

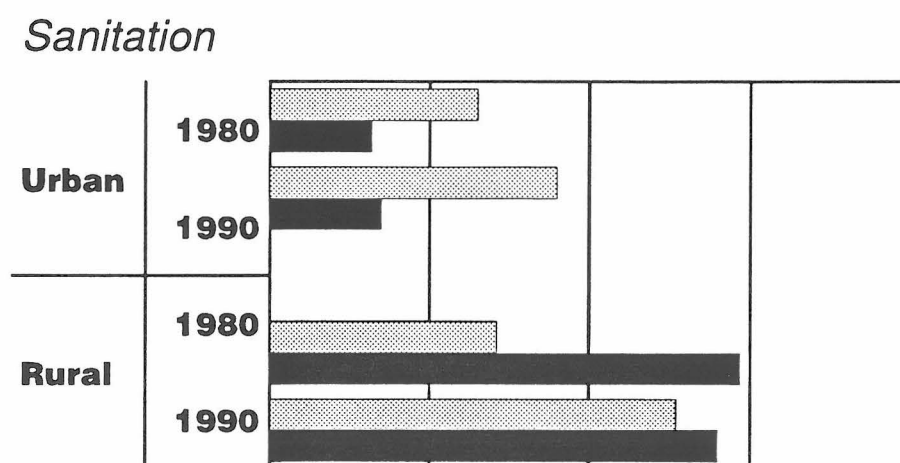
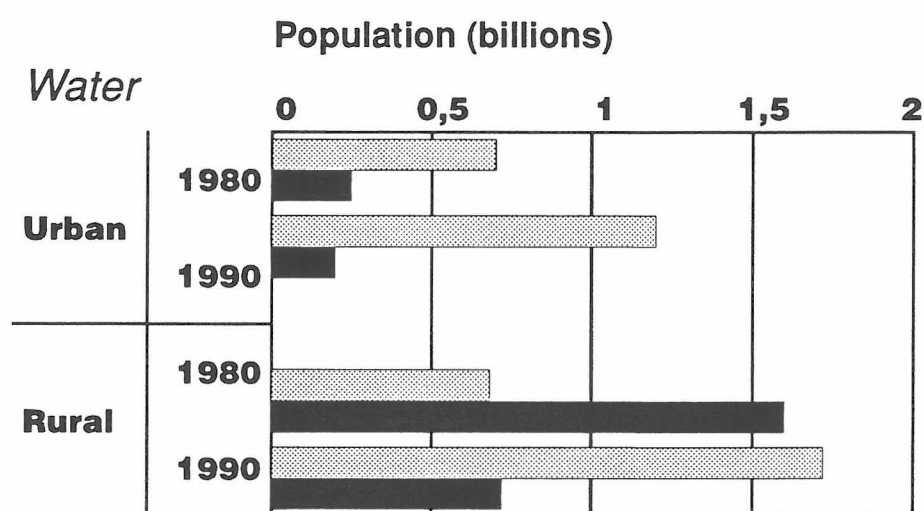


Freshwater Reserves



Source: Igor A. Shiklomanov, "World Fresh Water Resources," in *Water in Crisis*, Peter H. Gleick, ed. (Oxford University Press, New York, 1993), p.13.

ACCESS TO SAFE WATER AND ADEQUATE SANITATION IN DEVELOPING COUNTRIES, 1980 AND 1990



With access
 Without access

Source: World Health Organization data. - World Development Report p. 47

WASTE MANAGEMENT

- ⇒ WORLD URBAN WASTES GENERATED AT VOLUME OF 720 BILLION TONNES ANNUALLY**
- ⇒ MORE THAN HALF OR 400 BILLION TONNES GENERATED IN DEVELOPED COUNTRIES**
- ⇒ SEVERE HEALTH HAZARD**
- ⇒ EXPANDING URBAN POPULATIONS**
- ⇒ INCREASED INDUSTRIALIZATION**
- ⇒ DISPOSAL OF INDUSTRIAL WASTES**
- ⇒ HAZARDOUS WASTES**
- ⇒ WASTE REUSE**
- ⇒ RECYCLING: URBAN-RURAL**

POPULATION

- ➡ **WORLD POPULATION WILL REACH 6 BILLION BY 1998**
- ➡ **8.5 BILLION BY YEAR 2025**
- ➡ **IN 1993, THE ANNUAL ADDITION WAS 93 MILLION**
- ➡ **GROWTH RATES ARE DECLINING**
- ➡ **THE ABSOLUTE NUMBER OF PEOPLE ADDED TO WORLD POPULATION WILL CONTINUE TO INCREASE**
- ➡ **BY THE YEAR 2000, WORLD POPULATION MAY STABILIZE AT APPROXIMATELY 11.6 BILLION**
- ➡ **POPULATION IN DEVELOPING COUNTRIES HAS MORE THAN DOUBLED IN 35 YEARS**
- ➡ **IN 1950 IT WAS 1.7 BILLION**
- ➡ **BY 2000 IT WILL BE OVER 5 BILLION**

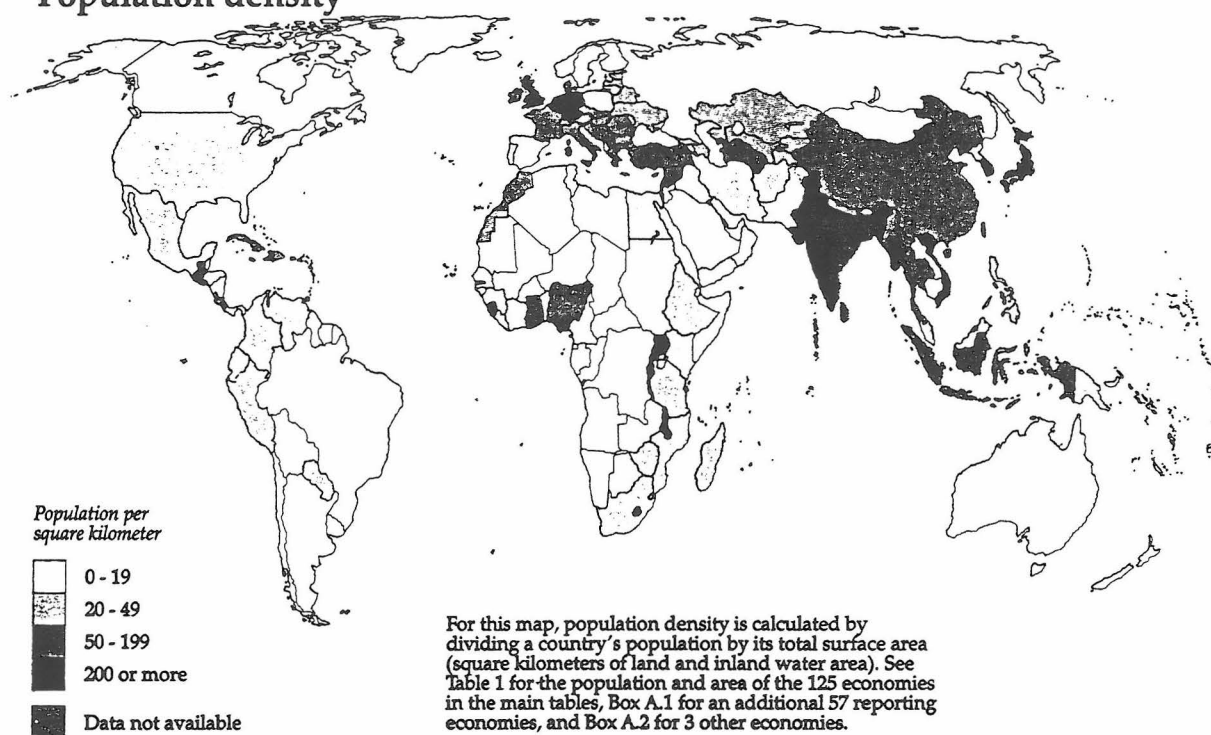
Sources: UNFPA 1994; Programme of Action on the International Conference on Population and Development

WOMEN IN THE DEVELOPMENT SECTORS

- ➡ **POPULATION**
- ➡ **HUMAN SETTLEMENTS**
- ➡ **ENERGY**
- ➡ **WATER RESOURCES**
- ➡ **FOOD AND AGRICULTURE**
- ➡ **FORESTRY**
- ➡ **TRANSPORT**
- ➡ **SCIENCE AND TECHNOLOGY**

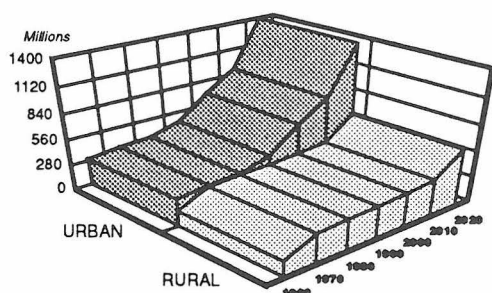
POPULATION DENSITY

Population density

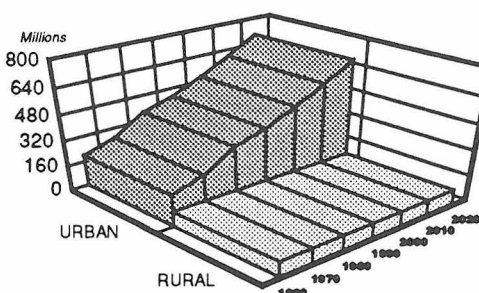


RURAL AND URBAN POPULATION IN DEVELOPING REGIONS AND HIGH-INCOME COUNTRIES, 1960-2025

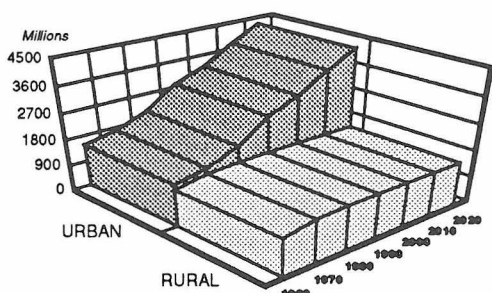
Sub-Saharan Africa



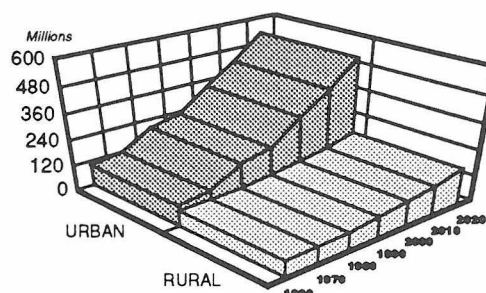
Latin America and the Caribbean



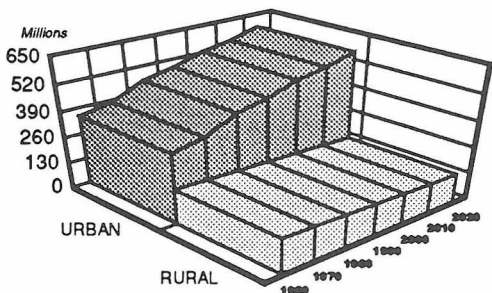
Asia and the Pacific



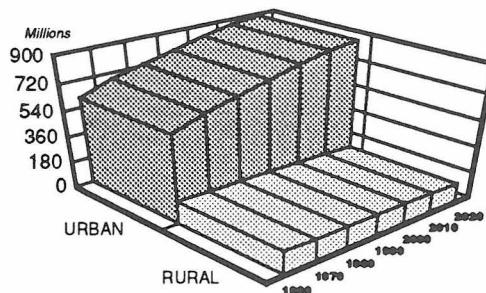
Middle East and North Africa



Europe and former U.S.S.R.



High-income countries

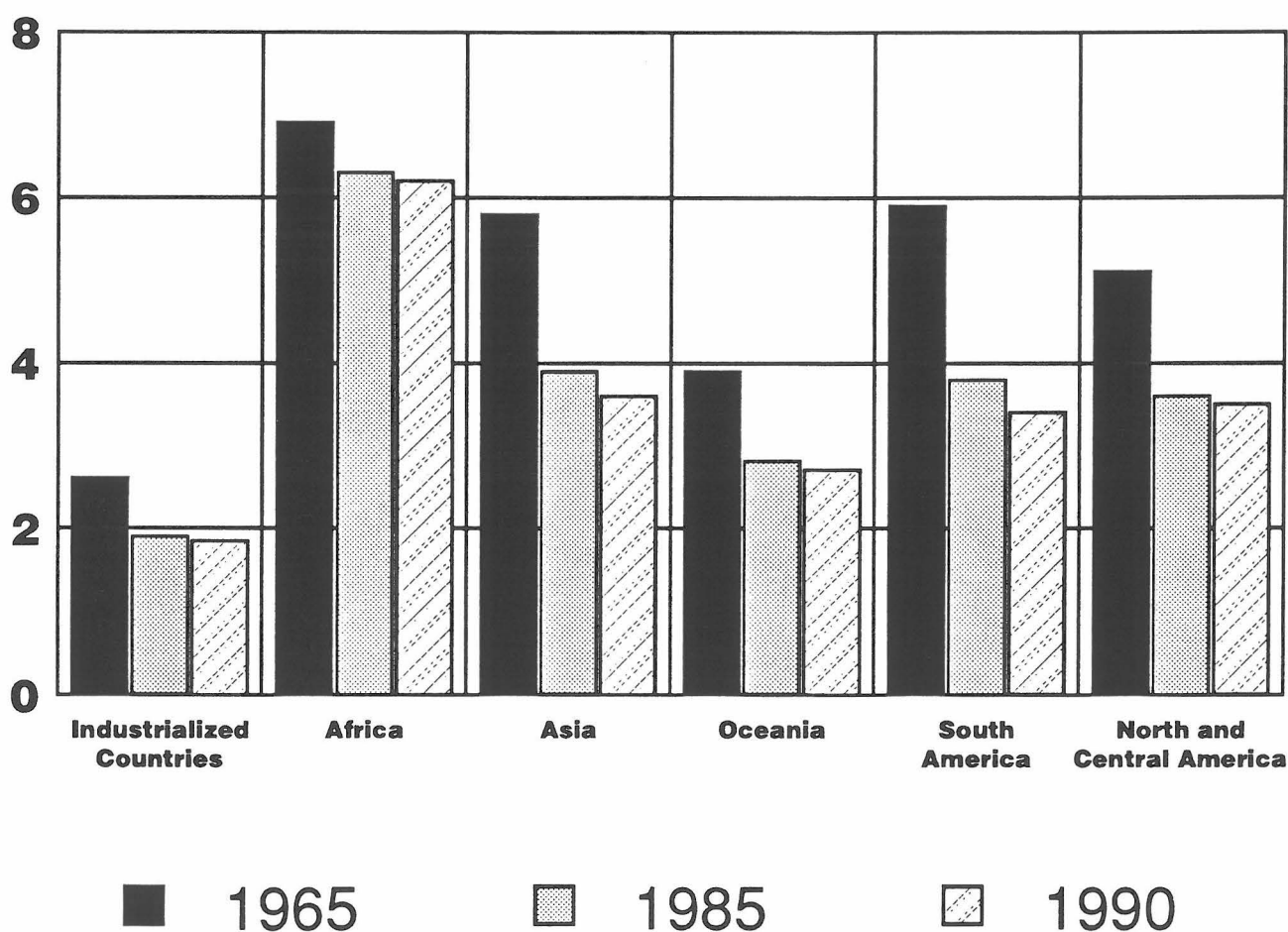


Note: Data after 1985 are projections.

Sources: World Bank data; United Nations 1990 - World Development Report 1992 p. 28

TOTAL FERTILITY RATES, 1965-90

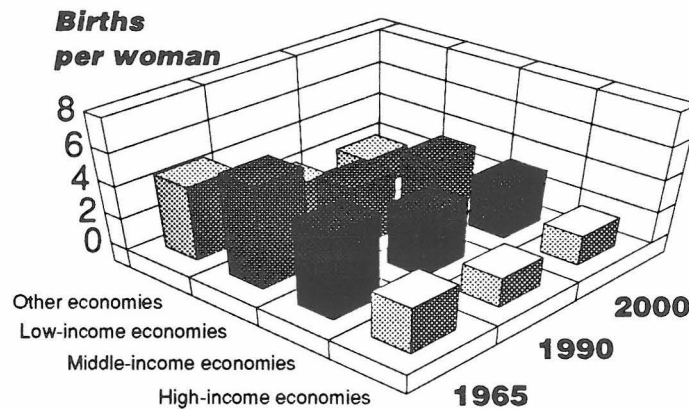
(births per woman)



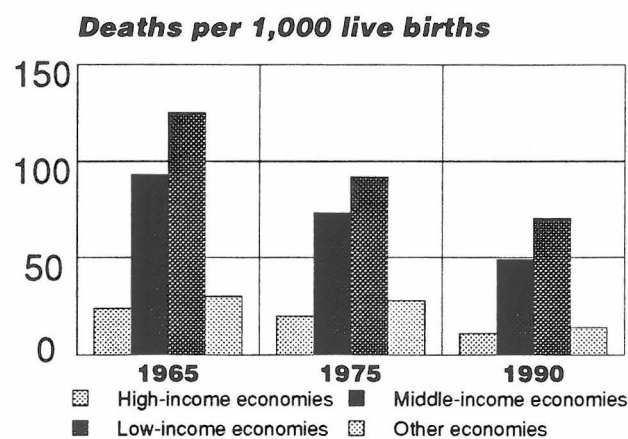
Source: United Nations (U.N.), Demographic Indicators 1950-2025 (The 1992 Revision),
on diskette (U.N., New York, 1993).

FERTILITY AND MORTALITY

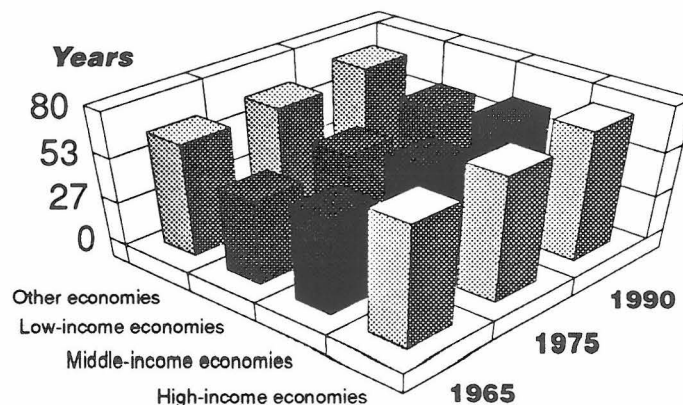
Total fertility



Infant mortality



Life expectancy



Source: World Development Report 1992 p.216

WOMEN AND POPULATION

➡ ISSUES:

- **EMPOWERMENT AND STATUS OF WOMEN**
- **THE GIRL CHILD**
- **MALE EDUCATION, RESPONSIBILITY AND PARTICIPATION**
- **SAFE MOTHERHOOD**
- **REPRODUCTIVE PATTERNS AND FAMILY PLANNING**

WOMEN'S AVERAGE EARNINGS AS A PERCENTAGE OF MEN'S, SELECTED COUNTRIES, 1980 AND 1990

Country	In Agriculture		In Nonagricultural Activities	
	1980	1990	1980	1990
Costa Rica	78	90	70	66
Cyprus	57	61	54	61
Egypt			64 ^a	114 ^b
Hong Kong		76 ^{c,d}		70 ^d
Jordan		83		
Kenya	68	84	80	91
Korea, Republic of	74	71	44	54
Paraguay	72 ^e	98	81 ^e	76
Portugal	64			
Singapore		91	63 ^f	71
Sri Lanka	85	92	88 ^g	90 ^g
Swaziland	49 ^{h,i}	55 ⁱ	66 ^h	73 ^b
Turkey	92 ^{c,j}			
United Rep. Tanzania		85 ^j		92 ^b

Source: United Nations (U.N.) Women's Indicators and Statistics Database (Wistat), Version 3 (U.N. Statistical Division, New York).

EMPOWERMENT AND STATUS OF WOMEN

- ➡ **PROGRAMME OF ACTION OF THE
INTERNATIONAL CONFERENCE ON
POPULATION AND DEVELOPMENT (CAIRO
1994) INCLUDES:**
- ➡ **ESTABLISHING MECHANISMS FOR WOMEN'S
EQUAL PARTICIPATION AND EQUITABLE
REPRESENTATION;**
- ➡ **PROMOTING THE FULFILMENT OF WOMEN'S
POTENTIAL;**
- ➡ **ELIMINATING ALL PRACTICES THAT
DISCRIMINATE AGAINST WOMEN;**
- ➡ **ADOPTING APPROPRIATE MEASURES TO
IMPROVE WOMEN'S ABILITY TO EARN
INCOME BEYOND TRADITIONAL
OCCUPATIONS, ACHIEVE ECONOMIC
SELF-RELIANCE, AND ENSURE WOMEN'S
EQUAL ACCESS TO LABOUR MARKET AND
SOCIAL SECURITY SYSTEMS;**
- ➡ **ELIMINATING VIOLENCE AGAINST WOMEN;**
- ➡ **ELIMINATING DISCRIMINATORY PRACTICES
BY EMPLOYERS AGAINST WOMEN**

GIRL CHILD

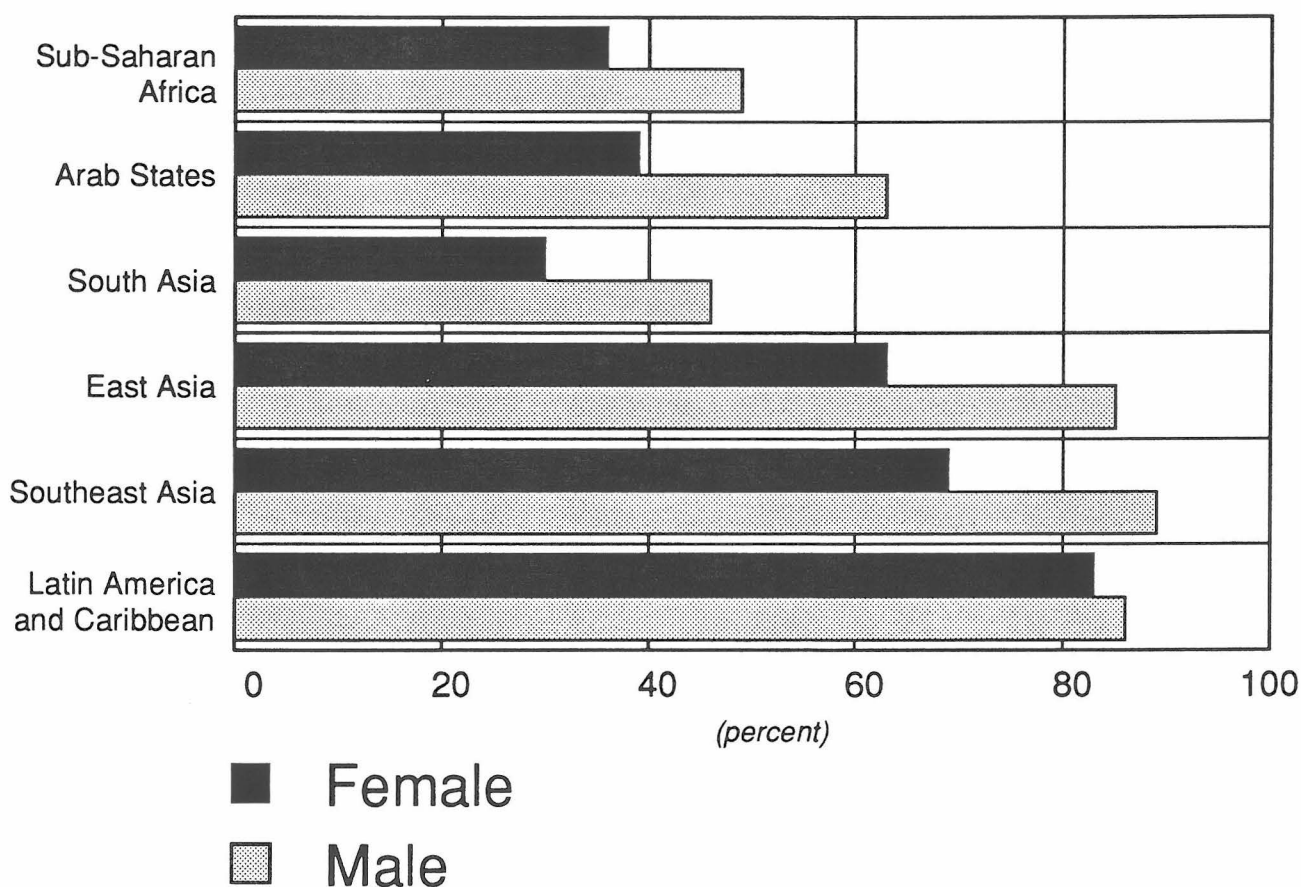
➡ THE PROGRAMME OF ACTION OF THE INTERNATIONAL CONFERENCE ON POPULATION AND DEVELOPMENT CALLS FOR COUNTRIES TO:

- **eliminate all forms of discrimination against the girl child and the root causes of son preference;**
- **increase public awareness of the value of the girl child, and concurrently, to strengthen the girl child's self-image, self-esteem and status;**
- **improve the welfare of the girl child;**

➡ PROGRAMMES NEED TO BE IMPLEMENTED WHICH:

- **speak for and broaden the value of girl children;**
- **promote equitable treatment of girls and boys;**
- **ensure the widest and earliest possible access by girls and women to secondary and higher levels of education, as well as vocational education and technical training;**
- **enforce laws to ensure that marriage is only entered into with the free and full consent;**
- **prohibit female genital mutilation where it exists;**
- **take necessary measures to prevent infanticide, prenatal sex selection, trafficking in girl children and use of girls in prostitution and pornography.**

FEMALE AND MALE ADULT LITERACY RATES, 1990



Source: United Nations Development Programme (UNDP), Human Development Report, 1993 (UNDP, New York, 1993), p. 213.

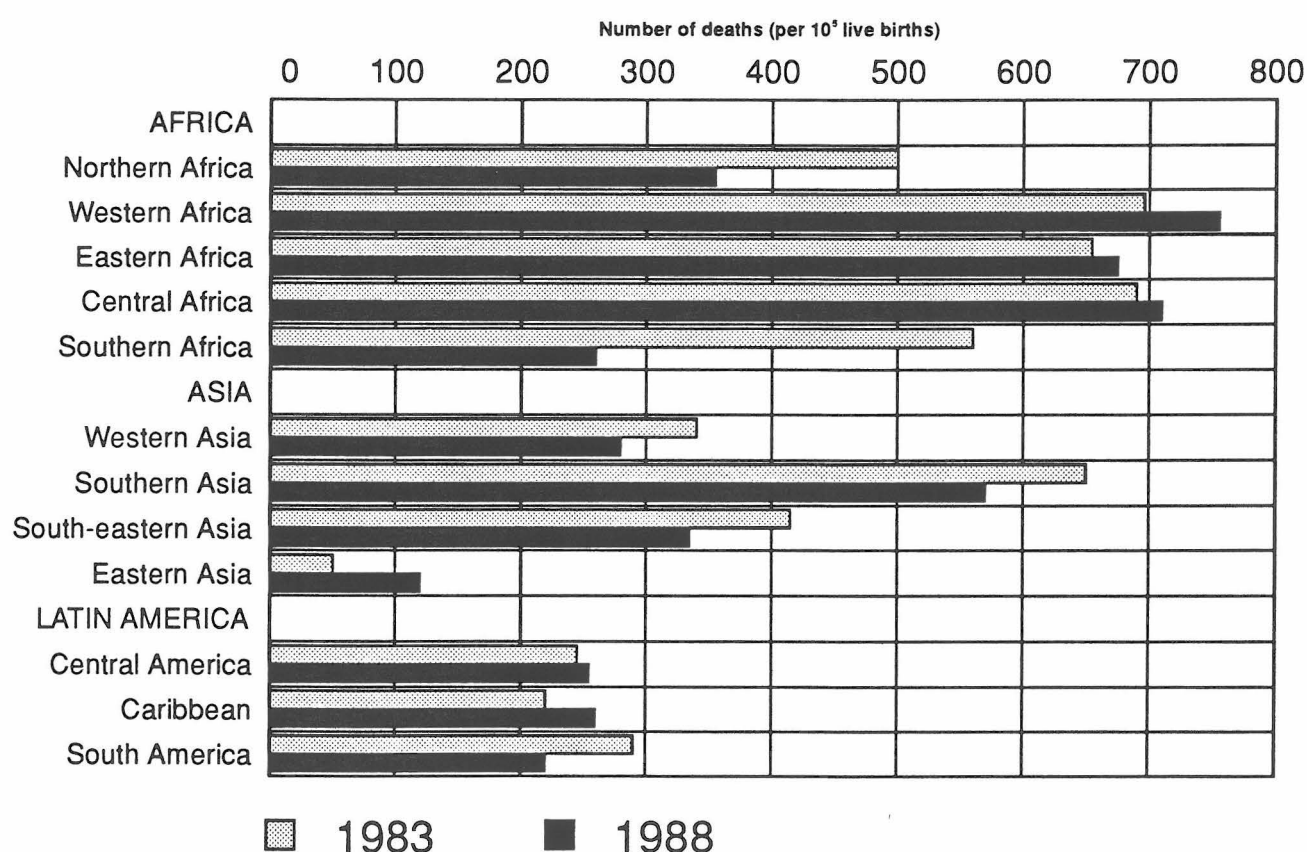
MALE RESPONSIBILITY AND PARTICIPATION - 1

- ➡ TO ENCOURAGE MALE RESPONSIBILITY AND PARTICIPATION, PROGRAMMES NEED TO BE IMPLEMENTED WHICH:**
- ➡ ENCOURAGE THE EQUAL PARTICIPATION OF WOMEN AND MEN IN ALL AREAS OF FAMILY AND HOUSEHOLD RESPONSIBILITIES;**
- ➡ EMPHASIZE MEN'S SHARED RESPONSIBILITY AND THEIR ACTIVE INVOLVEMENT IN RESPONSIBLE PARENTHOOD;**

MALE RESPONSIBILITY AND PARTICIPATION - 2

- ⇒ INCLUDING SEXUAL AND REPRODUCTIVE HEALTH, FAMILY PLANNING, PRENATAL, MATERNAL AND CHILD HEALTH, PREVENTION OF SEXUALLY TRANSMITTED DISEASES, INCLUDING HIV, THE PREVENTION OF UNWANTED AND HIGH-RISK PREGNANCIES, SHARED CONTROL AND CONTRIBUTION TO FAMILY INCOME, CHILDREN'S EDUCATION, HEALTH AND NUTRITION, AND RECOGNITION AND PROMOTION OF THE EQUAL VALUE OF CHILDREN OF BOTH SEXES;**
- ⇒ SPECIAL EMPHASIS MUST BE GIVEN TO THE PREVENTION OF VIOLENCE AGAINST WOMEN AND CHILDREN;**
- ⇒ ENFORCE MEASURES WHICH ENSURE THE APPROPRIATE FINANCIAL SUPPORT OF CHILDREN BY FATHERS**

MATERNAL MORTALITY RISKS IN REGIONS OF AFRICA, ASIA AND LATIN AMERICA, 1983 AND 1988



Source: WHO, 1991b - Environmental Data Report p. 235

SAFE MOTHERHOOD - 1

- ➡ **TO PROMOTE SAFE MOTHERHOOD, THE PROGRAMME OF ACTION OF THE INTERNATIONAL CONFERENCE ON POPULATION AND DEVELOPMENT CALLS FOR ALL COUNTRIES TO:**
- ➡ **PROMOTE WOMEN'S HEALTH AND SAFE MOTHERHOOD TO ACHIEVE A RAPID AND SUBSTANTIAL REDUCTION IN MATERNAL MORBIDITY AND MORTALITY AND REDUCE THE DIFFERENCES OBSERVED BETWEEN DEVELOPING AND DEVELOPED COUNTRIES AND WITHIN COUNTRIES, AND TO GREATLY REDUCE THE NUMBER OF DEATHS AND MORBIDITY FROM UNSAFE ABORTIONS;**

SAFE MOTHERHOOD - 2

- ⇒ IMPROVE THE HEALTH AND NUTRITIONAL STATUS OF WOMEN, ESPECIALLY OF PREGNANT AND NURSING WOMEN**
- ⇒ PROMOTE CHILD HEALTH AND SURVIVAL AND TO REDUCE DISPARITIES BETWEEN DEVELOPED AND DEVELOPING COUNTRIES AND WITHIN COUNTRIES**
- ⇒ IMPROVE THE HEALTH AND NUTRITIONAL STATUS OF INFANTS AND CHILDREN**
- ⇒ PROMOTE BREASTFEEDING AS A CHILD-SURVIVAL STRATEGY**

REPRODUCTIVE PATTERNS AND FAMILY PLANNING - 1 -

- ⇒ IN REGARDS TO REPRODUCTIVE RIGHTS AND FAMILY PLANNING, THE PROGRAMME OF ACTION OF THE INTERNATIONAL CONFERENCE ON POPULATION AND DEVELOPMENT URGES COUNTRIES TO:**
- ⇒ STRIVE TO MAKE ACCESSIBLE THROUGH PRIMARY HEALTH-CARE SYSTEMS, PROGRAMMES IN FAMILY PLANNING COUNSELLING, INFORMATION, EDUCATION, COMMUNICATION AND SERVICES;**
- ⇒ ENSURE THAT REPRODUCTIVE AND SEXUAL HEALTH PROGRAMMES ARE DESIGNED TO SERVE THE NEEDS OF WOMEN AND ADOLESCENT FEMALES ...;**

REPRODUCTIVE PATTERNS AND FAMILY PLANNING - 2 -

- ➡ **IMPLEMENT INNOVATIVE PROGRAMMES TO MAKE INFORMATION, COUNSELLING AND SERVICES FOR SEXUAL AND REPRODUCTIVE HEALTH ACCESSIBLE;**
- ➡ **IDENTIFY AND REMOVE ALL REMAINING BARRIERS TO THE UTILIZATION OF FAMILY PLANNING SERVICES;**
- ➡ **ESTABLISH, AT AN INTERNATIONAL LEVEL, ... GLOBAL, REGIONAL AND SUBREGIONAL FACILITIES FOR THE PROCUREMENT OF CONTRACEPTIVE ...;**
- ➡ **PREVENT, REDUCE THE INCIDENCE OF, AND PROVIDE TREATMENT FOR, SEXUALLY TRANSMITTED DISEASES, INCLUDING HIV/AIDS...**

WOMEN AND HUMAN SETTLEMENTS

**➡ MORE PEOPLE ARE MOVING TO
URBAN AREAS**

ISSUES:

➡ LACK OF SOCIAL SERVICES

➡ SANITARY CONDITIONS

**➡ UNSAFE WORKING
ENVIRONMENTS**

**➡ INADEQUATE OR INAPPROPRIATE
HOUSING**

POLICY FRAMEWORK - 1 -



CHAPTER 7 OF AGENDA 21:

- **GENERATE EMPLOYMENT FOR THE URBAN POOR, PARTICULARLY WOMEN, THROUGH PROVISION, IMPROVEMENT AND MAINTENANCE OF URBAN INFRASTRUCTURE AND SERVICES AND THE SUPPORT OF ECONOMIC ACTIVITIES IN THE INFORMAL SECTOR...[7.16 B(I)]**
- **INSTITUTIONALIZE A PARTICIPATORY APPROACH TO SUSTAINABLE URBAN DEVELOPMENT, BASED ON CONTINUOUS DIALOGUE BETWEEN THE ACTORS INVOLVED IN URBAN DEVELOPMENT ... ESPECIALLY WOMEN AND INDIGENOUS PEOPLE [7.20 (A)]**
- **ESTABLISH APPROPRIATE FORMS OF LAND TENURE WHICH PROVIDE SECURITY OF TENURE FOR ALL LAND-USERS, ESPECIALLY... WOMEN...[7.30 (F)]**

POLICY FRAMEWORK - 2 -

- **PROVIDE DIRECT ASSISTANCE FOR HUMAN SETTLEMENT DEVELOPMENT AT THE COMMUNITY LEVEL [7.77 9D)]**
- **STRENGTHENING AND PROMOTING PROGRAMMES FOR SOCIAL MOBILIZATION AND AWARENESS RAISING OF THE POTENTIAL OF WOMEN AND YOUTH IN HUMAN SETTLEMENTS ACTIVITIES;**
- **FACILITATING COORDINATION OF THE ACTIVITIES OF WOMEN,... IN HUMAN SETTLEMENTS DEVELOPMENT;**
- **PROMOTING RESEARCH ON WOMEN'S PROGRAMMES AND OTHER GROUPS, EVALUATING PROGRESS MADE WITH A VIEW TO IDENTIFY BOTTLENECKS AND NEEDED ASSISTANCE.**

WOMEN AND ENERGY

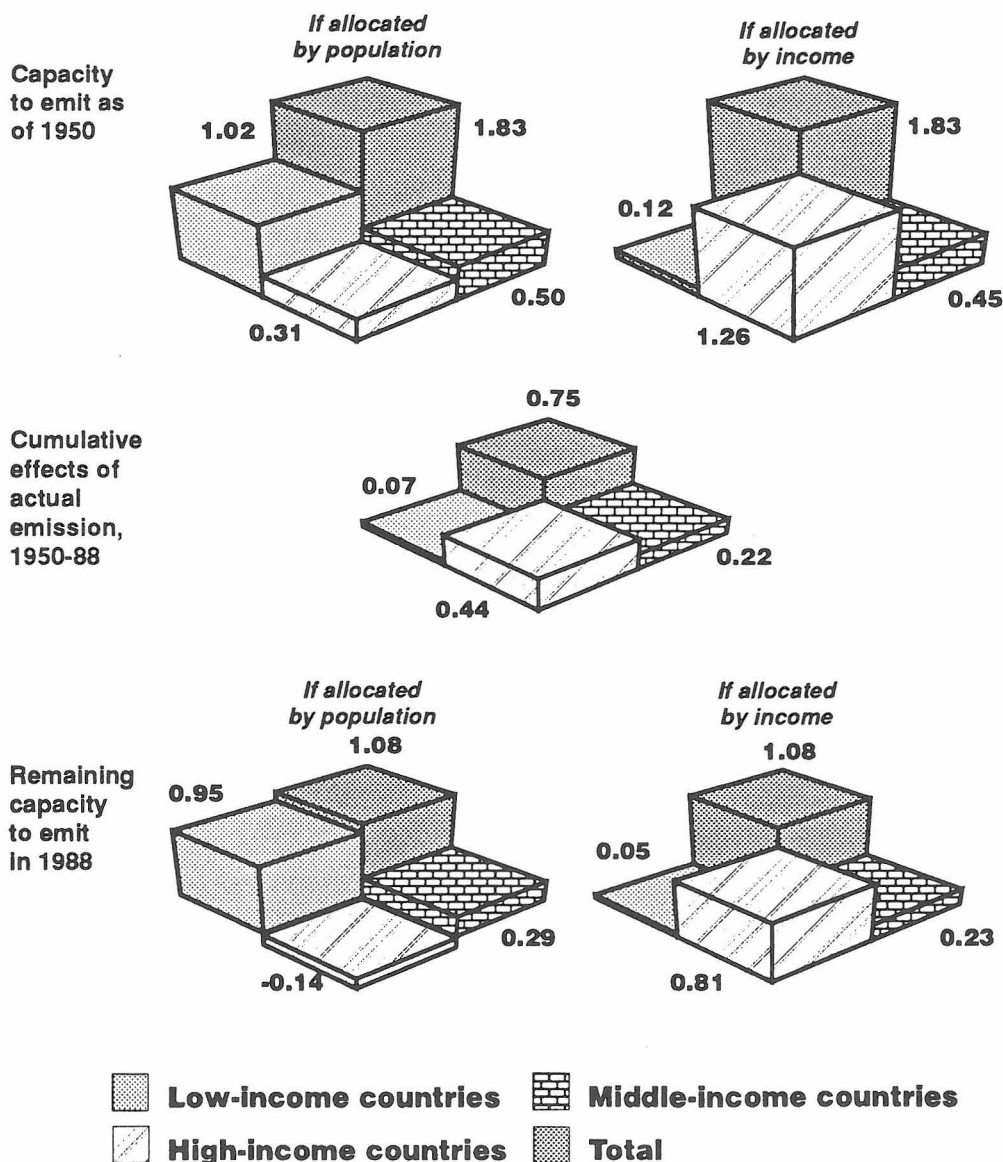
- ➡ **ROLE OF WOMEN IN ENERGY SECTOR**
- ➡ **INTEGRATED APPROACH TO WOMEN AND ENERGY**
- ➡ **WOMEN FACED WITH NUMBER OF CONSTRAINTS TO FULL PARTICIPATION IN ENERGY SECTOR**
 - **LACK OF EDUCATION AND TRAINING**
 - **LACK OF PARTICIPATION IN ENERGY PLANNING, PROGRAMMING AND PROJECT DESIGN**
 - **LACK OF INFORMATION AND AWARENESS-RAISING METHODOLOGIES**
 - **LACK OF FINANCIAL MEANS AND ACCESS TO CREDIT**
 - **LACK OF ACCESS TO CHOICE WITH REGARD TO VARIOUS TYPES OF TECHNOLOGIES**
- ➡ **FINDINGS OF RESEARCH ON WOMEN AND ENERGY**

TIME SPENT GATHERING FUEL (EARLY 1980s)

Country	Average Hours per Day	Explanation of Work
Southern India (6 villages)	1.7	Women contribute 0.7 hours; children contribute 0.5
Gujarat, India	3.0	In family of 5, 1 member often spends all her/his time on it
Nepal	1-5	Often 1 adult and 1-2 children do fuelwood collection
Tanzania	8.0	Traditional women's work
Senegal	4-5	Often is carried about 45 km
Niger	4-6	Women sometimes walk 25 km
Kenya	3.5	Women do 75 percent of fuel gathering
Ghana	3.5-4	1 full day's search provides wood for 3 days
Peru	2.5	Women gather and cut wood
Source: Sheila Lewenhak, <i>The Revaluation of Women's Work</i> (Earthscan, London, 1989), p. 147.		

SCENARIOS FOR ALLOCATING CAPACITY TO EMIT CARBON DIOXIDE IF GREENHOUSE GAS WARMING EFFECT IS STABILIZED AT 2xCO₂

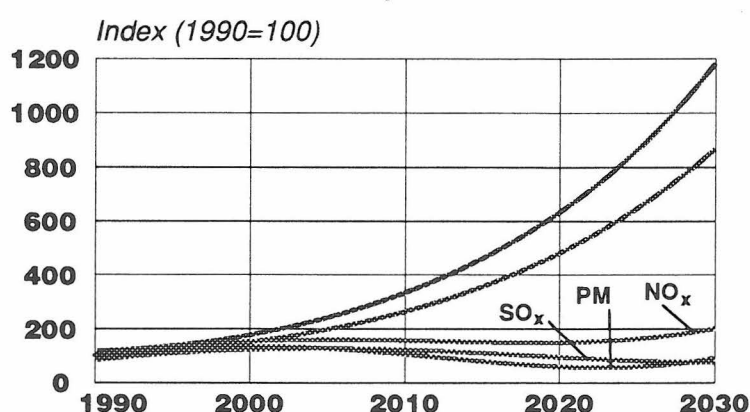
(warming effect of emissions in watts per square meter)



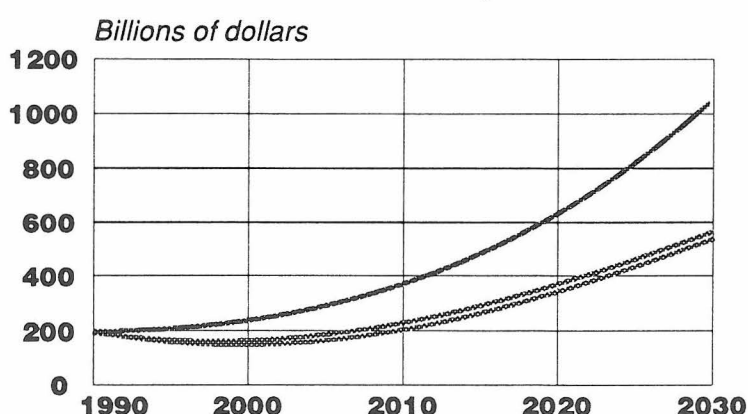
Source: World Bank staff estimates - World Development Report p. 165

EXPANSION OF ELECTRIC POWER IN DEVELOPING COUNTRIES: POLLUTION EFFECTS AND INVESTMENT REQUIREMENT UNDER THREE SCENARIOS, 1990-2030

Emission of pollutants^a



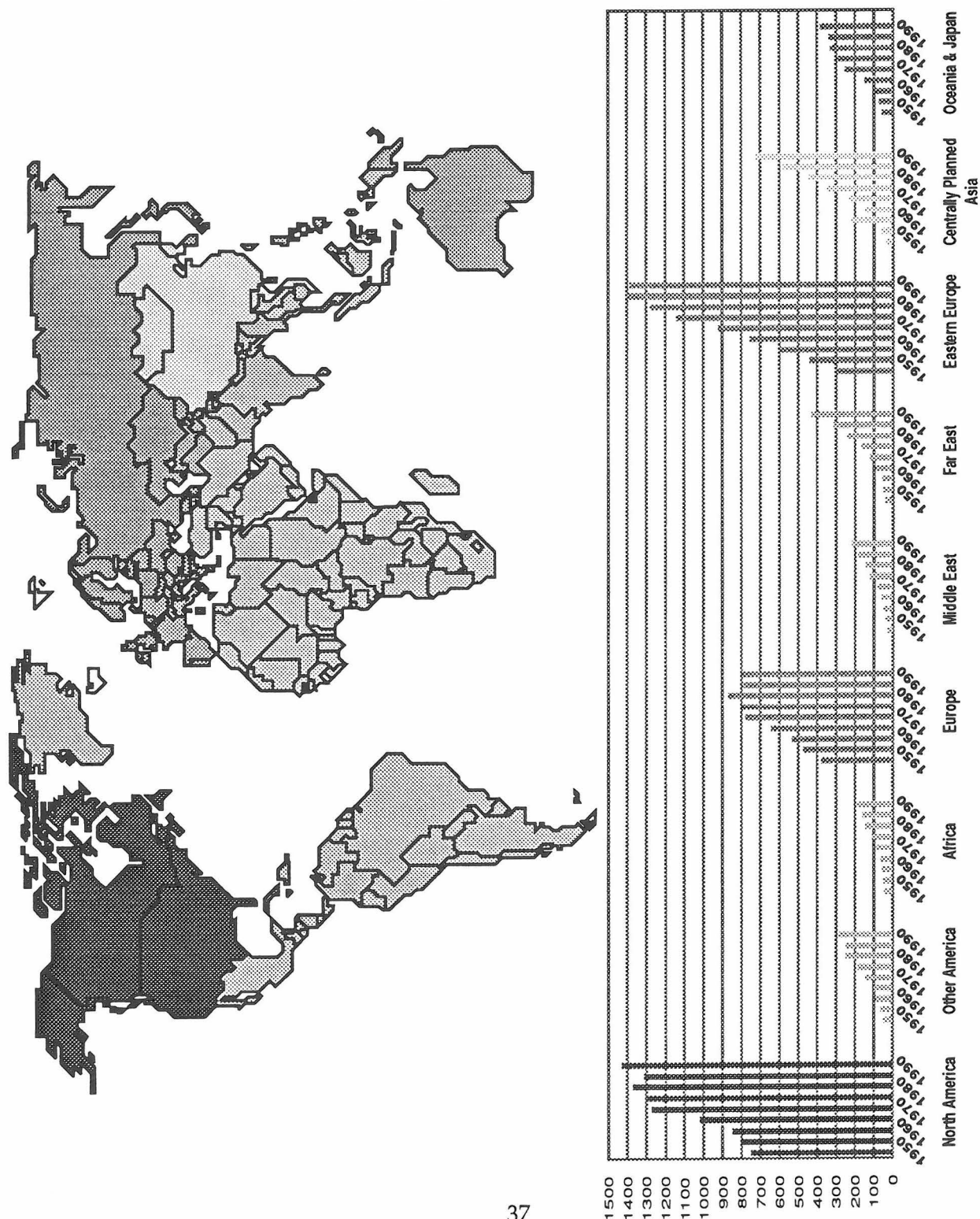
Annual investment requirement



- "Unchanged practices" scenario
- - - Scenario with efficiency reforms^b
- ... Scenario with efficiency reforms and pollution abatement measures^c

Source: Anderson and Cavendish, background paper - World Development Report 1992 p .121

TRENDS IN EMISSION OF CO₂ FROM INDUSTRIAL SOURCES IN MAJOR WORLD REGIONS, 1950-1990



Source: Data from Table 1.3 - Environmental Data Report 1993-94 p. 9

ISSUES

- ➡ **AVAILABILITY OF ENERGY SERVICES
AND SOURCES AND ACCESS TO
DECENTRALIZED RENEWABLE ENERGY
SERVICES**
- ➡ **COSTS OF ENERGY SERVICES**
- ➡ **IMPACTS OF DEFORESTATION AND
AFFORESTATION ON QUALITY OF LIFE**

NFLS POLICY FRAMEWORK - 1 -

- ➡ **PARAGRAPH 218: ...With a view to women as producers, users and managers of energy sources**
- ➡ **PARAGRAPH 219: ...Women should be integrated as contributors and beneficiaries**
- ➡ **PARAGRAPH 220: The grassroots participation of women in energy-needs assessment, technology and energy conservation, management and maintenance efforts should be supported**
- ➡ **PARAGRAPH 221: Priority should be given to substituting energy for muscle in the performance of the industrial and domestic work of women without loss of their jobs and tasks to men**

NFLS POLICY FRAMEWORK - 2 -

- ➡ **PARAGRAPH 222: ...Innovative programmes, such as farm woodlot development, should be initiated with the involvement of both women and men**
- ➡ **PARAGRAPH 223: The involvement of women at all levels of decision-making and implementation of energy-related decisions including peaceful use of nuclear energy should be enhanced**

WOMEN AND WATER RESOURCES

- ➡ LACK OF GENDER-SENSITIVE PLANNING IN WATER RESOURCES MANAGEMENT HAVE NEGATIVE EFFECTS ON WOMEN, THEIR FAMILIES AND COMMUNITIES.**
- ➡ WOMEN ARE THE HARDEST HIT BY ENVIRONMENTAL DEGRADATION**
- ➡ THE NEED FOR INTEGRATED WATERSHED MANAGEMENT**
- ➡ ACCESS TO WATER RESOURCES PREREQUISITE FOR WOMEN'S INVOLVEMENT**
- ➡ MODERN TECHNOLOGIES**

HOURS WOMEN SPEND DRAWING AND CARRYING WATER, 1975-82

Region	Hours per Week
AFRICA	
Botswana, (rural areas)	5.5
Burkina Faso, Zimtenga region	4.4
Côte d'Ivoire, (rural farmers)	4.4
Ghana, (northern farms)	4.5
Mozambique, (villages)	
Dry season	15.3
Wet season	2.9
Senegal, (farming village)	17.5
ASIA	
India, Baroda region	7.0
Nepal, (villages)	
Ages 5-9 years	1.5
Ages 10-14 years	4.9
Ages 15+years	4.7
Pakistan, (village survey)	3.5
Source: United Nations (U.N.), World's Women, 1970-90, Trends and Statistics (U.N., New York, 1991), p. 75.	

POLICY FRAMEWORK - 1 -

➡ NEW DELHI STATEMENT

➡ DUBLIN STATEMENT

➡ AGENDA 21

- **to improve integrated water resource management, develop public participatory techniques and their implementation in decision-making, particularly the enhancement of the role of women in water resources planning and management [18.12(n)]**
- **...ensuring that women participate equally in the education and training programmes... [18.19]**
- **an enabling environment for the lowest appropriate level management... include... donor support to local levels in developing countries, including... women's groups [18.22]**

POLICY FRAMEWORK - 2 -

- **education and training programmes... involving both men and women [18.33(b)]**
- **action is carried out at the national level to strengthen the managerial capabilities of water-user groups, including women, youth, indigenous people and local communities, to improve water-use efficiency at the local level [18.34(d)]**
- **the key to holistically and integrated environmentally sound management of water resources in the rural context includes the participation of local communities in all phases of water management, ensuring the full involvement of women in view of their crucial role in the practical day-to-day supply, management and use of water [18.68(b)]**

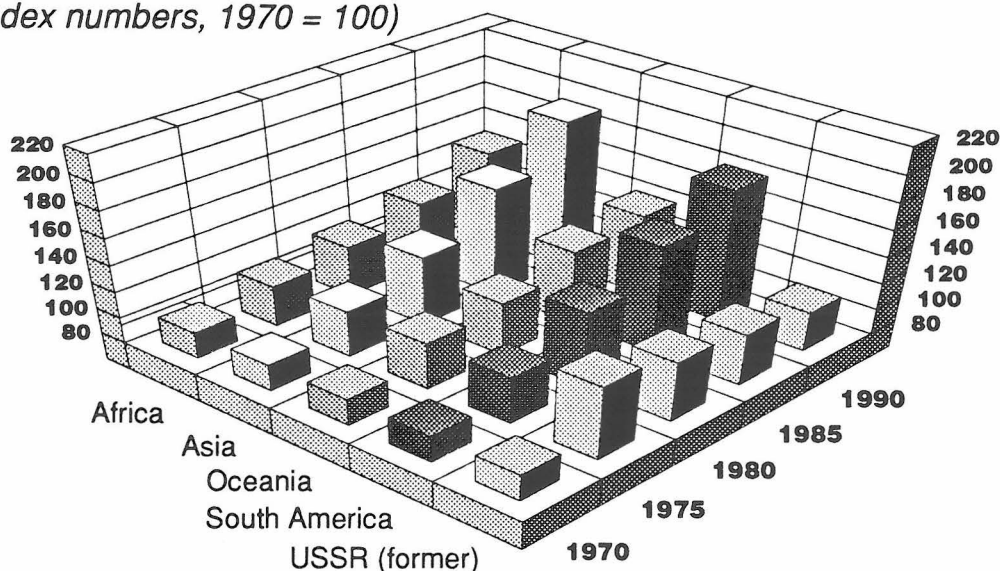
WOMEN, FOOD AND AGRICULTURE

- ➡ **CENTRAL ROLES THAT WOMEN PLAY IN AGRICULTURAL LABOUR FORCE**
- ➡ **EXTENSION SERVICES TARGET MEN INSTEAD OF WOMEN**
- ➡ **WOMEN ARE ENTITLED TO ONLY ONE PER CENT OF WORLD'S LAND YET PRODUCE MORE THAN HALF OF THE WORLD'S FOOD**
- ➡ **WOMEN PARTICIPATE IN NUMBER OF FOOD AND AGRICULTURE RELATED ACTIVITIES, INCLUDING:**
 - **PRIMARY PRODUCTION**
 - **ANIMAL PRODUCTION**
 - **FOOD STORAGE AND PROCESSING**
 - **TRADE AND MARKETING**

FOOD PRODUCTION BY REGION, 1970-92

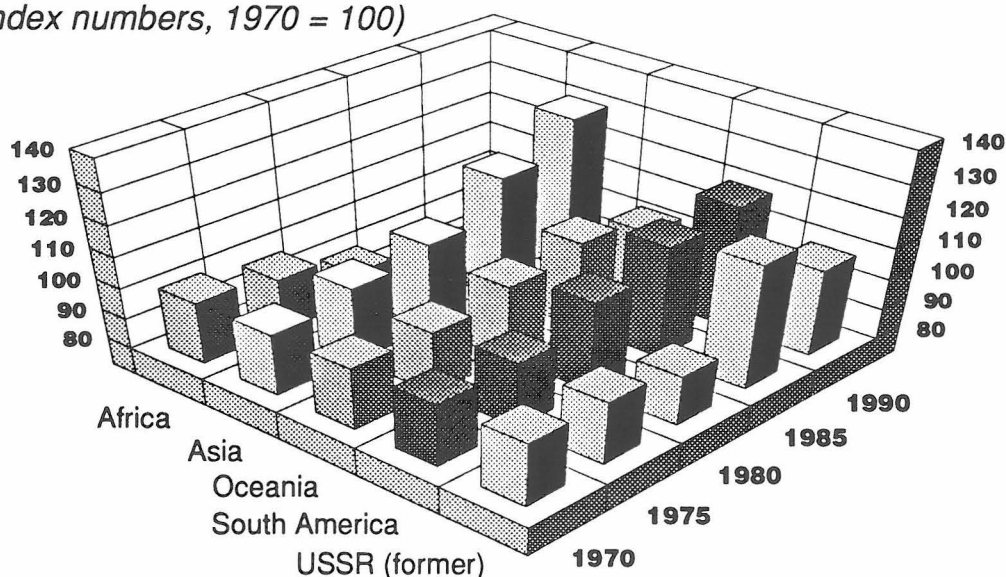
Index of Food Production by Region, 1970-92

(index numbers, 1970 = 100)



Index of per Capita Food Production by Region, 1970-92

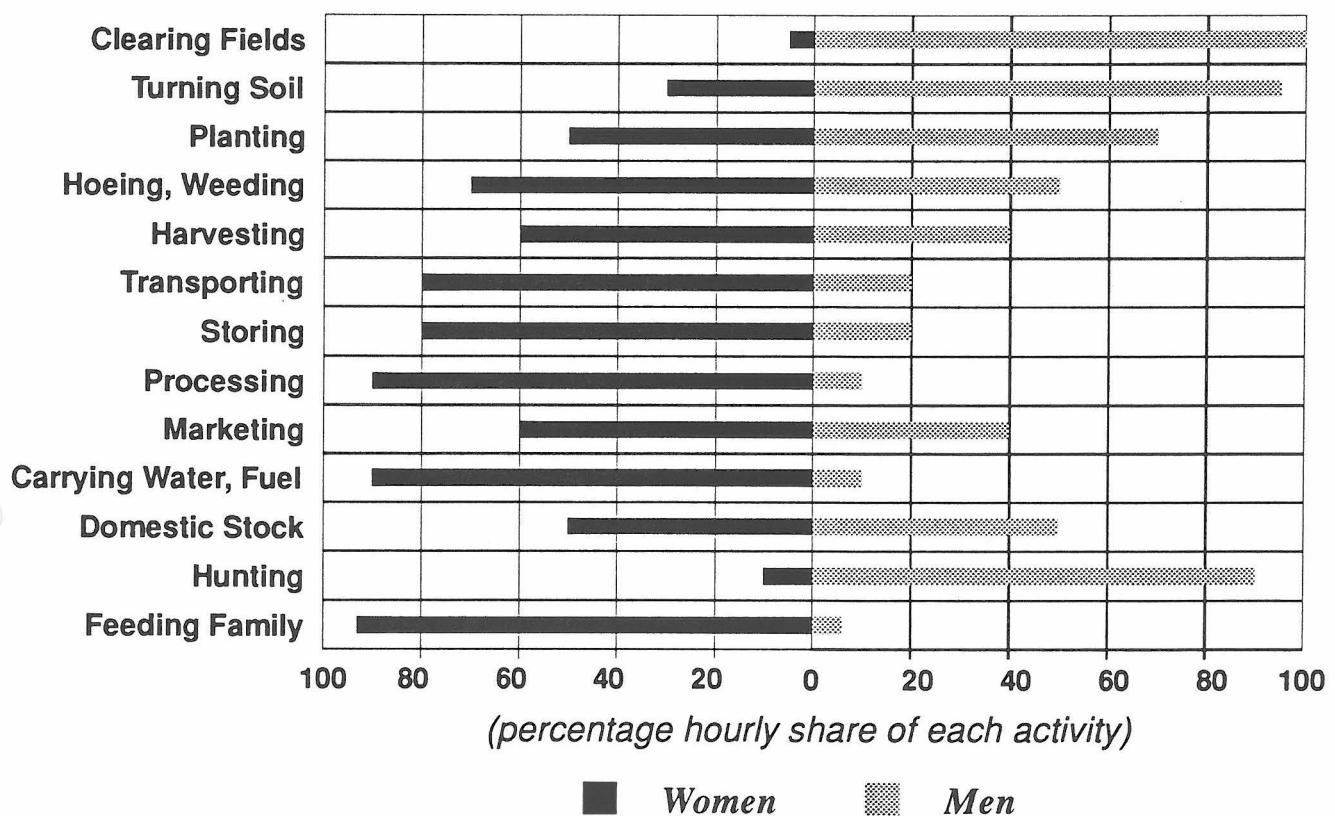
(index numbers, 1970 = 100)



Source: Food and Agriculture Organization of the United Nations (FAO), Agostat PC, on diskette (FAO, Rome, 1993). - World Resources 1994-95 p. 108

GENDER LABOR DIVISION IN AFRICA, EARLY 1980s

Gender Labor Division in Africa, Early 1980s



Source: Food and Agriculture Organization and Swedish International Development Authority (FAO/SIDA),
Restoring the Balance: Women and Forest Resource (FAO/SIDA, Rome, 1988), p. 21.

POLICY FRAMEWORK



AGENDA 21:

- **ESTABLISH LEGAL MEASURES TO PROMOTE ACCESS OF WOMEN TO LAND AND REMOVE BIASES IN THEIR INVOLVEMENT IN RURAL DEVELOPMENT [14.14(B)]**
- **TO PROMOTE GREATER PUBLIC AWARENESS OF THE ROLE OF PEOPLE'S PARTICIPATION AND PEOPLE'S ORGANIZATIONS, ESPECIALLY WOMEN'S GROUPS [14.17(A)]**
- **TO ENSURE EQUITABLE ACCESS OF RURAL PEOPLE, PARTICULARLY WOMEN... TO LAND, WATER AND FOREST RESOURCES AND TO TECHNOLOGIES, FINANCING, MARKETING, PROCESSING AND DISTRIBUTION [14.17(B)]**
- **REVIEW EXISTING MEASURES TO ACHIEVE WIDER ACCESS TO LAND, WATER AND FOREST RESOURCES AND ENSURE EQUAL RIGHTS TO WOMEN....[14.18(B)]**

POLICY FRAMEWORK (CONT'D)

- ➡ **TRAIN EXTENSION AGENTS AND INVOLVE FARMERS AND WOMEN'S GROUPS IN CROP HEALTH AND ALTERNATIVE NON-CHEMICAL WAYS OF CONTROLLING PESTS IN AGRICULTURE [14.81(B)]**
- ➡ **TRAIN FARMERS AND WOMEN'S GROUPS IN PLANT NUTRITION MANAGEMENT, WITH SPECIAL EMPHASIS ON TOPSOIL CONSERVATION AND PRODUCTION [14.91(B)]**
- ➡ **TO SUPPORT AND ENHANCE THE LEGAL CAPACITY OF WOMEN AND VULNERABLE GROUPS WITH REGARD TO ACCESS, USE AND TENURE OF LAND [32.6(B)]**
- ➡ **TO ENHANCE THE PARTICIPATION OF FARMERS, MEN AND WOMEN, IN THE DESIGN AND IMPLEMENTATION OF POLICIES....[32.6(F)]**
- ➡ **PROTECT, RECOGNIZE AND FORMALIZE WOMEN'S ACCESS TO TENURE AND USE OF LAND, AS WELL AS RIGHTS TO LAND, ACCESS TO CREDIT, TECHNOLOGY, INPUTS AND TRAINING [32.7(D)]**

WOMEN AND FORESTRY

- ➡ **GENDER BASED PRACTICES IN REGARDS TO FORESTRY NEED TO BE IDENTIFIED AND DESIGNED FOR**
- ➡ **WOMEN REQUIRE SPECIAL ATTENTION IN FORESTRY PROJECTS**
- ➡ **BANGLADESH EXAMPLE SHOWS HOW LACK OF GENDER ANALYSIS CAUSED WOMEN'S PARTICIPATION TO BE LIMITED**
- ➡ **WOMEN WRONGLY BLAMED FOR DEFORESTATION**
- ➡ **WOMEN INVOLVED IN AFFORESTATION ACTIVITIES**

POLICY FRAMEWORK

- ➡ **CHAPTER 11: "COMBATING DEFORESTATION" OF AGENDA 21 STIPULATES:**
- ➡ **PROMOTING PARTICIPATION OF THE PRIVATE SECTOR, LABOUR UNIONS, RURAL COOPERATIVES, LOCAL COMMUNITIES, INDIGENOUS PEOPLES, YOUTH, WOMEN USER GROUPS AND NON-GOVERNMENTAL ORGANIZATION IN FOREST-RELATED ACTIVITIES...**
- ➡ **ESTABLISHING AND/OR STRENGTHENING INSTITUTIONS FOR FOREST EDUCATION AND TRAINING AS WELL AS FOREST INDUSTRIES, FOR DEVELOPING AN ADEQUATE CADRE OF TRAINED AND SKILLED STAFF AS THE PROFESSIONAL, TECHNICAL AND VOCATIONAL LEVELS, WITH EMPHASIS ON YOUTH AND WOMEN**
- ➡ **GOVERNMENTS, WITH THE PARTICIPATION OF... WOMEN... SHOULD ACT TO MAINTAIN AND EXPAND VEGETATIVE COVER...**

WOMEN AND TRANSPORT

- ➡ **AVAILABILITY OF SAFE AND RELIABLE TRANSPORTATION IN DEVELOPING COUNTRIES IS POOR**
- ➡ **POOR SPEND DISPROPORTIONATE LEVEL OF SALARY ON TRANSPORTATION**
- ➡ **WOMEN ARE LARGEST USERS OF PUBLIC TRANSPORTATION**
- ➡ **IN ABSENCE OF APPROPRIATE TRANSPORTATION, WOMEN CARRY PRODUCE, RESOURCES AND CHILDREN BY FOOT**
- ➡ **HEALTH HAZARDS**

POLICY FRAMEWORK

- ⇒ NAIROBI FORWARD-LOOKING STRATEGIES**
- ⇒ WOMEN SEEN AS PRODUCERS AND CONSUMERS IN TRANSPORTATION POLICIES**
- ⇒ PROMOTE ROLE OF WOMEN AS OPERATORS AND OWNERS OF MEANS OF TRANSPORT**
- ⇒ RURAL TRANSPORTATION PLANNING AIMED AT REDUCING HEAVY BURDEN ON WOMEN**
- ⇒ DESIGN OF VEHICULAR TECHNOLOGY APPROPRIATE TO WOMEN**

WOMEN AND SCIENCE AND TECHNOLOGY

- ⇒ SCIENCE AND TECHNOLOGY
DEVELOPMENTS HAVE BYPASSED
WOMEN**
- ⇒ WOMEN FACE NUMBER OF
CONSTRAINTS TO THEIR EQUAL
PARTICIPATION IN SCIENCE AND
TECHNOLOGY SECTOR**
- ⇒ UNITED NATIONS RESOLUTION ON
WOMEN, SCIENCE AND TECHNOLOGY**

POLICY FRAMEWORK

- ➡ **NAIROBI FORWARD-LOOKING STRATEGIES:**
- ➡ **FULL AND EFFECTIVE PARTICIPATION OF WOMEN IN THE DECISION MAKING AND IMPLEMENTATION PROCESS RELATED TO SCIENCE AND TECHNOLOGY**
- ➡ **WOMEN INVOLVED IN PEACEFUL USES OF OUTER SPACE**
- ➡ **WOMEN EMPLOYED IN MANAGERIAL AND PROFESSIONAL LEVELS**
- ➡ **INCREASE INCENTIVES CREATED TO INCREASE ACCESS OF WOMEN TO SCIENTIFIC AND TECHNOLOGICAL TRAINING AND EDUCATION**
- ➡ **MONITOR IMPACT OF SCIENCE AND TECHNOLOGY DEVELOPMENTS ON WOMEN**
- ➡ **APPROPRIATE TECHNOLOGIES FOR WOMEN DESIGNED TO HIGHEST STANDARDS, PARTICULARLY IN MEDICAL TECHNOLOGY**

Module Three: **Women as Managers of the Environment**





Module Three: Women as Managers of the Environment

TRAINING TOOLS

- **Training Package on Women, Environmental Management and Sustainable Development:**

Part Three: *"Women as Managers of the Environment"*
 (page 249 to 314)

- **Trainers' Guide:**

1. *General Objective*
2. *Specific Objectives*
3. *Suggested Training Strategy*

- **Training Activities:**

- Option No. 1: *In-depth Analysis of the Main Issues and the Involvement of Women in the Design and Implementation of Policies, Programmes and Projects related to Environmental Management*
- Option No. 2: *Analysis of Success Stories showing the Role of Women in Environmental Management*
- Option No. 3: *Recommendations on the Adoption of a Gender-Sensitive Policy Framework at the National Level*

- **List of Transparencies**



Trainers' Guide

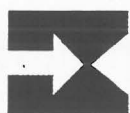
1. General Objective

At the end of this module participants will be able to recommend the policies, programmes and projects to involve women in environmental management and sustainable development in accordance with relevant chapters of Agenda 21.

2. Specific Objectives

More specifically, they will be able to:

- analyse relevant Chapters of Agenda 21 emphasizing the participation of women in environmental management and adopt them at the national policies;
- identify various roles women undertake in natural resources management, particularly water resources management;
- relate the water scarcity and water stress index to the national context;
- analyse the key elements of an integrated approach to environmental sanitation essential for health improvements;
- relate the risk of water and sanitation diseases to the lack of proper human waste disposal;
- plan for choice of water resources for personal and domestic water needs and hygienic activities;
- identify the main components of the waste management;
- identify the main obstacles hindering women's participation in various aspects of waste management;
- analyse "success stories" and identify their transferability at the national level.



Trainer's Guide

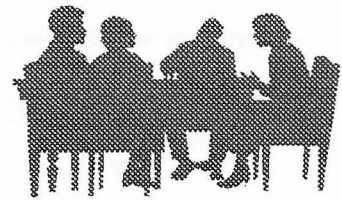
3. Suggested Training Strategy

KEY POINTS/ACTIVITIES	METHOD	MEDIA
1. Present the general and specific objectives of Module Three	Presentation	Flipchart
2. Based on the previous reading of the Training Package on Women, Environmental Management and Sustainable Development "Part Three: Women as managers of the Environment" (page 249 to 314) and with the support of transparencies, present the following points: I. WOMEN AND NATURAL RESOURCES MANAGEMENT 1.0 Women and Natural Resources Management 1.1 Policy Framework II. WOMEN AND WATER RESOURCES MANAGEMENT 2.0 The State of Global Water Resources 2.1 Women and Water Resources Management 2.2 Policy Framework 2.3 Issues Pertaining to Women's Participation in Water Resources Management 2.4 Roles of Women in Water Resource Management	Lecture and discussion with visual aids	Transparencies No. 1/2 Transparency No. 3 Transparencies No. 4/5 Transparencies No. 6/7 Transparencies No. 8/9 Transparency No. 10 Transparency No. 11
III. WOMEN, WATER AND ENVIRONMENTAL SANITATION 3.0 Introduction 3.1 An Integrated Approach to Environmental Sanitation 3.1.1 Disposal of Human Wastes 3.1.2 Use and Protection of Water Sources 3.1.3 Water and Personal Hygiene 3.1.4 Food Hygiene 3.1.5 Domestic and Environmental Hygiene	Lecture and discussion with visual aids	Tr. No. 12/13 Transparency No. 14 Transparency No. 15 Transparency No. 16 Transparency No. 17 Transparency No. 18



KEY POINTS/ACTIVITIES	METHOD	MEDIA
3.2 Women's Roles in Environmental Sanitation		Tr. No. 19/20/21/22
IV. WOMEN AND WASTE MANAGEMENT 4.0 Introduction 4.1 Definition of Waste Management 4.1.1 Sanitation 4.1.2 Solid Waste Disposal 4.1.3 Liquid Waste Disposal 4.1.4 Gaseous Wastes 4.1.5 Industrial Wastes 4.1.6 Hazardous and Toxic Wastes 4.1.7 Waste Reuse 4.2 Women in Waste Handling 4.2.1 Policy Framework 4.2.2 The Role of Women in Waste Treatment	Lecture and discussion with visual aids	Transparency No. 23 Transparency No. 24 Tr. No. 25/26 Transparency No. 27 Transparency No. 28 Tr. No. 29/30 Transparency No. 31
NOTE: The trainer on the basis of the needs/expectations of the target group and the time constraints, should select amongst the optional activities given in this module		
3. Explain the objective of the activity that you have selected	Presentation	
4. Distribute the instruction of the activity that you have selected	Facilitate group work	
5. Plenary presentation and assessment of group work	Discussion	Flipchart
6. Summary and review by the trainer. Link to Module Four if foreseen in your seminar	Presentation and discussion	Flipchart





Option No. 1: In-depth Analysis of the Main Issues and the Involvement of Women in the Design and Implementation of Policies, Programmes and Projects related to Environmental Management

TIME: 180 min

1. Objective

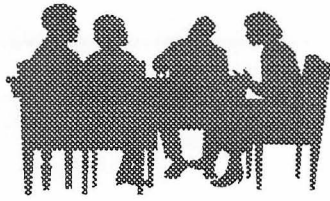
Analyze the main environmental management problems in the context of existing policies and identify the level of women's participation in accordance with the recommendations of Chapters 19, 20 and 21 of Agenda 21.

2. Individual Work

Read the enclosed list of key issues for discussion group work. Select the most relevant issues.

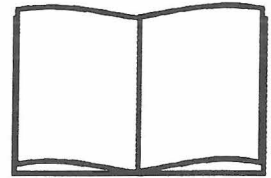
3. Group Work

Through brainstorming with the rest of the group, answer to the questions of selected key issues.



4. Plenary Work

In plenary, the selected spokesperson will present the outcome of the group work for further discussion with the rest of the group and the trainer.



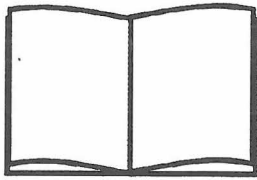
Summary of Key issues

1. Women and Natural Resources Management

- Are you aware of any environmental policies and projects in your country?
- Have these projects focused on integrating women into its activities?
- Are you aware of any organizations which are involved in environmental management or protection activities? Which activities are they involved in? Have they been successful in their endeavours? Have they received assistance from government or external support agencies?

2. Women and Water Resources Management

- What are the main water problems experienced both in rural and urban areas in your country?
- What are the causes of these problems?
- What national policies exist to incorporate women's needs and requirements into water resources management in your country?
- Are recommendations from Chapter 19 of Agenda 21 applied when defining water policies in your country?
- Which are the main aspects of water resource management and legal structures addressing these aspects in your country?
- What are the main cross-sectoral issues resulting from water resources management?
- What level of representation do women have in institutions which deal with water resources in your country?
- What are the main problems that women face in water supply and water resources policies and management in your country?

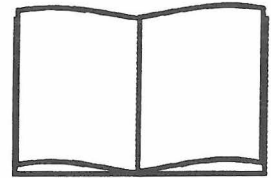


3. Women, Water and Environmental Sanitation

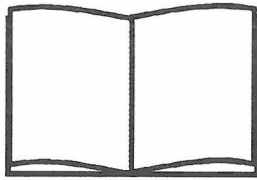
- What are the main roles and responsibilities of the local, municipal and national institutions in environmental sanitation management in your country?
- What are the main responsibilities that women have in environmental sanitation activities in your country?
- What are the main responsibilities that men have in environmental sanitation activities in your country?
- What are the main responsibilities that children have in environmental sanitation activities?
- Describe the roles that women, men and children have in environmental sanitation projects or programmes that you are familiar with. For example, do they deliver health education messages, or provide labour or materials for the construction of facilities, etc.
- Were there any problems or constraints in implementing these projects and if so, what were they? How were these problems or constraints overcome? What successes were experienced in these programmes and projects? What recommendations would you make to ensure that these successes can be repeated in other projects and programmes?

4. Women and Waste Management

- What are the main problem areas of waste management in your country? Is it for example with solid waste, industrial or human waste, etc.?
- What are the traditional forms of waste treatment or management used by women and families in your country?
- Are these traditional waste treatment or management systems effective or do they pose environmental health risks? What are the main problems, if any, with these systems?



- Are you familiar with any waste management projects in your country in liquid waste, human waste, solid wastes, industrial wastes, gaseous wastes, and waste reuse?
- How are recommendations of Chapter 19, 20 and 21 of Agenda 21 implemented in waste management projects?
- Were women involved in these projects? In what capacities?
- What constraints, if any, did women and communities face in obtaining improved waste management systems? How were these overcome?
- Were women and communities involved in the selection of the technology used in the project?
- What positive impacts had waste management projects on women and children in terms of health, environment or natural resources in your country?
- What negative impacts had waste management projects on women and children in terms of health, environment or natural resources in your country?
- What policies or policy framework in your country emphasize involvement of women in environmental management? If not, what would you recommend?





Option No. 2: Analysis of Success Stories Showing the Role of Women in Environmental Management

Time: 180 min

1. Objective

To analyze the vital roles of women in environmental management projects and identify the suitability of similar approaches at the national level.

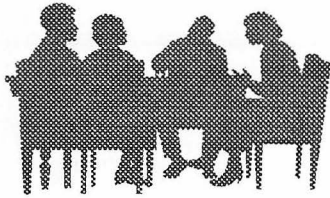
2. Individual Work

Select from the enclosed list of success stories those related to the main problems of environmental management in your country.

3. Group Work

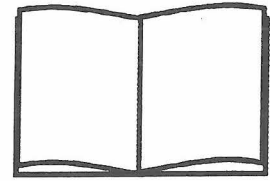
Through brainstorming with the rest of the group, answer to the following questions:

- Are there similar programmes/projects taking place in your country? If yes describe them.
- Which one of the success stories that you have analyzed has retained your attention? Why?
- Taking into consideration your national context, which one of the success stories could be retained as a project/programme idea to be implemented at the national level? Why?



4. Plenary Work

In plenary, the selected spokesperson will present the outcome of the group work for further discussion with the rest of the group and the trainer.

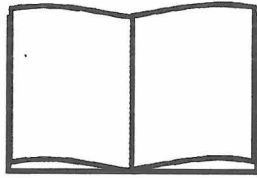


Success Stories

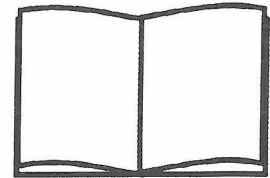
1. Women and Natural Resources Management

The role of Women in Natural Resources Management

1. In Kenya, the Green Belt Movement under the National Council of Women of Kenya (NCWK) is planting trees to reduce the effects of deforestation, carrying out awareness programmes to educate people on environment and development issues, and at the same time, providing a forum for women to come together to share ideas, and learn to be effective leaders. The promotion of a positive image of and among women is one of the most important goals of the NCWK and the Green Belt Movement. Women are being trained to plant and cultivate seedlings, care for trees and generate sources of income for themselves. Involvement of women as equal participants and developers of green belts provides a good model of significant female achievement amongst the women themselves and amongst communities (Dankelman & Davidson 1988).
2. In Brazil, the Acao Democratica Feminina Gaucha (ADGF) was founded in 1964 as a woman's organization to promote social change for equal opportunities. In 1974, it added the issue of environmental protection and the promotion of sustainable development to its agenda. At the national and international levels, ADGF is fighting for the modification of Brazil's prevailing agricultural systems and for changes in development aid. It campaigns and lobbies to have existing environmental protection laws respected and new one created. It links national and international ecological organizations dealing with environmental conservation, peace, and social justice. It also serves as an information centre for environmental organizations, for students, teachers, professionals and government departments (Dankelman & Davidson 1988).
3. In Zimbabwe, ORAP, the Organization of Rural Associations for Progress was formed in 1981 as a non-governmental organization to promote new development strategies for the people of Mataberland. Its



aim was to respond to the plight of rural people who suffered during the struggle for Independence. The environment in this area had been severely degraded and women, as the primary farmers, were the main victims of environmental degradation. ORAP began by helping villages to form to discuss local needs and possible solutions. These groups then started to apply their labour and skills to practical work, helped - via ORAP - with materials and funds from donors. Women have a prominent role in the whole programme. ORAP runs training programmes specifically for women. Women are helped, through discussion and practical research, to develop strategies for action to improve their conditions. Women in the ORAP programme have, for example, studied rural child-care patterns and identified the need for pre-school help while mothers are working. They have also surveyed what families produce and what can be marketed. ORAP has helped women with the development of sustainable food and water programmes, training women in the use of traditional seeds, the production of a variety of foods, improved food storage technologies, and better water management including local storage and irrigation schemes (Dankelman & Davidson 1988; Kempadoo & ORAP 1991).



2. Women and Water Resources Management

The Role of Women in Water Resources Management

1. Environmental Degradation and Water Scarcity

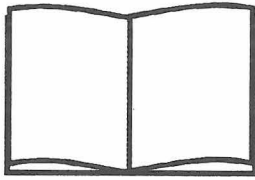
➤ *Negative experiences*

Examples of how women have been negatively affected by water resource management practices are well documented. For example, in **New Guinea**, previously clean water sources became polluted and blocked by sediments from logging and mining. In **India**, a dramatic increase in sugar cane irrigation caused drinking water sources to dry up, causing women to walk further, wait longer, or decide to use less safe water sources (Van Wijk & Bolt 1993).

➤ *Success stories*

Examples of how women combated these negative effects, or the role that women play in water resource management can also be found. For example, in **West African Sahel**, a group of women reversed desertification in their area by building banks to protect the land from erosion. This enabled the land to soak up rainwater that had previously flowed away down gullies. As a result, the water level in wells rose (Dankelman & Davidson 1988).

In **Burkino Faso**, severe shortages of water on the Yatenga plateau forced women in Saye village to walk long distances for water supplies. The women approached the village leaders to build a dam. If the men did not cooperate, the women threatened to return to their parents' village where there was more water. The men realized the seriousness of the situation and helped mobilize the whole community to build a dam. The experience in Saye motivated other communities to build their own dam. In a nearby village of Somiaga, villagers considered Saye to have been the testing ground for their own dam. One man said, "We learned from the women in Saye that dams should be built; we also learned from their mistakes" (Dankelman & Davidson 1988, p. 35).



2. Integrated watershed management

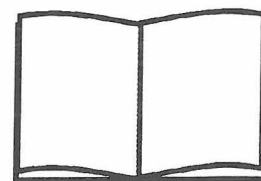
An example of women's actions in watershed management can be found in **India**, where women of the Chipko movement protested against commercial exploitation of forests which was destroying their land and water resources. Oak trees were being replaced by fast growing pine trees, causing a loss of rich, water-conserving humus. Water run-off was increasing and water sources were drying up. The planting of eucalyptus trees, a tree with high water consumption was causing groundwater depletion, soil aridity and desertification. In addition, mining of limestone, important for conserving and storing water, in the area was seriously affecting water availability. Women of the Chipko movement successfully brought the case to the Supreme Court and most of the mines were closed (Dankelman & Davidson 1988).

3. Access to resources such as land and labour

This applies for both men and women. For example, in a project in **Burkina Faso**, it was seen that although there was initial enthusiasm to participate in a project to construct dams, village support declined over time. Both women and men quoted reasons for their resistance as food of work was no longer a part of the arrangement and that not all participants benefited from the dams. Three groups of people felt that they did not benefit under the present system of land use, land rights and labour participation: (1) the women, who for use of the land below the dams and construction of the dams, depend on the permission of their husbands; (2) the young men, who have no right to use the land below the dams; and (3) those who only rent land below the dams and have no prospects of inheriting land in the area. Further more, not all village groups have access to manual labour. Women and women's groups cannot mobilize labour beyond their own families and lose income from trade while they are constructing the dams. Male leaders who construct dams in their own area lose interest in organizing participation for the benefit of others (Dankelman & Davidson 1988).

4. Women's empowerment to protect and maintain their own water resources without neglecting the support of men.

In the Rewari district in Haryana, **India**, people traditionally depend on ponds and checkdams for their water needs, but with the advent of tube wells and the collapse of traditional water management, ponds silted up

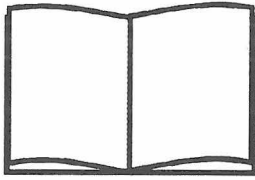


and the check dams eroded. The water table fell more than 11 metres and groundwater became highly saline and potable water became scarce. In the early 1980s the state government provided piped water to many villages but the supply was very erratic. Chronic drought, increased population pressures on forests and large-scale mining reduced fuelwood and fodder, adding to people's impoverishment. The Haryana Social Work and Research Centre (HSWRC), a non-governmental organization launched an integrated development package to ameliorate the condition of Rewari women. The package consisted of income generating schemes, rainwater harvesting tanks for drinking water, earthen check dams for farming and biogas plants as an alternative to firewood. The results from the project were encouraging, however the women encountered a backlash from young unemployed men, who felt discriminated against because there were no programmes for them. Stiff opposition from husbands was also experienced (Van Wijk & Bolt 1993).

5. Modern technologies in water resource projects

In a fishing village along the Pacific coast of **Colombia**, the gathering of cockles is one of the major sources of women's income. Their livelihood was being threatened by the Esteros project, a project which involved the construction of four thousand kilometres of canals to link the tidal creek system between Buenaventura and Tumaco. The process would include dredging and excavation in the tidal creek area. An environmental impact study of the project concluded that the destruction of the mangrove forest would have an effect on the productivity of estuarine organisms that depend on that habitat during part of their life cycle. More severe, however, would be the impact on the income of the women in the fishing village of Salahonda. In interviews with the women, it was confirmed that there had been a decline in catches. Completion of the canal would result in a net loss of 4.1 million Colombian pesos a year of potential income for the local people. Thus it was decided that only limited areas would be dredged and excavated and women's groups were set up in the area and provided with better canoes and small outboard engines to enable women to reach less accessible piangua areas (Dankelman & Davidson 1988).

In **Bamako, Mali**, at the UNDP seminar on "Promotion of Women's Activities in Enhancing Water Resources", one of the central issues mentioned was the effect of introducing modern water point with expensive unfamiliar technology which often brings with it a disruptive

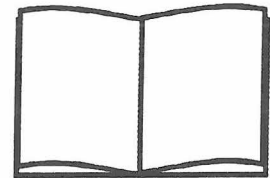


management system to which traditional communities have to adapt. The "modern" water tap introduces a modern idea, that of public asset with new rules, different from community rules. **Often these new systems are introduced without involving women from the outset, even though acceptance, use and maintenance depends on community dynamics and on the active role of women.** Women, responsible for providing water and ensuring its correct use, have little right to speak and only become involved when recourse has been made to the community for management problems. Women are in this way consigned responsibilities for systems which are not always beneficial to them as a group. The seminar was inspired by the saying, "A woman's work is like an underground stream which, unseen, makes the earth green" (Van Wijk & Bolt 1993).

The Roles of Women in Water Resource Management

6. Fisheries

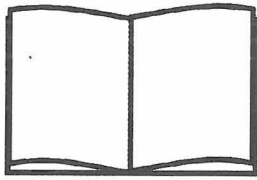
In Western Kenya, the Jiwruork Women's Group improved a freshwater fishery which was not being developed or managed properly. In Njoro, unemployment was high, family incomes were low, and fish, being the cheapest source of protein, was a major source of food for the community. The Jiwriork Women's Group, a self-help group of local women, started a project to produce fish for consumption in a nearby dam. The project collapsed due to a lack of commitment and a knowledgeable leader. No-one was regulating fishing or maintaining the fish farm, as a result emergent plants and other aquatic vegetation greatly decreased fish production. Water catchment areas were misused and water was polluted. A year after the project collapsed, Emily Othieno, a lecturer of Zoology at Egerton University persuaded some of the women who had originally been involved, to revive their activities. The women formed a supervisory committee and with some technical support from the university (but no outside funding), the Jiwruork Women's Group established two new fish farms in two earthen ponds and improved management of the old one located at the dam. Fish have now been harvested and sold. The income generated by these sales is distributed to group members who remit half of the proceeds to the project each year. In addition to raising incomes, the project has enabled maximum production of fish without over-exploiting the resource base (UNEP & WorldWide 1991).



In **Dgema-Abbey, Nigeria**, fishing is the primary occupation of the local population. The village has suffered from oil exploration and exploitation, which has caused pollution of some of the surrounding creeks. Most of the men have migrated out to nearby towns and cities to work, leaving the women to deal with most community matters. For the past 30 years, the women have been trying to conserve marine life in these creeks as these resource sustain the community. The women formed an enforcement group and under an elected leadership, instituted and enforced rules, regulations and sanctions for harvesting and managing creeks and mangrove forests in the area. The rules involve a rotational system using creeks while other depleted creeks are banned in order to give the fish in them time to recover. To ensure compliance with this ban, the women sought the consent of the Village Chief, who contacted native medicine men to invoke curses on anyone who contradicted the ban. Funding for the activity was derived from community members under a voluntary basis. The women have managed to devise an environmentally sound strategy for coping with the depletion of natural resources and encouraging communal spirit. They used natural resource management techniques which were socially acceptable and based on the history and culture of the people. The project has united the people for the purpose of protecting the natural resource base on which their livelihood depends (UNEP & WorldWide 1991).

7. Hydroelectric Development

The **New Zealand** government was examining options for generating additional electricity. They investigated adding hydroelectric dams in the lower Clutha River and commissioned a study team to compare four alternative schemes. The team's approach was to ensure that local communities were involved in the investigation and decision-making process. The study team had a high profile of women; 10 of its members were women. Women in the local community were involved by distributing pamphlets posters, displays and holding meetings at shopping areas. Home visits and meetings were also arranged. As a result, community women took a very active and public role. They influenced what was studied and how it was studied. They played a key role on disseminating information and made submissions which covered the whole range of hydroelectric development issues (UNEP & WorldWide 1991).

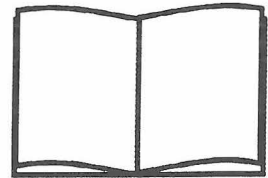


8. Water Quality Protection

In a village in central Java, **Indonesia**, the sole water source was a small, polluted river 1.5 km away which dwindled in the dry season. Water-transmitted diarrhoea epidemics and water-borne skin diseases were common. The Family Welfare Movement (PKK), a woman's national non-governmental development organization, gradually mobilized the village to participate in development activities which included training of women. Women leaders of the village, supported by the village head, took the initiative to bring clean water from a mountain spring in another village 500 meters higher up the mountain to their own village and closer to their homes. Permission was obtained to share the other village's water supply. At a formal meeting with all of the village present, the women secured the commitment of the entire village to build and manage a safe water supply system based on collective responsibility. Three years later, the village has a water distribution system collectively built and managed. The women take turns cleaning the communal water facilities and collect user fees to cover maintenance costs. Dramatic health improvements have resulted and there has been a 10% increase in per capita income due to improved agricultural production, fish farming and goat raising (UNEP & WorldWide 1991).

9. Wetlands Conservation

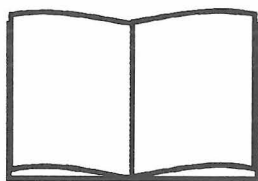
The creation of a new shrimping industry threatened to destroy more than 1,000 hectares of wetlands and forest along the southern coast of **Honduras**. This threatened the wildlife, birds and marine life as well as the livelihood of 2,000 families. The wood from the forests and the fish from the lagoon were an integral part of their economic survival and the protein component that the fish and wildlife added to local diets played an important role in maintaining good health. The people of the surrounding communities were organized under Sara Aguilera to halt the continued destruction and takeover of this area by corporate concerns. Ms. Aguilera tried to negotiate with the corporate firms, she made statements on radio and television and lobbied public officials. However, the strength of corporate concerns forced a show down of strength. One night hundreds of fishermen and farmers gathered at the gates and burned down the buildings and destroyed the fence blocking their access to the forests and lagoons. The showdown was successful and the people were given back their right to fish and farm the area. The



Ministry of Natural Resources designated the El Jacarito lagoon as a reserve for wildlife and artisanal fishery (UNEP & WorldWide 1991).

10. Groundwater Protection

In Antigua, West Indies, the only source of water is in the form of tiny seasonal streams or gushing gullies following heavy rainfall. Dams and reservoirs store the potable water which comes exclusively from rainfall. Groundwater is used extensively. Over the years, a combination of man-made and natural pollutants had begun to contaminate some of the groundwater aquifers. The pollution was particularly prevalent in two areas of the island, where coliform and pathological bacteria, pesticides from surrounding farms and a rise in salinity due to rapid depletion in the water table were all contributing factors. More than 1,000 residents had expressed alarm at the obvious health risks associated with consumption of water from contaminated wells. Veronica Yearwood, a hydrologist employed with the Antigua and Barbuda Public Utilities Authority (APUA) campaigned for a groundwater management programme to provide clean and safe drinking water to poor families. She convinced APUA to conduct a series of chemical tests on the region's groundwater aquifers to ascertain the level of pollution. She then obtained funding to implement a groundwater management programme and to establish a team for this purpose. Under her leadership, the team examined and changed laws to prevent pollution of groundwater. Local women were organized to publicize the project and to educate the other residents of the long-term damage that could result from a contaminated well or aquifer. The project has been extended to all other regions of the island. All known aquifers are now being tested and monitored for groundwater contamination, and the necessary steps to eliminate health hazards from water supplies is being undertaken (UNEP & WorldWide 1991).



3. Women, Water and Environmental Sanitation

*The Role of Women in Environmental Sanitation **

1. Promoters of sanitation facilities

In Pakistan, women were involved as **promoters** of new latrines.

The Baldia slum in Karachi, Pakistan is a conglomerate of 39 neighbourhoods each having its own ethnic identity. A social worker from the university made house-to-house visits to inform women about a new type of soak-pit household latrine and to help arrange for construction (free if households provided their own superstructure and labour). Once initial mistrust had been overcome, the local women went door-to-door to canvass for latrines, allowed their daughters to be employed in social surveys and organized street cleaning. The result was 80% latrine coverage in their community. Source: Bakhteari, Q.A. & Wegelin-Schuringa (1992).

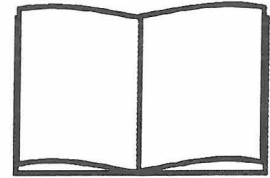
In Indonesia, the PKK, a women's non-governmental organization motivated their communities to build pit latrines, convert human waste into manure, and then use the manure as fertilizer to improve agricultural productivity.

2. Waste recycling

In Manila, a women's organization masterminded a project to recycle wastes. Women **designed, planned, implemented and managed** the whole project and continue to **promote and educate** communities as to the need to dispose of household wastes properly. They **monitor** and hold regular inspections of house surroundings and residents are informed of disposal activities that are not performed properly.

In Taiwan, the Homemaker's Union and Foundation **promoted** a government recycling project and circulated thousands of pamphlets to

* Case studies presented at the Global Assembly of Women and the Environment (Miami 4-8 November 1991) and published in "Success Stories of Women and the Environment" (UNEP/WorldWide 1991) can be used to illustrate women's involvement in project activities.



educate people how to sort their garbage and where to send recyclables. The women's group sent teams to work with community members to **encourage** and **promote** recycling. It also distributes **educational** materials to adults and children about environmental issues.

3. **Public cleanup campaigns**

In **Peru**, a non-governmental organization obtained the commitment of 200 women coordinators belonging to the organization to initiate activities to contain a cholera epidemic. The women distributed pamphlets that **educated** people on the basic measures needed to prevent spreading of the epidemic. They also **implemented** a public cleanup campaign to eliminate accumulated garbage, fumigate centers where milk was prepared and distributed and **organized** latrine cleanups.

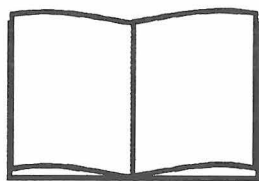
4. **Education and leadership**

In **Thailand**, women's participation in **education** and **leadership** were promoted in a village-based water supply, sanitation and sustainable development project. Women field workers **gathered information**, helped villagers **identify** needs and problems, and worked with them to **design** solutions. Women in the village were primary targets and were seated in front rows in training sessions to encourage them to present their ideas. Village women's participation in the project's **formal decision making structures** was greatly enhanced.

5. **Toxic waste**

In **Bangladesh**, a women's activist group **organized** women's organizations, human rights and legal aid groups, scientists, researchers and social activists to put pressure on the Bangladesh government to take steps against toxic waste threats. They conducted a nationwide signature campaign, distributed information leaflets, demonstrated, wrote newspaper articles, and held seminars and press conferences to create public awareness about industrial wastes and its possible effects. Several hundred women participated in these events.

These case studies illustrate how an integrated approach to waste disposal, water and hygiene is needed to realize health improvements and how women and groups of women have successfully implemented a range of initiatives.



4. Women and Waste Management

The Role of Women in Waste Treatment

A number of case studies taken from "Success Stories of Women and the Environment" (UNEP/WorldWide 1991) detail the many ways that women have successfully affected waste management improvements for the better health and living conditions of their families and communities. These case studies show how women have taken the lead in waste management problem identification and in planning and implementing programmes to solve for these problems. **Women have participated in waste management activities in waste reuse and recycling, disposal of human wastes, solid waste disposal, the disposal of nuclear wastes, prevention of air pollution and the disposal of toxic and hazardous wastes.**

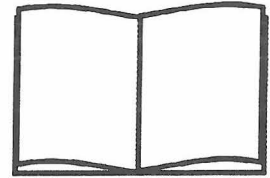
1. Waste Reuse and Recycling

In Manila, a non-governmental organization, the Metro Manila Council of Women Balikatan Movement (INC) planned a recycling programme to improve waste disposal for major towns.

Many of the residents in the Metro Manila area did not have adequate waste disposal systems. Landfill space was scarce, and few residents had thought of recycling household wastes. Land, air and water pollution was a major problem in the city, and many canals were clogged with plastics.

In February 1983, the Metro Manila Council of Women Balikatan Movement, Inc. planned a garbage recycling program in order to improve waste disposal for the town's 18,468 households. The San Juan Chapter of the Council organized 10 existing junk shop traders to collect and pay for dry waste. A system was set up whereby "eco-aides" collect the community's dry household waste once a week. This waste is then sold to junk shop traders who in turn sell it to the factories and secondary material. The factories then convert the dry waste into new products.

The women also continuously wrote to the households urging them to separate their wet and dry garbage and sell it to the "eco-aides". Seminars, meetings and general assemblies in the villages explained the



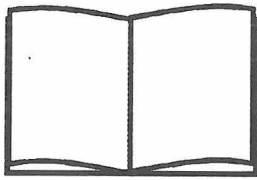
problem and the proposed solution. The Metro Manila Council of Women provides an annual subsidy of U.S. \$400 which is used for collection equipment, uniforms and "eco-aide" identification cards. The village councils cooperate by supporting the program.

The project has resulted in many environmental, health and economic benefits. Streets and canals are cleaner. Most community members are becoming more cooperative in separating wastes. There is less air, water and land pollution. Street litter has been reduced. Participating households, "eco-aides" and junk shop traders earn money from the program, and the general health of the community has improved. Factories consume less fuel when they use recycled materials and spend less on imports of raw material, thereby decreasing overall production cost. Fewer government dump trucks are needed to collect the wastes, thereby saving government funds. Less government money is spent on unclogging canals which were previously clogged with plastic. The project has been so successful that both the Metro Manila Council and the Government of the Philippines are considering replicating it. Ms. Camacho was asked by the Metro Manila Authority to advise them on how to word an ordinance that would compel residents to recycle.

Also in Manila, The Ladies Auxiliary Committee of the Catholic Women's League, a non-governmental organization transformed vacant lots into sanitary landfills where organic waste could be converted into fertilizer and set up a programme to recycle or reuse dry wastes such as plastic containers, newspapers, old tires, etc. As a result of their efforts the dumping of wastes into local creeks and the burning of domestic wastes decreased.

The project was initiated in a small community called San Antonio Valley II Subdivision (SAV) located outside Metro Manila where 1,000 people (about 200 families) reside. The community could not depend on the Environmental Sanitation Center, which is part of the Metro Manila Authority, to pick up their domestic waste on a consistent basis because of the center's limited resources. As a result, garbage piled up, and residents resorted to burying their garbage themselves or to dumping it in a nearby creek.

Through the Ladies Auxiliary Committee of the Catholic Women's League (CWL), the community decided to remedy the problems themselves rather than to reform the Environmental Sanitation Center. They transformed wide vacant lots in the area into sanitary landfills where organic waste could be converted into fertilizer. Dry wastes such as plastic containers, tin cans, newspapers, old tires, etc., were either



recycled or sold through junk dealers. Proceeds from the sales are given to maids and "househelps" working in private residences to provide an incentive for them to participate in recycling. Wet wastes such as fish intestines and gills, spoiled rice, fruit peelings and the like were either buried to produce plant fertilizer or put in disposable plastic bags for the garbage collectors. The CWL sent representatives to the local government to ensure garbage collection proceeded two times a week on a regular basis.

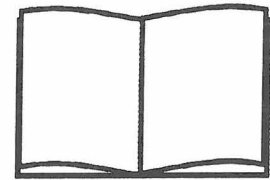
As a result of the new waste disposal system, residents burn and dump less garbage, although this activity still goes on. The CWL continues to hold meetings and circulates memoranda regarding the househelps, regarding proper waste disposal methods. Officers and committee members conduct inspections of house surroundings, and inform residents if disposal activities have not been performed properly. Conception Ocampo believes the work of her group, the CWL, has increased the role of women in the community. Moreover, CDL's efforts have saved money for the local government and for the Metropolitan Manila Authority since the project reduced collection activity by the local government by as much as 80%.

In South Africa, a team of women initiated a project to educate the local population of women about the benefits of home gardens and the ways waste items can be recycled and utilized in the gardens.

The local population of Kangwane did not use the ground around their huts efficiently and allowed organic matter that could be used as compost in home gardens to go to waste.

Gladys Khangwayini Mashinni, an EarthCare team leader with Ecolink, a non-governmental organization, initiated a garden/nutrition project in KaNgwane after an assessment of community needs was made. She first attended a training course to observe how a similar project was being conducted in another part of South Africa. Then three team members were chosen. The team began visiting rural communities and meeting with women leaders to discuss what was most needed. From these discussions, the Earthcare team initiated nutrition lessons, food demonstrations and training in the trench garden technique among the local women. The trench garden method uses organic kitchen waste, grass cuttings and crushed glass to produce chemical-free vegetables at low cost.

The team demonstrated the advantages of home gardens and recycling and produced a brochure with illustrations and easy-to-follow



instructions that explained how to create a home garden. The key to designing an effective brochure was using simple wording, simple illustrations to complement the words and illustrations that depicted black participants. The team pays daily visits to the community groups participating in the project. Private donors -mainly Nestle South Africa - fund the project, which costs about U.S. \$50,00 annually. One obstacle was that local women had very little money with which to buy the seeds needed for the initial planting, although vegetable sales cover the costs of future plantings.

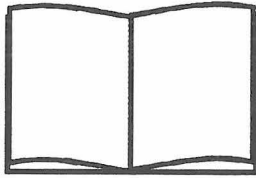
The home gardens produce cheap vegetables that are free of chemicals. This project improved the nutrition of the township and saved cash formerly used to purchase vegetables for consumption. It also reduced household waste. Community women are the sole participants, although the men are supportive of their efforts.

2. Sanitation

In the 1970s, Gambong Village in Indonesia suffered from multiple problems. Eighty percent of the people relied on the land for a living, but that land was so infertile that many men had left the village to seek employment elsewhere. Only 3% of the villagers had attended school beyond the primary grades. Improper human waste disposal and water shortages led to frequent outbreaks of contagious diseases.

PKK is a Indonesian social movement devoted to enhancing the role of women in grassroots development activities. In 1981 the PKK team in Gambong conducted several education programs and meetings for women. In the wake of these meetings, 17 village women formed an organization of women farmers called Wanita Utama or the "Honorable Ladies." The 17 "village motivators" then went house to house and encouraged each family to: 1) build two pit latrines; 2) use a simple system to convert the human waste into manure; and 3) use that manure to improve the land's agricultural productivity.

Using this simple, low-cost, environmentally friendly strategy, Gambong's women have raised village living standards without using outside resources. Agricultural yields are higher, especially for horticultural products such as fruits, vegetables, herbs and spices. Poultry and livestock raising has expanded. Increased incomes have transformed the village: the men have returned to these improved conditions; families can afford educational expenses through the high school level; housing has been built using a rotating credit scheme; and



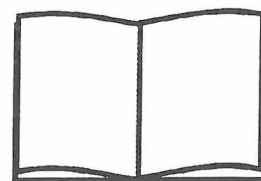
more and more villagers can afford radios, televisions and motorbikes. Moreover, sanitation and health conditions have improved. In 1986 the President of Indonesia gave Wanita Utama the KALPATARU Award for their continuous and impressive efforts to preserve and improve the environment.

A case study from Sri Lanka demonstrates how women spearheaded development activities to improve sanitation conditions in the Kurana village.

Inadequate water and sanitation facilities in Kalutara District's outlying areas led to regular rainy season outbreaks of diarrhoeal disease, a major killer in Sri Lanka. In response, UNICEF supported a water and sanitation project for 25 villages in Kalutara District. The project used a process designed to strengthen the government extension system, community participation and institution building, especially women's participation in development projects and activities.

Kurana was selected as one of the project villages. Ninety-five percent of its 460 families were members of a socially-depressed group which as migrated to the village when they were offered Crown land. Kurana lacked both a sanitary waste disposal system and a potable water supply system, suffered from its remote location and a caste-based social ostracism. It had been bypassed by other development efforts. A core group of young people (mainly women) had joined the dormant Rural Development Society to try to improve their conditions.

The objective of the waste disposal project in Kurana was to construct 25 water-sealed latrines within a year. Early achievement of this goal secured UNICEF funds of 750 rupees per latrine and community self-help enabled latrine construction, which was accompanied by sanitation, health and nutrition education. The education emphasizes the ability of the community to effectively control the situation by using sanitary toilets and adopting related health habits. Orientation/training sessions for the Rural Development Society and government extension workers and officials prepared everyone for their roles in the participatory project. The Rural Development Society, especially its Village Development Team (9 of the 12 were women), had major responsibilities. Working closely with government extension workers and officials, they conducted a community survey to assess village needs and resources, and analyzed the data; mobilized village participation; managed the UNICEF funds; and planned, supervised and monitored the construction program.



Twenty-five water-sealed latrines were constructed. Heightened awareness and the adoption of better water sanitation practices reduced roadside pollution and the incidence of sanitation-related infections. The community established connections with the government. This ended its isolation and led to the implementation of other development projects in Kurana.

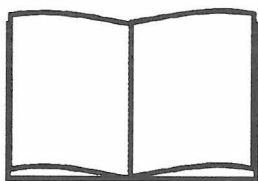
Another case study, this time from Pakistan shows how a women's groups were involved with the introduction and adoption of new sanitation technologies amongst women.

During the last ten to fifteen years, thousands of families in search of food and employment have moved to certain areas of Karachi from rural areas of Pakistan and from other countries. They occupied unauthorized land in unplanned settlements. These people suffered from constant health problems due to the absence of sewage systems and sanitation. Poor drainage attracted flies and mosquitoes, causing diarrhoea, typhoid, malaria and dysentery among the population. The focus of the project by the APWA was to improve health through better sanitation practices and facilities in the communities.

Money posed a constraint, therefore the first step was to introduce simple improvements such as bucket latrines and soakpits for human sewage. Open pits were dug for the disposal of wastewater. In order to raise money to build more permanent sanitation structure, APWA introduced income-generating activities. Women were trained in such skills as pickling and preserving vegetables, embroidery and carpet and rug making to help raise money. APWA and other organizations helped communities to save money by helping them build facilities themselves rather than having it done by commercial companies.

Small social welfare organizations developed, and community member approached the Karachi Development Authority and the Karachi Municipal Corporation for further assistance when needed. In some communities, latrines have been constructed inside the houses.

Aside from improved sanitation and health, another social benefit arose from the implementation of the project: the project instilled confidence in the women of the community. Improvements in the health of women and children had freed up women's time to pursue activities that interest them. Previously, women had spent much of their time caring for sick children. Women participate in income-generating activities as well as contribute physical labour to construction projects. More and more



women take out loans from cooperatives and women's banks newly operating in Pakistan.

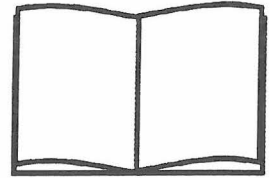
3. Solid Waste

A case study from Nepal describes how a local Nepalese women's organization Women in the Environment (WE) initiated an innovative programme to dispose of solid wastes in the squatter settlements at Balaju.

On the west bank of Nepal's Bishnumati River at Balaju, lies a squatter settlement of 70 households. The community there, suffered from poverty, poor sanitation, lack of potable water and the insecurity of living next to a river which threatened their homes whenever water levels were high. "Women in Environment" (WE), a Katmandu-based NGO, consists of professional women is committed to creating environmental awareness among Nepalese people, especially women and children, through education and village-based action programs. In 1990, WE initiated a squatter settlement program at Balaju in an effort to provide education, health, sanitation, waste disposal and drinking water facilities to the members of the squatter community. Prior to initiating the project, WE visited Balaju a number of times and spoke with local people to identify problems and issues. WE also arranged a "Training of Trainers Workshop" to equip WE members with knowledge and skills prior to implementing the project.

An action committee of 12 local people was formed to act as a catalyst for the development activities in the settlement. Piles of solid waste had gathered around the settlement, and WE considered poor management of solid wastes, a major health threat to women and children; however, the community did not identify this as a problem. WE organized lectures on the health risks posed by improper solid waste disposal. When the people remained unmotivated to change their habits, WE provided a bucket to each household and offered a cash prize of 500 rupees to the household which disposed of their solid waste most effectively and kept their house clean. Within two months, every household was disposing of their waste at a WE-recommended site, and no one wanted the cash reward. After living in a clean environment, families wanted to keep their homes that way.

WE also facilitated the connection of the community to the main water line. They helped the people liaise with government agencies and provided building materials for the water connection and two taps.



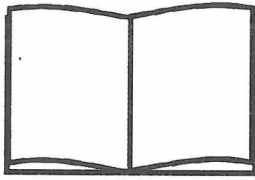
Local people contributed their labour; they then added a third tap themselves. The squatter community also planted saplings and established a gabion wall to stabilize the river bank. Kitchen gardens have been established, and more than 20 women participate regularly in the non-formal education program.

On a larger scale, a case study from Taiwan describes how the women's organization Homemakers' Union and Foundation (HUF), a group with over a thousand members, initiated a programme to reduce and recycle solid wastes.

In 1990, Taiwan had a population of more than 20 million people, giving the island a population density of about 560 per square kilometer. Municipal solid waste is one of the most urgent problems. In 1988, municipal solid waste generation reached 5,880,000 metric tons, an increase of 11.3% from 1987 figures. Wai-Jane Ho has identified what she calls the three "highs" and three "lows" that explain why Taiwan is experiencing this problem: High Density - high economic and social indices affecting environmental loading; High Growth - increased pollution following economic growth; High Expectations - people expect a clean environment; Low Funds - low public investment in environmental protection; Low Manpower - few people working in environmental protection; Low Technology - technology often lags behind that of developed countries.

Wai-Jane Ho is a member of the Homemaker's Union and Foundation (HUF), established in 1987. It is one of the most outstanding women's organizations in Taiwan. HUF has over 1,000 members who want to unite to improve the quality of life and is funded by private firms and enterprises. The Environmental Protection Committee (EPC) is one of HUF's seven committees. The EPC planned 11 environmental protection projects during 1988-89. When the group established the Homemakers' Union Environmental Protection Foundation (HUEPF), it declared 1989 "The Year of Waste Reduction."

With a budget of U.S. \$87,000 per year, the HUEPF's 222 members engaged in many activities, such as promoting the "Hsi-Fu" Recycling Project, started by the Government's Environmental Protection Administration (EPA). HUEPF printed thousands of pamphlets to teach people how to sort their garbage and where to send recyclables. Each year, the group targets communities and sends teams to work with community members to encourage recycling. Other HUEPF members have worked through department stores to encourage shoppers to bring their own bags rather than using plastic bags. Another activity



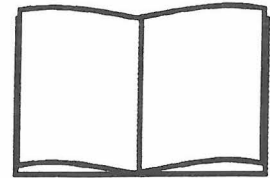
distributed educational materials published by EPA to children and adults. "The Little Magic Scouts of Environmental Protection" project involved educating a group of 30 youngsters about environmental issues. It included a field trip to teach children about waste generated and disposal. "The Environmental Protection Mother's Camp" is designed as an eight-week training course for mothers to learn about environmental protection.

HUEPF's efforts have succeeded in reducing the total weight of solid waste by 20-40%.

A case study in Lima Peru, illustrates how women were involved in alternative waste management technologies. Accumulation of waste is a major problem in Lima, Peru, especially in marginal communities. The conventional method of garbage collection using compactor trucks is ill-suited to these areas, where narrow streets, bad roads and steep inclines often prevent access and shorten the life of the expensive, imported trucks. Consequently, marginal communities often lack regular garbage collection; residents either burn their rubbish, which creates air pollution, or simply throw their garbage into the river, vacant lots, etc. Disease-carrying rodents and insects thrive amidst the accumulated household waste.

Rosa Aquino Portal led a one-year pilot project launched by the Instituto de Desarrollo y Medio Ambiente (Institute of Development and Environment - IDMA) in 1987 to develop and test an alternative method of waste collection for marginal communities in Lima. In the system developed by IDMA, small vehicles (tricycles, motorbikes, etc.) follow micro-routes and collect garbage from street to street, periodically returning to a strategically-located collection center to exchange full containers for empty ones. Workers also carry out recycling activities at the center. Once a day, a municipal garbage truck comes to the center and transports the collected waste to a disposal site. Catholic Relief Services and the Institut für Internationalen Zusammenarbeit helped fund the U.S. \$25,000 collaborative effort by IDMA, the affected communities (in particular, local women's groups) and the municipalities. The project focused on increasing environmental awareness and involved neighborhood organizations, particularly women's groups, in all phases of the project - from preliminary research and system design through project evaluation. The pilot project covered three communities (5,500 people).

The alternative collection scheme works; it has cleaned up the streets in participating communities and reduced air, water and soil pollution. The



labour-intensive scheme has many advantages, for example, its low cost (\$8-12/metric ton versus \$9-20/metric ton for the conventional method), easy implementation, minimal initial investment requirements, ability to generate employment, ability to service areas inaccessible to compactor trucks, and promotion of environmental education. Other institutions and municipalities in Lima have adopted and adapted this system.

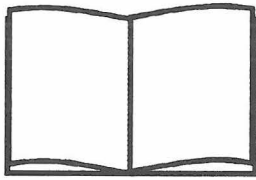
Thirty garage collection micro-enterprises (each composed of about 10 people and 4 tricycles) currently operate in Lima's marginal communities, using the technology developed by IDMA.

4. Nuclear Waste

A case study in Bangladesh describes how a local women's organization NARIPOKKA successfully campaigned against and resisted attempts by a ship originating in the United States to dump nuclear wastes and toxic materials in the Bay of Bengal.

In February 1989, two news reports appeared almost simultaneously in the Bangladeshi press. One pertained to a proposed manufacturing plant in Bangladesh based on imported industrial waste; the other referred to the clandestine movement in the Indian Ocean of a U.S. ship attempting to dump its 15,000 tons of toxic incinerator ash into the Bay of Bengal. The ship Felicia had originated in Philadelphia, changing its name several times in two years to avoid detection. Dumping this toxic waste off the coast of Bangladesh would threaten the fishing industry, the area's main source of livelihood. It would also undermine the health of humans, plants and animals living on the coast.

Starting in March 1989, *Naripokkho* (a Bangladesh women's activist group) mobilized like-minded individuals and organizations - women's organizations, human rights and legal aid groups, scientists, students, researchers and social activists - and undertook a series of actions as the organization "Foreign Waste Resistance Committee". Its prime objective was to build up public opinion to put pressure on the Bangladeshi Government to take steps against these toxic waste threats. They conducted a nationwide signature campaign, distributed information leaflets, demonstrated, wrote newspaper articles, and held seminars and press conferences to create public awareness about industrial waste and its possible effects. Sayyada Ghuznavi and Parvin Hasan jointly coordinated these activities, which cost Bangladesh Taka 20,000. *Naripokkho* provided most of the necessary funding, although member organizations also contributed financing. There was also a strong



element of volunteerism in the campaign. Several hundred women participated in the activities.

As a result of the group's campaign, the two toxic waste issues were resolved by October 1989. The proposed industrial waste-based plant was cancelled. The Bangladeshi Government used its resources, including the Navy, to protect its territorial waters. The Indian Navy also joined in the search for the ship, although given the enormity of the problem, neither navy could confirm or deny whether any waste had in fact been dumped in the Indian Ocean. The most dramatic effect of the actions, however, has been the awareness created about the hazards of industrial waste. The group, renamed the "Environment Protection Committee", continues to operate with a wider mandate on environmental matters.

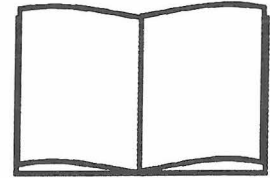
5. Gaseous Wastes

A case study from the United States demonstrates the role that one woman played in developing new waste management technologies which do not contribute to air pollution.

Anna Edey designed and built an experimental solar greenhouse which uses no fossil or nuclear energy resources for heating, cooling and electricity. She kept 30 Angora rabbits and 100 chickens in spacious free-ranging enclosures within the greenhouse to provide heat and carbon dioxide, as well as manure, low-cholesterol/low-calorie eggs, meat and Angora. An Earth Lung Filter System filters the air and prevents too much aluminium from entering the growing area which also takes advantage of the exhaled carbon dioxide to foster faster plant growth. The result is a non-polluting, sustainable, dependable and economically viable model for producing high yields of food all year long which reduces waste accumulation and does not contribute at all to air pollution.

6. Hazardous and Toxic Waste

A case study from Naugatuck, Connecticut describes how a group of concerned women through legal action extending over several years forced the cleanup of a landfill site from which toxic chemicals and leachate were flowing out and contaminating local surface and groundwaters.

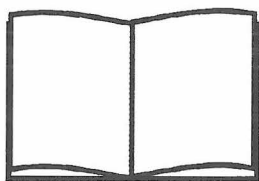


In October 1981, the U.S. Environmental Protection Agency (USEPA) added Laurel Park Landfill in Naugatuck, Connecticut to a list of 114 hazardous waste sites initially designated for cleanup under the \$1.6 billion federal "Superfund" program. The Laurel Park landfill was in the sixth most dangerous group out of 11 groups. The Superfund was established in December 1980 in response to a public outcry over a hazardous waste emergency at the Love Canal site in Niagara Falls, New York. Laurel Park Landfill rises high atop the Andrew Mountain Hillside and can be seen for miles around. It was suspected of causing surface and groundwater contamination. A brook which flowed beneath the landfill was heavily polluted with high levels of toxic chemicals and landfill leachate; this brook travelled downhill through a schoolyard.

The Pollution Extermination Group (PEG) was founded by three women who lived within the vicinity of the 19-acre landfill. Mary Lou Sharon was elected the group's president and was instrumental in PEG becoming incorporated. She urged PEG to intervene in the court system, secured legal representation and lobbied in Washington for the reauthorization of Superfund. The main objectives of the neighbourhood organization were to close Laurel Park and to secure potable water for the residents (approximately 50) within a 1/4 mile radius of the site. The major concerns were installation of monitoring wells on site and petitioning the State Department of Environmental Protection (DEP) to test for dioxin. Both were accomplished. PEG also requested monitoring of the leachate line leaving the site, which eventually empties into the Naugatuck Public Works Treatment Plant. This was accomplished as part of the cleanup plan.

USEPA is suing Uniroyal Chemical Co., Inc. and B.F. Goodrich for the cost of the cleanup. Those companies in turn are suing 200 municipalities, business and individuals arguing about the percentages of responsibility. The estimated cost of the cleanup for two landfills owned and operated by the Murtha companies (including the Laurel Park landfill) is estimated at \$70 million. After three years of litigation with 36 responsible parties, 19 agreed to design and implement a final cleanup plan. This final plan, to cost \$20 million, will involve capping the landfill, lowering the water table and eliminating direct human exposure to waste contamination. PEG Inc. maintains contact with DEP and the EPA concerning the status of the landfill.

A case study in Thailand demonstrates how women became involved in a programme which trained them on the safe use of toxic substances in the home and in agriculture.

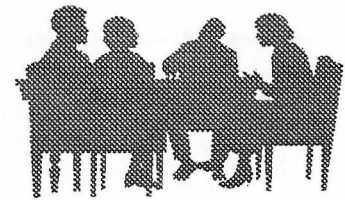


Due to concerns over the growing dangers from toxic substances in agriculture, foods and the household, the United Nations Environment Program (UNEP) earmarked funds to train women leaders on the proper use of hazardous substances. Thailand was one of the countries to utilize these funds.

The Thai training program was headed by one of UNEP's Senior Women Advisors, who was also the president of the Foundation of Life-long Education. The Foundation and UNEP provided policy guidelines; the Ministry of Education's Department of Non-formal Education implemented the project. The training program was known as the "Project to Train Housewives and Community Leaders in Safe Uses and Handling of Harmful Substances in Homes and Agriculture", and it ran for two months in 1989. One hundred and sixty-six women (local housewife group leaders, village health workers, volunteer teachers of the Department of Non-formal Education and local leaders) attended one of the five three-day workshops on toxic substances held throughout Thailand (one per region).

The workshops provided information on the proper use of toxic substances through lectures, videotapes, exhibits, models, etc. Equally important, the workshops offered the women skills training and practice which instilled self-confidence in their ability to share knowledge acquired in the workshop with neighbours and friends. The women researched topics individually and in teams and reported back to the group. They also prepared and performed short plays on training themes. On the last day, the women went into the community and practised the strategies they had learned for providing information on the use of toxic substances.

Within three months, the program's participants had shared their knowledge with over 10,000 people, more than six times the expected number of people. In addition, the people who were reached directly and indirectly through the program had made improvements in practices related to harmful substances. The Thai Government has earmarked its budget for a similar workshop to be undertaken in 25 more provinces for 1992.



Option No. 3: Recommendations for the Application of International Policy Framework at the National Level

TIME: 180 min

1. Objective

To undertake an in-depth analysis of the international policy frameworks related to women as managers of the environment and make recommendations for policy framework at the national level.

2. Individual Work

In order to facilitate your analysis, please read the enclosed summary containing the main issues related to women as managers of the environment and the relevant policy frameworks presented in this module. Select the relevant issues.

3. Group Work

Through brainstorming with the rest of the group, try to reach a consensus on the following questions:

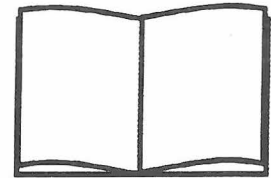
- How do the international policies outlined relate to your national context?
- Are existing national policies frameworks emphasizing the role of women as environmental managers?



- What programmes/projects are being implemented in your country which reflect the international policy framework (Agenda 21, Nairobi Forward-Looking Strategies, etc.). If not, what actions would you recommend ?
- Who is financing the existing programmes/projects?

4. Plenary Work

In plenary, the selected spokesperson will present the outcome of the group work for further discussion with the rest of the group and the trainer.



Summary of Main Issues and Policy Framework

1. Women and Natural Resources Management

Issues

- lack of education and training;
- lack of participation in planning, programming and projects;
- lack of information and awareness raising methodologies;
- lack of financial means;
- lack of choice in the various types of technologies.

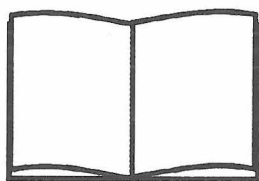
Policy Framework

Increasingly at the policy level, women's role in environmental and natural resource management is being given its due attention. Within the United Nations, work on behalf of women has long been underway. In 1976, the United Nations declared the United Nations Decade for Women: Equality, Development and Peace to assess the role of women in society particularly as related to peace, equality and development. Global conferences were held in Mexico City in 1975, in Copenhagen in 1980 and in Nairobi in 1985. Within these global conferences, the important linkages between the role of women in development and the protection of the environment was recognized and explicitly stressed the importance of the total integration of women in the development process and emphasized women's participation in national and international ecosystem management and control of environmental degradation.

The *Nairobi Forward-Looking Strategies* states:

Paragraph 224

Deprivation of traditional means of livelihood is most often a result of environmental degradation resulting from such natural and man-made disasters as droughts, floods, hurricane, erosion, desertification, deforestation and inappropriate land use. Such conditions have already



pushed great numbers of poor women into marginal environments where critically low levels of water supplies, shortages of fuel, over-utilization of grazing and arable lands and population density have deprived them of their livelihood. Most seriously affected are women in drought-afflicted arid and semi-arid areas and in urban slums and squatter settlements. These women need options for alternative means of livelihood. Women must have the same opportunity as men to participate in the wage-earning labour force in such programmes as irrigation and tree planting and in other programmes needed to upgrade urban and rural environments. Urgent steps need to be taken to strengthen the machinery for international economic cooperation in the exploitation of water resources and the control of desertification and other environmental disaster.

Paragraph 225

Efforts to improve sanitary conditions, including drinking water supplies, in all communities should be strengthened, especially in urban slums and squatter settlements and in rural areas, with due regard to relevant environmental factors. **These efforts should be extended to include improvements of the home and the work environment and should be effected with the participation of women at all levels in planning and implementation process.**

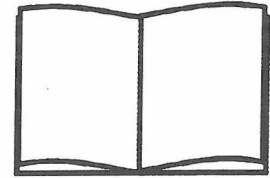
Paragraph 226

Awareness by individual women and all types of women's organizations of environmental issues and the capacity of women and men to manage their environment and sustain productive resources should be enhanced. All sources of information dissemination should be mobilized to increase the self-help potential of women in conserving and improving the environment. National and international emphasis on ecosystem management and the control of environmental degradation should be strengthened and women should be recognized as active and equal participants in this process.

Paragraph 227

The environmental impact of policies, programmes and projects on women's health and activities, including their sources of employment and income, should be assessed and the negative effects be eliminated.

The recommendations coming from the Nairobi Conference were fostered by UNDP's Senior Women's Advisory Group on Sustainable Development (SWAGSD).



Based on the experiences of the Zimbabwe and Tunisia assemblies, UNEP, in cooperation with WorldWide convened a Global Assembly of Women and the Environment - Partners for Life, which was held in November 1991 in Miami, Florida. The meeting was one of the major events held prior to the United Nations Conference on Environment and Development and was the culmination of a series of four regional meetings on women and environment. The Assembly's mandate was to present to the world community explicit evidence, through the presentation of successful case studies, the capacity of women to advance environmentally friendly products, systems, and technologies to achieve sustainable development.

The UNCED process affirmed women's key role in environmentally sound management. The two major documents adopted by the Conference, The Rio Declaration on Environment and Development and Agenda 21, both recognize the important role that women have in environmental management and sustainable development.

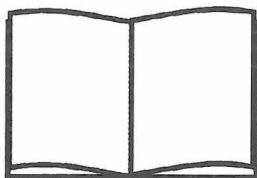
Principle 20 of the Rio Declaration states:

Women have a vital role to play in environmental management and development. Their full participation is therefore essential to achieving sustainable development.

Chapter 24, a separate chapter of Agenda 21 entitled: "Global Action for Women Towards Sustainable and Equitable Development" was also endorsed. This chapter is policy and management oriented and contains specific recommendations to strengthen the role of women in sustainable development and to eliminate all obstacles to their equal and beneficial participation; particularly in decision-making activities related to promoting environmentally sound management and sustainable development.

Throughout the 115 programme areas of Agenda 21 specific reference to women's needs, interests and roles are made. As just one example, in Chapter 10 "Integrated Approach to the Planning and Management of Land Resources", it is stated:

- 10.5 The broad objective is to facilitate allocation of land to the uses that provide the greatest sustainable benefits and to promote the transition to a sustainable and integrated management of land resources. In doing so, environmental social and economic issues should be taken into consideration. Protected areas, private property rights, the rights of indigenous people and their communities and other local communities and the economic role



of women in agriculture and rural development, among other issues should be taken into account.

Agenda 21 is a blueprint for action to the 21st century. Its 115 programme areas provide the framework for cooperation amongst Governments and the many other institutions and sectors of society that must be engaged in its implementation to effect the transition to sustainable development. Its goal is to cover all areas where environment and development intersect and where major social groups are affected, including women's organizations, in evolving towards a global partnership for sustainable development.

2. The State of Global Water Resources

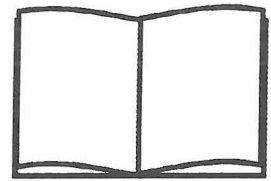
Issues

- water stress or scarcity
- misuse of water
- mismanagement of water resources
- surface water quality deteriorating
- groundwater sources polluted by surface water and irreversibly damaged by intrusion of sea water.

3. Women and Water Resources Management

Issues

- (1) Women in low income rural and urban areas in developing countries are hardest and earliest hit by environmental degradation in general and water scarcity in particular.
- (2) The need for a sound integrated watershed management approach that encompasses women's needs is increasingly being stressed.



- (3) Access to resources such as land and labour is an important prerequisite for women's involvement in the improvement and management of their environment.
- (4) Men's resistance to women's involvement in water resources management activities and projects is a constraint women face. Women need to be empowered to protect and maintain their own water resources without neglecting the support of men.
- (5) The introduction of modern technologies in water resource projects can have negative impacts on women's roles and position in the community, particularly if they have had no say in project design. Women's traditional management roles need to be taken into account if projects are to be successful.

Gender perspective in water resources management guiding principles which have been commonly accepted in global policy documents such as the New Delhi and Dublin Statements and Agenda 21. These principles include :

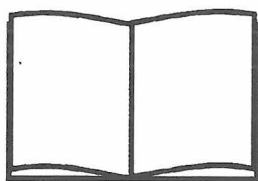
(1) Water as an economic good:

Much attention has been given to placing an economic value on water rather than solely on its health and social benefits. One reason for this has been to ensure the cost-effectiveness and efficiency of WRM projects. However, responsibility must be taken to ensure that economic cost-effectiveness and efficiency aspects do not have negative effects on social outcomes and particularly on the situation of women.

The division commonly made between domestic and productive use of water can be dangerous from a gender perspective. At household level, domestic water may be utilized for a variety of subsistence income-generating purposes commonly undertaken by women, for example, keeping of small livestock, beer brewing, brick-making, vegetable growing. Women must be seen and treated as economic actors and resource managers. The economic value of "domestic" water uses must be recognized.

(2) Management at the lowest appropriate level:

Statements about community management are typically couched in the language of empowerment and equity. However, there is also considerable emphasis on efficiency, cost-effectiveness, ownership and rights. Social norms and women's subordinate position may make women's involvement in community management difficult. A good knowledge of gender roles is a prerequisite for securing women's



involvement in management roles. Informal management systems, and women's roles in them must be recognized as a possible means of women's effective involvement.

(3) User orientation and demand management:

The management principles of user orientation and demand management could be positive from a gender perspective but would require gender-sensitive knowledge of users and uses. Since women's uses are often seen as "social" and "non-productive", they are often not visible to planners or are given secondary value. There must be more importance placed on the value of social good in uses of water.

(4) Capacity building and institutional development:

Capacity building and institutional development must include gender sensitization and training for all categories and levels of personnel. It must also include emphasis on gender research and development of gender analysis and planning methodologies.

(5) Government as promoter or provider:

Reduced roles for the state - promoting rather than providing - and more active roles for NGO's, the private sector and user associations, does not necessarily mean increased access to decision making for women. The economic crisis and resulting structural adjustments have played a part in the increased focus on market forces and private sector involvement. This gives rise to some concern regarding the impact on women given the increased focus on economic efficiency and cost-effectiveness.

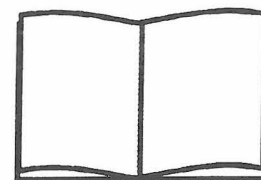
(6) Aid coordination:

Aid coordination will be essential to ensure a gender perspective - cooperation between agencies and within agencies should be developed. Increased communication and cooperation between different categories of personnel should be encouraged to develop the competence, methodologies and tools necessary to facilitate better incorporation of both women's and men's needs in programmes.

Policy Framework

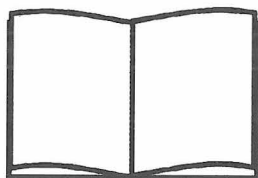
A number of international conferences and agreements have advocated policies which specifically identify the need to incorporate women's requirements in water resources management.

Chapter 18: the Protection of the Quality and Supply of Freshwater Resources: Application of Integrated Approaches to the Development,



Management and Use of Water Resources of Agenda 21 recommends that:

- (1) Integrated water resources management, including the integration of land- and water-related aspects, should be carried out at the level of the catchment basin or sub-basin... and to design, implement and evaluate projects and programmes that are both economically efficient and socially appropriate within clearly defined strategies, based on an approach of full participation, including that of women, youth, indigenous people, local communities, in water management policy-making and decision-making [18.9 (c)].
- (2) To improve integrated water resource management, develop public participatory techniques and their implementation in decision-making, particularly the enhancement of the role of women in water resources planning and management [18.12 (n)].
- (3) Delegate water resources management to the lowest appropriate level which then necessitates educating and training water management staff at all levels and ensuring that women participate equally in the education and training programmes... [18.19].
- (4) An enabling environment for the lowest level appropriate level management which includes the role of government in mobilizing financial and human resources, legislation, standard setting and other regulatory functions... and creating opportunities for public participation... This should include... donor support to local levels in developing countries, including community-based organizations, non-governmental organizations and women's groups [18.22].
- (5) Education and training programmes be established and strengthened on water-related topics... for all categories of staff involved in water resources assessment activities, using advanced educational technology, where appropriate and involving both men and women [18.33 (b)].
- (6) Action is carried out at the national level to strengthen the managerial capabilities of water-user groups, including women, youth, indigenous people and local communities, to improve water-use efficiency at the local level [18.34 (d)].
- (7) Implicit in virtually all of the recommendations of Chapter 18 of Agenda 21 is the need for progressive enhancement of training



and career development of personnel in sector institutions. It is urged that special provision be made for mobilising and facilitating the active participation of women... and that special education and training programmes for women should be launched with regard to the protection of water resources and water quality within urban areas [18.62].

- (8) The key to holistically and integrated environmentally sound management of water resources in the rural context includes the participation of local communities in all phases of water management, ensuring the full involvement of women in view of their crucial role in the practical day-to-day supply, management and use of water [18.68 (b)].

The Nairobi Forward-Looking Strategies is also concerned with women and water resources management. Paragraph 188 states:

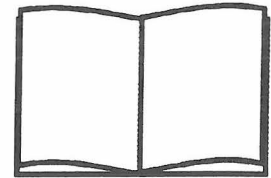
"Governments should pay greater attention to the preservation and the maintenance free from pollution of any kind of sources of water supply for irrigation and domestic consumption, applying special remedial measures to relieve the burden placed on women by the task of fetching water. To this end, they should construct wells, bore-holes, dams and locally made water-catchment devices sufficient for all irrigation and domestic needs, including those of livestock. Women should be included by Governments and agencies in all policy planning, implementation and administration of water supply projects and trained to take responsibility for the management of hydraulic infrastructure and equipment and for its maintenance."

4. Women, Water and Environmental Sanitation

Issues

Environmental sanitation can be defined as all aspects of water, waste disposal and hygiene which are essential for health improvements. As such, environmental sanitation encompasses:

1. water hygiene and consumption of safe water;
2. human waste disposal;
3. safe wastewater (grey water) disposal and drainage;



4. solid waste disposal (including household wastes);
5. proper personal hygiene; and
6. food hygiene.

For health improvements to be realized hygiene education programmes need to encompass all aspects of environmental sanitation. **In an integrated approach to environmental sanitation hygiene education is defined as all activities aimed at encouraging behaviour and conditions which help to prevent water and sanitation-related diseases.**

Health and hygiene interventions can be grouped into five main domains of hygiene behaviour. These are:

1. Disposal of human wastes.
2. Use and protection of water sources.
3. Water and personal hygiene.
4. Food hygiene.
5. Domestic and environmental hygiene.

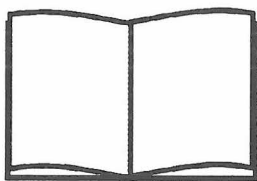
Policy Framework

Women can be involved in project activities in:

Data collection Women need to be involved in the collection of gender disaggregated baseline data. They can identify priority data to be collected, determine the most appropriate means of collecting data and the sample selection, and participate in the analysis and interpretation of the data.

Designers and planners Women should be the ones who decide how best women can be involved in project activities. Women can make selections on available technologies. Women should be involved in detailed design decision. Women can help design the community management system, for example, who sits on committees and boards and what levels and systems of payment need to be instituted.

Promotion Women can encourage the acceptance of new or improved systems simply by their own usage of the facilities. Women can also organize education programmes and incentive programmes to promote change in the community.



Construction Women can participate as construction workers or they can manage the construction activity. If community labour is used, women can organize work details. If work is contracted out to skilled craftspeople, women can train or brief them as to local needs and project design.

Operation and maintenance Women can take responsibility for the general care and cleaning of facilities and for essential maintenance tasks. Women can contract out work needed for major repairs and supervise work done.

Education Women can teach and motivate others members of the family to use new or improved facilities with proper hygiene habits. Women can also participate in a more formal role as paid or volunteer workers, educating and motivating community members to use, care for and maintain new sanitation facilities or to dispose of wastes safely, regularly and in designated areas.

Managers Women can develop a community based financial programme. Women can organize the collection of tariffs or contributions and enforce agreed upon social sanctions against those who do not pay.

Monitors Women can maintain regular checks on communal or public latrines. Women can organize community inspections or competitions to promote household cleanliness and to ensure that wastes are being disposed of safely and regularly.

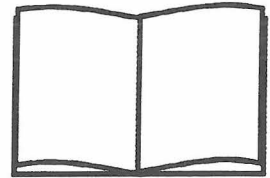
5. Women and Waste Management

Issues

The wastes which we generate must be disposed of safely. If not they pollute the environment and may destroy the very resource base which is needed to support human activity.

A basic requirement for human survival is the safe disposal of human wastes.

Human and other wastes, if not disposed of safely often find their way into water sources, thus perpetuating and intensifying the cycle of disease transmission.



The Rio Declaration and Agenda 21 also recognizes that women have a vital and central role to play in environmental management and development and their full participation is essential in achieving sustainable development.

Women and men as the family members concerned with child raising, care giving and safeguarding of the health of the family have a central and pivotal role to play in protecting the local family environment.

This part focuses on defining and describing waste management and the constraints and opportunities for women's involvement.

A number of case studies are given which detail the important contributions that women have made to waste management. These can serve as guidelines for planning future initiatives.

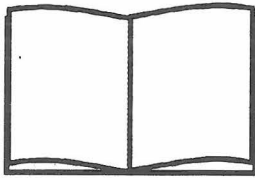
Waste management and the waste management process can be divided as follows:

1. Sanitation
2. Solid Waste Disposal
3. Liquid Waste Disposal (greywater)
4. Gaseous Wastes
5. Industrial Wastes
6. Hazardous and Toxic Wastes
7. Waste Reuse: composting, biogas production, aquaculture and recycling.

Sanitation

Many of the diseases which affect the population of the developing world are transmitted through human wastes.

In selecting a sanitation technology in a community the key requirement is that the technology must be socially and culturally acceptable and affordable by the community.



Solid Waste Disposal

Solid wastes include household garbage and other materials discarded by people.

The hygienic disposal of solid wastes in properly planned and constructed sites is a key requirement for environmental protection.

Liquid Waste Disposal

Households generate considerable volumes of wastewater (greywater). If the household is connected to a sewer system, then these liquid wastes are disposed of properly.

These polluted ponds are a major health hazard and need to be eliminated in an effective waste management process.

Gaseous Wastes

In addition to polluting water bodies and the land, human beings also pollute the atmosphere. This pollution results in serious environmental degradation and health risks.

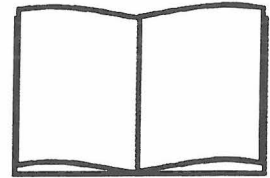
Industrial Wastes

Women, particularly poor women in urban and peri-urban areas are affected by the improper disposal of industrial wastes.

Hazardous and Toxic Wastes

Pesticides, insecticides and fertilizers which are used in agriculture often leave residues which are toxic and represent health risks. In addition, the improper application of these products and their handling is a major health risk. Toxic residues find their way into the environment and contaminate the soil, water and air. Oil spills in the recent years have become another threat to human beings and environment.

A specific form of wastes which poses a severe threat to the environment and to human health are the hazardous wastes resulting from military weapons production and nuclear activity.



Waste Reuse

Many forms of reuse are in practice throughout the world. These include composting, generation of biogas, and aquaculture.

Recycling is another form of reuse which allows waste products to be safely reused.

Policy Framework

The most comprehensive policy statement on waste management is Agenda 21 which includes specific references to the involvement and role of women in waste management.

Chapters 19, 20 and 21 of Agenda 21 particularly focus on waste management.

Chapter 19, Environmentally Sound Management of Toxic Chemicals Including Prevention of Illegal Traffic in Toxic and Dangerous Products recommends:

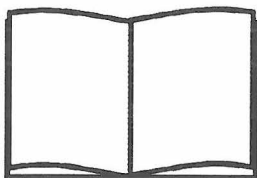
International organizations, with the participation of government and non-government organization should launch training and education programmes involving women and children, who are at greatest risk in order to enable countries and particularly developing countries, to make maximum national use of international assessments of chemical risks.

Chapter 20 on Environmentally Sound Management of Hazardous Wastes Including Prevention of Illegal International Traffic in Hazardous Wastes recommends for example that:

20.26 (b) Governments, in collaboration with international organizations, should conduct research in the health effects of hazardous wastes in developing countries including the long term effects on children and women.

20.27 Governments, according to their capacities and available resources and with the cooperation of the United Nations and other relevant organizations and industry an appropriate, should:
(b) Increase participation in hazardous waste management programmes by the general public, particularly women, including participation at grass-roots levels.

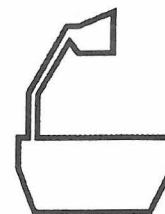
Chapter 21 deals with the environmentally sound management of solid wastes and sewage related issues and recommends specifically that:



21.19 Governments and institutions and non-governmental organizations, including consumer, women's and youth groups, in collaboration ...should launch programmes to demonstrate and make operational enhanced waste reuse and recycling.

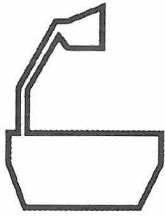
21.25 ...Governments, in collaboration with United Nations ...should undertake to (d) encourage non-governmental organizations and women's, youth and public interest group programmes, in collaboration with municipal authorities, to mobilize community support for waste reuse and recycling through focused community-level campaigns.

21.46 (c) Launch campaigns to encourage active community participation involving women's groups and youth groups in the management of waste, particularly household waste.



List of Transparencies

- No. 1: *Women and natural resources management (1)*
- No. 2: *Women and natural resources management (2)*
- No. 3: *Policy framework*
- No. 4: *The state of global water resources (1)*
- No. 5: *The state of global water resources (2)*
- No. 6: *Annual water use per capita, 1970-92*
- No. 7: *Women and water resources management*
- No. 8: *Policy framework (1)*
- No. 9: *Policy framework (2)*
- No. 10: *Issues in women and water resources management*
- No. 11: *The role of women in water resource management*
- No. 12: *Environmental sanitation*
- No. 13: *Domains of hygiene behaviour*
- No. 14: *Disposal of human wastes*
- No. 15: *Use and protection of water sources*
- No. 16: *Water and personal hygiene*
- No. 17: *Food hygiene*
- No. 18: *Domestic and environmental hygiene*
- No. 19: *Women's roles*
- No. 20: *Effects of water supply and sanitation improvements on morbidity from diarrhoea*
- No. 21: *Case studies show how women and women's groups have been successfully involved in environmental sanitation activities*
- No. 22: *Macro and micro considerations*
- No. 23: *Definition of waste management*
- No. 24: *Sanitation*
- No. 25: *Trends in arising of certain waste streams in selected countries*
- No. 26: *Percentage of GWI respondents reporting availability of different types of waste treatment and disposal facilities*
- No. 27: *Waste reuse*



No. 28: *Women's involvement*

No. 29: *Policy framework (1)*

No. 30: *Policy framework (2)*

No. 31: *The role of women in waste treatment*

TRANSPARENCIES
MODULE THREE

WOMEN AS MANAGERS OF THE ENVIRONMENT

WOMEN AND NATURAL RESOURCES MANAGEMENT - 1

- ⇒ WOMEN PLAY A MAJOR ROLE IN
MANAGING NATURAL RESOURCES AT
THE HOUSEHOLD AND COMMUNITY
LEVELS**
- ⇒ WOMEN EFFECT AND ARE CLOSELY
AFFECTED BY ENVIRONMENT**
- ⇒ WOMEN ARE ALSO VICTIMS OF
ENVIRONMENTAL MISMANAGEMENT**
- ⇒ WOMEN, ENVIRONMENT AND
SUSTAINABLE DEVELOPMENT (WED)**

WOMEN AND NATURAL RESOURCES MANAGEMENT - 2

- ➡ **INTERESTS OF POOR WOMEN AND THE GOALS OF SUSTAINABLE DEVELOPMENT ARE MUTUALLY REINFORCING**
- ➡ **CASE STUDIES SHOW HOW WOMEN HAVE BEEN INVOLVED IN IMPROVING ENVIRONMENTAL CONDITIONS**
- ➡ **IN KENYA, THE GREEN BELT MOVEMENT**
- ➡ **IN BRAZIL THE ACAO DEMOCRATICA FEMINA GAUCHA (ADGF)**
- ➡ **IN ZIMBABWE , THE ORGANIZATION OF RURAL ASSOCIATIONS FOR PROGRESS (ORAP)**

POLICY FRAMEWORK

- ➡ **WOMEN'S ROLE IN ENVIRONMENTAL AND NATURAL RESOURCES MANAGEMENT NOT GIVEN DUE ATTENTION**
- ➡ **INTERNATIONAL WOMEN'S DECADE**
- ➡ **NAIROBI FORWARD-LOOKING STRATEGIES**
- ➡ **GLOBAL CONFERENCES HELD IN MEXICO CITY IN 1975, COPENHAGEN 1980, NAIROBI 1985**
- ➡ **DISASTERS SUCH AS DROUGHT, FLOODS, HURRICANE, EROSION, DESERTIFICATION, DEFORESTATION PUSHED COMMUNITIES INTO MARGINAL ENVIRONMENTS**
- ➡ **SANITARY CONDITIONS AND DRINKING WATER SUPPLIES SHOULD BE IMPROVED**
- ➡ **WOMEN SHOULD BE RECOGNIZED AS EQUAL PARTICIPANTS IN ECOSYSTEM MANAGEMENT**
- ➡ **GLOBAL ASSEMBLY OF WOMEN AND THE ENVIRONMENT -PARTNERS FOR LIFE**
- ➡ **UNCED: RIO DECLARATION/AGENDA 21**
- ➡ **INSTRAW**

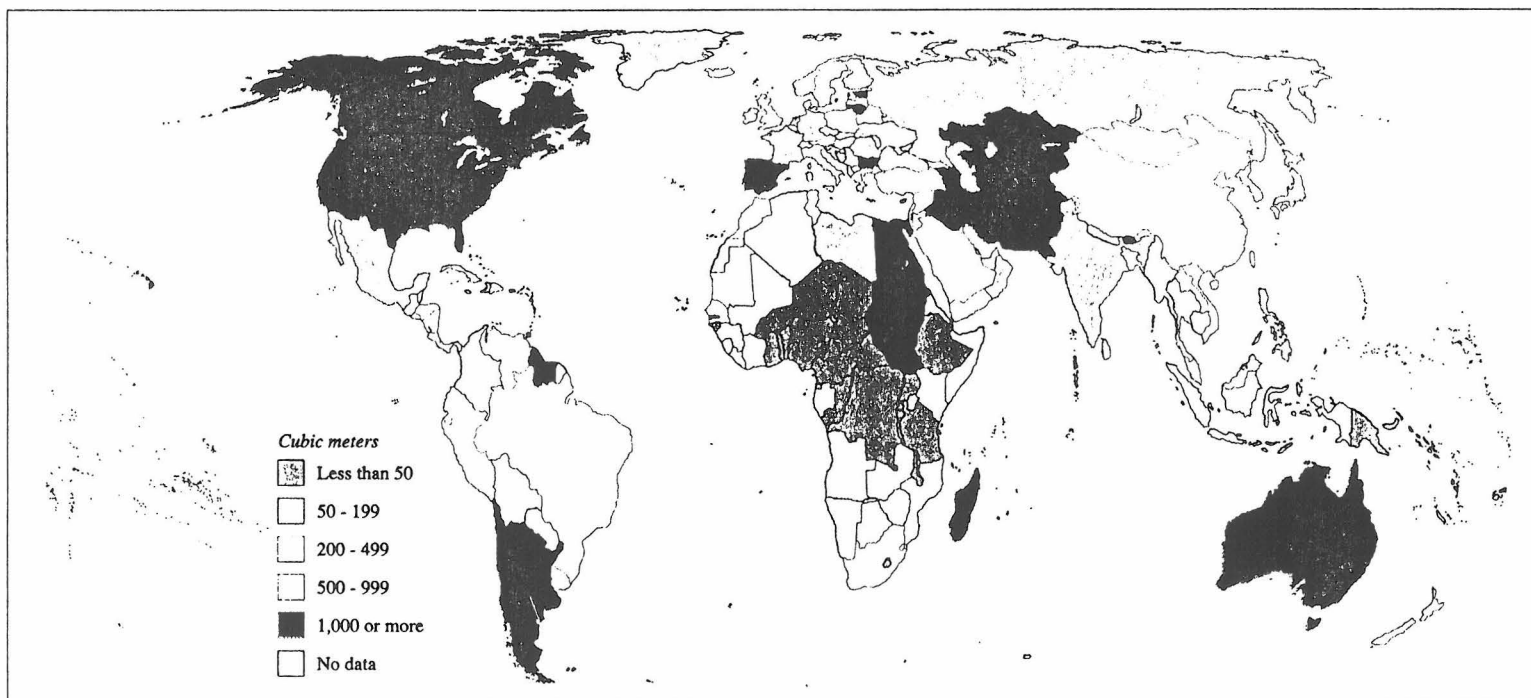
THE STATE OF GLOBAL WATER RESOURCES - 1

- ⇒ **WATER IS AN INCREASINGLY SCARCE
AND FINITE RESOURCE**
- ⇒ **THE WATER STRESS INDEX**
- ⇒ **100 LITRES PER PERSON PER DAY OR 36.5
CUBIC METRES PER YEAR**
- ⇒ **IN 1990-28 COUNTRIES WITH
POPULATIONS of 335 MILLION
EXPERIENCED WATER STRESS OR
SCARCITY**
- ⇒ **THE POPULATION GROWTH RATE WILL
DETERMINE WHETHER THE COUNTRY
EXPERIENCES WATER STRESS OR WATER
SCARCITY**

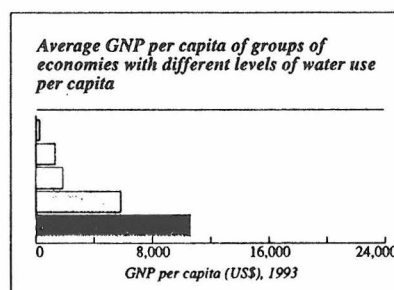
THE STATE OF GLOBAL WATER RESOURCES - 2

- ➡ **INDIA**
- ➡ **CHINA**
- ➡ **LARGE NUMBER OF AFRICAN COUNTRIES
STRESSED BY WATER SHORTAGE**
- ➡ **DESPITE WATER SHORTAGES, MISUSE OF
WATER IS WIDESPREAD**
- ➡ **THE RESULTS OF OVERUSE OF
FRESHWATER SOURCES ARE VISIBLE**
- ➡ **URBAN AND RURAL WATER SOURCES
ARE THREATENED**

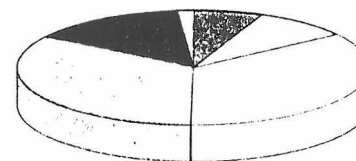
ANNUAL WATER USE PER CAPITA, 1970-92



Annual water use per capita, 1970-92	Number of economies	GNP (US\$000,000) 1993	Population (000,000) 1993	GNP per capita (US\$) 1993
Less than 50	27	103,000	354	290
50 - 199	30	654,000	487	1,340
200 - 499	36	3,627,000	1,936	1,870
500 - 999	31	10,869,000	1,862	5,840
1,000 or more	26	8,497,000	801	10,610
No data	59	507,000	85	5,990



Shares of world population living in economies with different levels of water use per capita



Source: The World Bank Atlas 1995 p. 30

WOMEN AND WATER RESOURCES MANAGEMENT

- ➡ **WOMEN RARELY SEEN OR TREATED AS
MANAGERS OF WATER RESOURCES**
- ➡ **TOP DOWN DECISION-MAKING CAN
EASILY LEAD TO INAPPROPRIATE WATER
RESOURCES MANAGEMENT PROJECTS
AND HAVE CRITICAL IMPACTS ON
WOMEN AND COMMUNITIES**
- ➡ **WOMEN'S EXPERIENCE AND SKILLS
SHOULD BE RECOGNIZED AS A
POWERFUL INSTRUMENT**

POLICY FRAMEWORK - 1

- ➡ **INTERNATIONAL CONFERENCES AND AGREEMENTS HAVE ADVOCATED POLICIES WHICH SPECIFICALLY IDENTIFY THE NEED TO INVOLVE WOMEN IN WATER RESOURCES MANAGEMENT**
- ➡ **CHAPTER 18 OF AGENDA 21 RECOMMENDS:**
 - **TO IMPROVE INTEGRATED WATER RESOURCE MANAGEMENT, DEVELOP PUBLIC PARTICIPATORY TECHNIQUES AND THEIR IMPLEMENTATION IN DECISION-MAKING, PARTICULARLY THE ENHANCEMENT OF THE ROLE OF WOMEN IN WATER RESOURCES PLANNING AND MANAGEMENT [18.12(N)]**
 - **DELEGATE WATER RESOURCES MANAGEMENT TO THE LOWEST APPROPRIATE LEVEL WHICH THEN NECESSITATES EDUCATING AND TRAINING WATER MANAGEMENT STAFF AT ALL LEVELS AND ENSURING THAT WOMEN PARTICIPATE EQUALLY IN THE EDUCATION AND TRAINING PROGRAMMES... [18.19]**

POLICY FRAMEWORK - 2

- **ACTION IS CARRIED OUT AT THE NATIONAL LEVEL TO STRENGTHEN THE MANAGERIAL CAPABILITIES OF WATER-USER GROUPS, INCLUDING WOMEN, YOUTH, INDIGENOUS PEOPLE AND LOCAL COMMUNITIES, TO IMPROVE WATER-USE EFFICIENCY AT THE LOCAL LEVEL [18.34(D)]**
- **THE KEY TO HOLISTIC AND INTEGRATED ENVIRONMENTALLY SOUND MANAGEMENT OF WATER RESOURCES IN THE RURAL CONTEXT INCLUDES THE PARTICIPATION OF LOCAL COMMUNITIES IN ALL PHASES OF WATER MANAGEMENT, ENSURING THE FULL INVOLVEMENT OF WOMEN IN VIEW OF THEIR CRUCIAL ROLE IN THE PRACTICAL DAY-TO-DAY SUPPLY, MANAGEMENT AND USE OF WATER [18.68(B)]**

ISSUES IN WOMEN AND WATER RESOURCES MANAGEMENT

- ⇒ WOMEN ARE HARDEST AND EARLIEST HIT BY ENVIRONMENTAL DEGRADATION IN GENERAL AND WATER SCARCITY IN PARTICULAR**
- ⇒ THE NEED FOR AN INTEGRATED WATERSHED MANAGEMENT APPROACH IN WHICH WOMEN PLAY A CENTRAL ROLE IS INCREASINGLY BEING STRESSED**
- ⇒ ACCESS TO RESOURCES SUCH AS LAND AND LABOUR IS AN IMPORTANT PREREQUISITE FOR WOMEN'S INVOLVEMENT IN THE IMPROVEMENT AND MANAGEMENT OF THE ENVIRONMENT**
- ⇒ THE INTRODUCTION OF MODERN TECHNOLOGIES IN WATER RESOURCE PROJECTS CAN HAVE NEGATIVE IMPACTS ON WOMEN'S ROLES AND POSITION IN THE COMMUNITY, PARTICULARLY IF THEY HAVE HAD NO SAY IN PROJECT DESIGN**

THE ROLE OF WOMEN IN WATER RESOURCE MANAGEMENT

➡ **ROLE OF WOMEN IN WATER SUPPLY AND
SANITATION PROJECTS WELL DOCUMENTED**

➡ **WOMEN'S ROLES IN WATER RESOURCE
MANAGEMENT ACTIVITIES :**

- **FISHERIES**
- **HYDROELECTRIC DEVELOPMENT**
- **WATER QUALITY PROTECTION**
- **WETLANDS CONSERVATION**
- **GROUNDWATER PROTECTION**

➡ **FISHERIES: IN WESTERN KENYA THE
JIWUOK WOMEN'S GROUPS IMPROVED A
FRESHWATER FISHERY**

➡ **HYDROELECTRIC DEVELOPMENT: THE NEW
ZEALAND GOVERNMENT**

➡ **WATER QUALITY PROTECTION: IN A VILLAGE
IN CENTRAL JAVA, INDONESIA**

➡ **WETLANDS CONSERVATION: A SHRIMPING
INDUSTRY IN HONDURAS**

➡ **GROUNDWATER PROTECTION: IN ANTIGUA,
WEST INDIES**

ENVIRONMENTAL SANITATION

- ⇒ ENVIRONMENTAL SANITATION CAN BE DEFINED AS ALL ASPECTS OF WATER, SANITATION, WASTE DISPOSAL AND HYGIENE WHICH ARE NEEDED FOR HEALTH IMPROVEMENTS
- ⇒ WATER HYGIENE AND CONSUMPTION OF SAFE WATER
- ⇒ HUMAN WASTE DISPOSAL
- ⇒ SAFE WASTE WATER (GREYWATER) DISPOSAL
- ⇒ SOLID WASTE DISPOSAL (INCLUDING HOUSEHOLDS WASTES)
- ⇒ PROPER PERSONAL HYGIENE
- ⇒ FOOD HYGIENE

DOMAINS OF HYGIENE BEHAVIOUR

- ⇒ DISPOSAL OF HUMAN WASTES**
- ⇒ USE AND PROTECTION OF WATER SOURCES**
- ⇒ WATER AND PERSONAL HYGIENE**
- ⇒ FOOD HYGIENE**
- ⇒ DOMESTIC AND ENVIRONMENTAL HYGIENE**

DISPOSAL OF HUMAN WASTES

- ➡ **CHOICE OF DEFECATION PLACE**
- ➡ **METHOD OF EXCRETA DISPOSAL**
- ➡ **OPEN AIR DEFECATION**
- ➡ **ON SITE-DISPOSAL**
- ➡ **OFF SITE-DISPOSAL**
- ➡ **ANAL CLEANSING MATERIAL**
- ➡ **HANDWASHING**

USE AND PROTECTION OF WATER SOURCES

- ➡ **CHOICE OF WATER SOURCE:
AVAILABILITY, RELIABILITY, DISTANCE,
CONVENIENCE, SOCIAL ACCESSIBILITY**
- ➡ **PREVENTION OF DISEASE'S IS ONLY ONE
FACTOR**
- ➡ **WOMEN ARE THE MAIN DECISION
MAKERS AT THE HOUSEHOLD AND
COMMUNITY LEVELS**

WATER AND PERSONAL HYGIENE

- ➡ WATER TREATMENT**
- ➡ SAFE STORAGE AND PROTECTION**
- ➡ CLEAN CONTAINERS**
- ➡ WATER SHORTAGES**
- ➡ AVAILABILITY OF SOAP**
- ➡ SHARED CLOTHING AND BEDDING**

FOOD HYGIENE

- ➡ FOOD HYGIENE INCLUDES HANDLING, PREPARATION, CONSUMPTION AND STORAGE PRACTICES**
- ➡ HANDWASHING**
- ➡ SAFE WATER FOR WASHING FRUITS AND VEGETABLES**
- ➡ FOOD COOKING - 70C TEMPERATURES NECESSARY**
- ➡ FOOD STORAGE**
- ➡ KITCHEN CLEANLINESS**

DOMESTIC AND ENVIRONMENTAL HYGIENE

- ➡ **HOUSEHOLD CLEANLINESS**
- ➡ **INSECT CONTROL**
- ➡ **DISPOSAL OF HOUSEHOLD SOLID
WASTES**
- ➡ **DISPOSAL OF HOUSEHOLD LIQUID
WASTES**
- ➡ **ANIMAL MANAGEMENT**

WOMEN'S ROLES

- ➡ WOMEN HAVE PIVOTAL ROLE
- ➡ DATA COLLECTION
- ➡ DESIGNERS AND PLANNERS
- ➡ PROMOTION
- ➡ CONSTRUCTION
- ➡ OPERATION AND MAINTENANCE
- ➡ EDUCATION
- ➡ MANAGERS
- ➡ MONITORS

EFFECTS OF WATER SUPPLY AND SANITATION IMPROVEMENTS ON MORBIDITY FROM DIARRHOEA

Effects of improved water and sanitation on sickness

Disease	Millions of people affected by illness	Median reduction attributable to improvement (percent)
Diarrhea	900 ^a	22
Roundworm	900	28
Guinea worm	4	76
Schistosomiasis	200	73

a. Refers to number of cases per year. Source: Esrey and others 1990

Effects of water supply and sanitation improvements on morbidity from diarrhea

Type of improvement	Median reduction in morbidity (percent)
Quality of water	16
Availability of water	25
Quality and availability of water	37
Disposal of excreta	22

Source: Esrey, Feachem and Hughes 1985.

**CASE STUDIES SHOW HOW WOMEN
AND WOMEN'S GROUPS HAVE
BEEN SUCCESSFULLY INVOLVED IN
ENVIRONMENTAL SANITATION
ACTIVITIES**

- ⇒ INDONESIA
- ⇒ MANILA
- ⇒ TAIWAN
- ⇒ PERU
- ⇒ THAILAND
- ⇒ BANGLADESH
- ⇒ ARGENTINA

MACRO AND MICRO CONSIDERATIONS

- ➡ **POPULATION 1993 - 5.3 BILLION**
- ➡ **ANNUAL INCREASE - 91 MILLION**
- ➡ **HUMAN ACTIVITIES PRODUCE WASTES**
- ➡ **ACCUMULATION OF WASTES POLLUTES ENVIRONMENT AND RESULTS IN DISEASE**
- ➡ **MACRO LEVEL: WASTES FROM RESOURCE EXPLOITATION CAUSES ACID RAIN, OZONE DEPLETION, WATER SOURCE POLLUTION, SPECIES EXTINCTION**
- ➡ **MICRO LEVEL OR HOUSEHOLD LEVEL: IMPROPER DISPOSAL OF HUMAN AND HOUSEHOLD WASTES RESULTS IN DISEASE TRANSMISSION**

DEFINITION OF WASTE MANAGEMENT

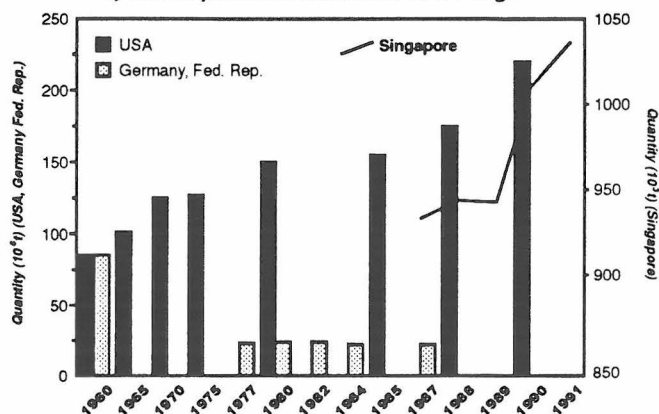
- ➡ **WASTE MANAGEMENT COVERS
MANAGEMENT OF ALL FORMS OF WASTE
PRODUCED BY HUMAN ACTIVITY**
- ➡ **SANITATION**
- ➡ **SOLID WASTE DISPOSAL**
- ➡ **LIQUID WASTE DISPOSAL**
- ➡ **GASEOUS WASTES**
- ➡ **INDUSTRIAL WASTES**
- ➡ **HAZARDOUS AND TOXIC WASTES**
- ➡ **WASTE REUSE: COMPOSTING, BIOGAS
PRODUCTION, AQUACULTURE AND
RECYCLING**

SANITATION

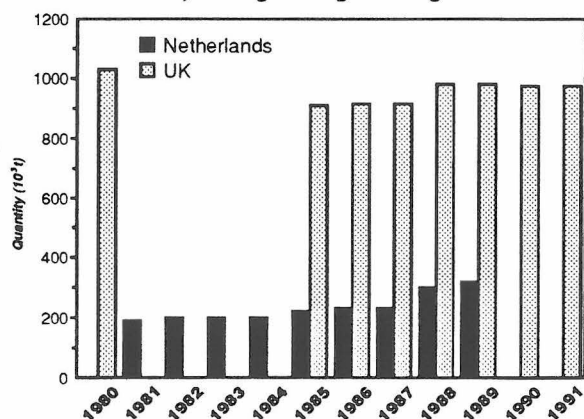
- ➡ **DISEASES TRANSMITTED THROUGH IMPROPER WASTE DISPOSAL**
- ➡ **HUMAN WASTES MUST BE CONTAINED AND NEUTRALIZED**
- ➡ **HUMAN WASTES CONTAIN DISEASE PATHOGENS: BACTERIA, VIRUSES, PROTOZOA, HELMINTHS**
- ➡ **PATHOGENS SPREAD BY DIRECT CONTACT BETWEEN PEOPLE, THROUGH SOIL AND VEGETABLES AND BY CONTAMINATING WATER SOURCES**
- ➡ **MANY FORMS OF EFFECTIVE WASTE DISPOSAL**
- ➡ **CONVENTIONAL PIPE BORNE SEWERAGE, SEPTIC TANKS, SOAKAWAYS, PIT LATRINES**
- ➡ **ALL GOOD IF PROPERLY CONSTRUCTED AND MAINTAINED**

TRENDS IN ARISING OF CERTAIN WASTE STREAMS IN SELECTED COUNTRIES

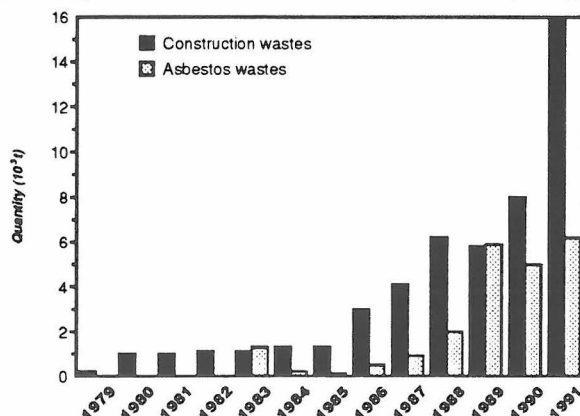
a) Municipal/Household waste arisings



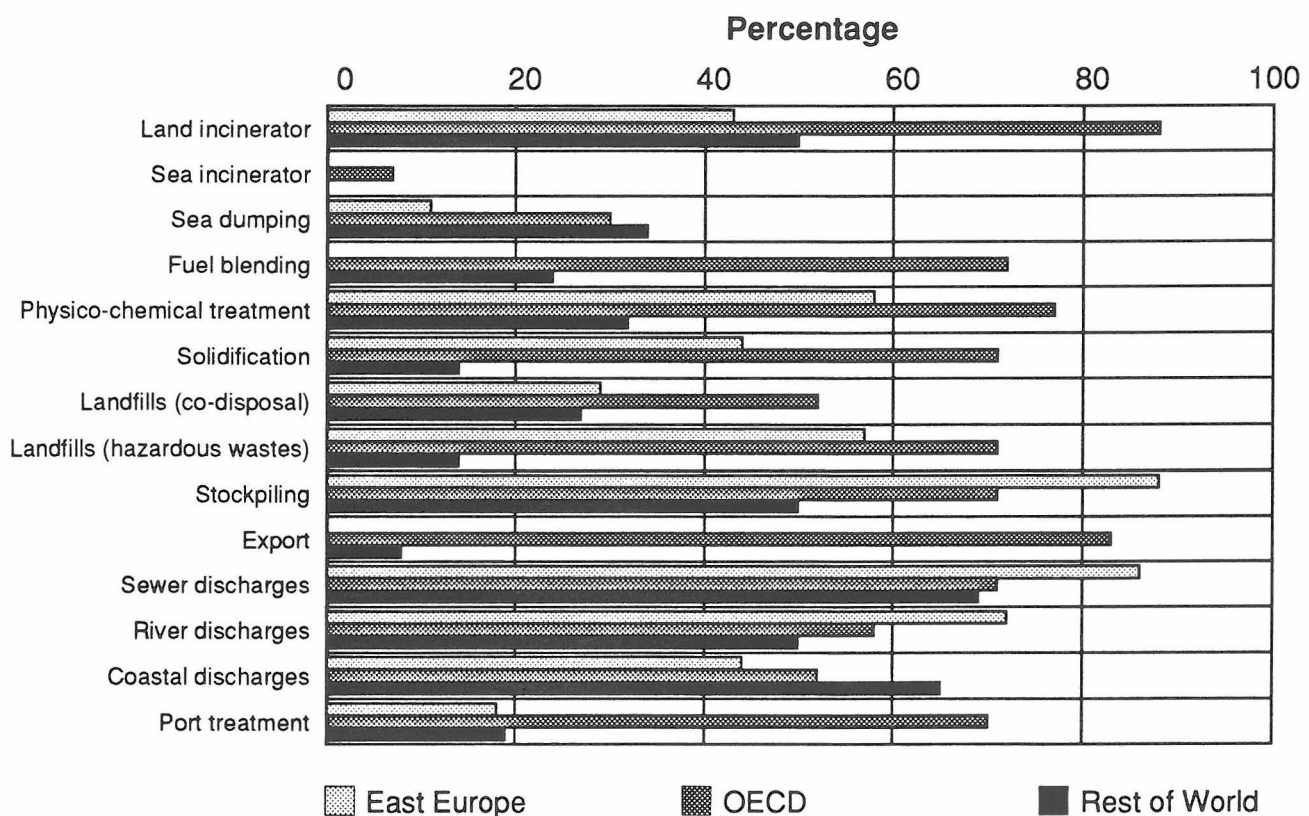
b) Sewage sludge arisings



c) Arisings of construction and asbestos wastes, Hong Kong



PERCENTAGE OF GWI RESPONDENTS REPORTING AVAILABILITY OF DIFFERENT TYPES OF WASTE TREATMENT AND DISPOSAL FACILITIES



Source: IMO, 1992 - Environmental Data Report p. 338

WASTE REUSE

- ➡ **WASTE REUSE**
- ➡ **MANY MATERIALS REUSABLE OR RECYCLABLE**
- ➡ **30 - 50% OF LANDFILL MATERIALS, PAPER AND PAPER PRODUCTS**
- ➡ **COMPOSTING**
- ➡ **BIOGAS**
- ➡ **AQUACULTURE**
- ➡ **RECYCLING AND REUSE IMPORTANT INFORMAL SECTOR FOR WOMEN AND CHILDREN IN DEVELOPING WORLD**

WOMEN'S INVOLVEMENT

- ➡ **WOMEN'S INVOLVEMENT KEY TO
PROPER WASTE DISPOSAL**
- ➡ **WOMEN RESPONSIBLE FOR HOUSEHOLD
WASTES DISPOSAL AND
ENVIRONMENTAL SANITATION**
- ➡ **ESSENTIAL TO INVOLVE WOMEN AT ALL
STAGES IN WASTE MANAGEMENT
DISPOSAL**
- ➡ **WOMEN INVOLVED AS: FAMILY
LEADERS, THROUGH WOMEN'S
ORGANIZATIONS AND NGO'S, AS
WORKING PROFESSIONALS,
GOVERNMENT AGENTS, INDIVIDUAL
ACTIVISTS**
- ➡ **CASE STUDIES SHOW HOW WOMEN
WERE INVOLVED IN PLANNING AND
IMPLEMENTING WASTE MANAGEMENT
PROJECTS**

POLICY FRAMEWORK - 1

➡ **AGENDA 21 INCLUDES SPECIFIC REFERENCES TO THE INVOLVEMENT AND ROLE OF WOMEN IN WASTE MANAGEMENT**

➡ **CHAPTER 19 RECOMMENDS:**

- International organizations... launch training and education programmes involving women and children, who are at greatest risk in order to enable countries... to make maximum national use of international assessments of chemical risks

➡ **CHAPTER 20 ON ENVIRONMENTALLY SOUND MANAGEMENT OF HAZARDOUS WASTES RECOMMENDS:**

- 20.26(B) Governments... should conduct research in the health effects of hazardous wastes in developing countries including the long term effects on children and women
- 20.27 Governments, should: (B) increase participation in hazardous waste management programmes by the general public, particularly women, including participation at grass-roots levels

POLICY FRAMEWORK - 2

➡ CHAPTER 21 DEALS WITH THE ENVIRONMENTALLY SOUND MANAGEMENT OF SOLID WASTES AND SEWAGE RELATED ISSUES AND RECOMMENDS:

- **21.19 Governments and institutions and non-governmental organizations, including consumer, women's and youth groups, in collaboration... should launch programmes to demonstrate and make operational enhanced waste reuse and recycling.**
- **21.25 ...Governments, in collaboration with United Nations... should undertake to (D) encourage... women's groups... in collaboration with municipal authorities, to mobilize community support for waste reuse and recycling through focused community-level campaigns**
- **21.46 (C) Launch campaigns to encourage active community participation involving women's groups and youth groups in the management of waste...**

THE ROLE OF WOMEN IN WASTE TREATMENT

- ➡ **WOMEN HAVE SUCCESSFULLY AFFECTED WASTE TREATMENT IMPROVEMENTS FOR THE BETTER HEALTH AND LIVING CONDITION OF THEIR FAMILIES AND COMMUNITIES**

- ➡ **WOMEN HAVE PARTICIPATED IN WASTE TREATMENT ACTIVITIES IN:**
 - **WASTE REUSE AND RECYCLING**
(Indonesia/South Africa)
 - **DISPOSAL OF HUMAN WASTES**
(Indonesia/South Africa)
 - **SOLID WASTE DISPOSAL**
(Nepal/Taiwan)
 - **THE DISPOSAL OF NUCLEAR WASTES**
 - **PREVENTION OF AIR POLLUTION**
(U.S.A.)
 - **THE DISPOSAL OF TOXIC AND HAZARDOUS WASTES**
(U.S.A./Thailand)
 - **SANITATION**
(Indonesia/Sri Lanka/Pakistan)

Module Four: Women, Environmental Indicators and Capacity Building Programmes





Module Four: **Women, Environmental Indicators and Capacity Building Programmes**

TRAINING TOOLS

- **Training Package on Women, Environmental Management and Sustainable Development**

Part Four: *“Women, Environmental Indicators and Capacity Building Programmes” (page 317 to 370)*
- **Trainers’ Guide:**
 1. *General Objective*
 2. *Specific Objectives*
 3. *Suggested Training Strategy*
- **Training Activities**
 - Option No. 1: *Recommend the Adoption of Gender-Sensitive Environmental Indicators*
 - Option No. 2: *Analysis of a Checklist for Integrating Women, Environment and Development Issues*
 - Option No. 3: *Gender Analysis and Planning*
 - Option No. 4: *Ensuring Equal Opportunities for Women in Capacity-Building Programmes*
- **Outline of Video Programme: “Gender Analysis for Forestry Development Planning” and Key issues for Discussion**
- **List of Transparencies**

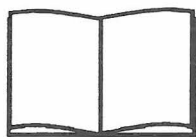


Table of Contents



Trainers' Guide

1. General Objective

At the end of this module participants will be able to identify gender-sensitive environmental indicators for policy decisions; implement institutional guidelines for action at the programme and project levels and formulate recommendations for the implementation of a Capacity Building programme at the national level.

2. Specific Objectives

More specifically, they will be able to:

- recognize the need for gender-sensitive environmental indicators for measuring the impact of decision-making on sustainable development of the environment;
- identify the relevant recommendations made to the Commission of Sustainable Development;
- analyze different types/approaches of environmental indicators, their strengths and weaknesses;
- suggest environmental indicators to make visible the impacts of environmental and development activities on women;
- adopt institutional guidelines for action at the programme and project levels to integrate women, environment and development issues;
- give a definition of capacity building;
- analyse examples of global Capacity Building programmes for sustainable development in view of assessing transferability at the national level;
- identify short-term and long term indicators to monitor Capacity 21 programmes;

The logo consists of a black square with a white stylized 'X' or arrow shape pointing to the right.

Trainer's Guide

- plan for the implementation of measures indicated in Agenda 21 to ensure equal opportunities for women in Capacity Building Programmes;
- identify INSTRAW's contribution to the capacity building of women in environmental management and sustainable development.



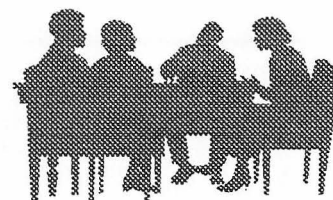
3. Suggested Training Strategy

KEY POINTS/ACTIVITIES	METHOD	MEDIA
1. Present the general and specific objectives of Module Four	Presentation	Flipchart
2. Based on the previous reading of the Training Package on Women, Environmental Management and Sustainable Development "Part Four: Women, Environmental Indicators and Capacity Building Programmes" (page 317 to 370) and with the support of transparencies, present the following points: I. INTRODUCTION 1.0 The Need for Environmental Indicators 1.1 Types of Environmental Indicators 1.2 Examples of Indicators and Indicator Frameworks 1.3 Issues 1.4 Recommendations 1.5 Women and Environmental and Sustainable Development Indicators 1.6 Making Women Visible	Lecture and discussion with visual aids	Transparency No. 1 Tr. No. 2, 3, 4, 5, 6, 7 Transparency No. 8 Tr. No. 9/10 Tr. No. 11/12 Tr. No. 13/14
II. GUIDELINES FOR ACTION AT THE PROGRAMME AND PROJECT LEVELS 2.1 Natural Resources 2.2 Population 2.3 Management and Decision-Making		Tr. No. 15/16 Transparency No. 17
NOTE: In order to enable participants to undertake gender planning in their field work, at this stage the trainer may decide to present the video programme: "Gender Analysis for Forestry Development Planning". Please refer to the outline on page 39	Presentation	Video Programme: "Gender Analysis for Forestry Development planning"
2.4 Women and the Project Cycle 2.4.1 Actions Needed for Effective Women's Participation 2.4.2 Constraints		Transparency No. 18 Tr. No. 19/20/21



Trainer's Guide

KEY POINTS/ACTIVITIES	METHOD	MEDIA
III. WOMEN AND CAPACITY BUILDING 3.0 Capacity Building: A Definition 3.1 Making Capacity Building A Reality 3.1.1 Understanding Agenda 21 3.1.2 Capacity 21: A Global Capacity Building Programme for Sustainable Development 3.2 Managing Capacity 21 3.2.1 Commission on Sustainable Development 3.3 Human Resources Development 3.3.1 Education and Training 3.3.2 Popular Participation 3.4 Monitoring Capacity Building Programmes 3.5 Ensuring Equal Opportunities for Women in Capacity Building Programmes 3.6 INSTRAW's Contribution to the Capacity Building	Lecture and discussion with visual aids	Transparency No. 22 Transparency No. 23 Transparency No. 24 Transparency No. 25 Transparency No. 26 Transparency No. 27
NOTE: The trainer on the basis of the needs/expectations of the target group and the time constraints, should select amongst the optional activities given in this module		
3. Explain the objective of the activity that you have selected	Presentation	
4. Distribute the instruction of the activity that you have selected	Facilitate group work	
5. Plenary presentation and assessment of group work	Discussion	Flipchart
6. Summary and review by the trainer	Presentation and discussion	Flipchart



Option No. 1: Recommend the Adoption of Gender-Sensitive Environmental Indicators

TIME: 60 min

1. Objective

To examine critically current environmental indicators being used by decision-makers and recommend the adoption of gender-sensitive environmental indicators at the national level.

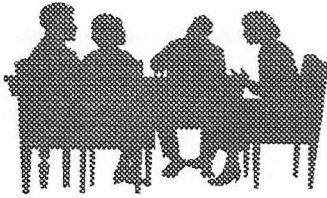
2. Individual Work

On the basis of the policies/programmes and projects related to women, environmental management and sustainable development that you have identified in the previous activities, describe the type of indicators and criteria that you are currently using to guide your policy decisions.

3. Group Work

On the basis of the analysis of the different environmental indicators approaches presented in this module and through brainstorming with the rest of the group try to reach a consensus on the following issues:

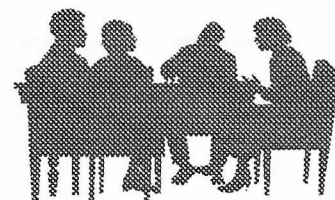
- Which of the different environmental indicators approaches would you select. Why?
- What kinds of indicators would be necessary to make visible the impacts of environmental and development activities on women? Give some examples.



- What kinds of indicators would be necessary to make visible the impacts that women's activities in environmental management have on the environment and sustainable development? Give some examples.
- What do you think of INSTRAW's Time Use Measurement and Unpaid Work SNA based activity classification framework?
- Would you recommend its implementation at the national level?
- What are the eventual strengths and weaknesses in the classification model that you have identified?

4. Plenary Work

In plenary, the selected spokesperson will present the outcome of the group work for further discussion with the rest of the group and the trainer.



Option No. 2: Analysis of a Checklist for Integrating Women, Environment and Development Issues

Time: 60 min

1. Objective

Pilot-test a possible checklist to be adopted in line with the guidelines for action at the programme and project levels at the national level.

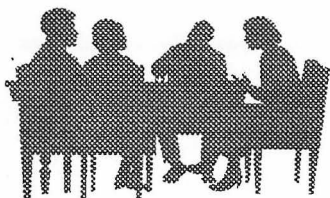
2. Individual Work

- Read the **guidelines** for action at the programme and project levels herewith enclosed.
- Read through the checklist herewith enclosed.

3. Group Work

Discuss with the group your findings and arrive at a consensus on the following questions:

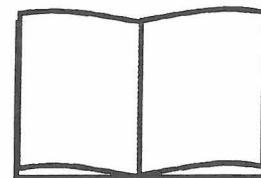
- Is the checklist comprehensive?
- Does it fully reflect the concerns expressed in the guidelines for action at the programme and project levels?
- What would you amend/add and why?
- If you were a member of a Ministerial Committee responsible of elaborating institutional guidelines and checklists for the



mainstreaming of women at the programme and project levels, would you recommend the adoption of the checklist at the national level?

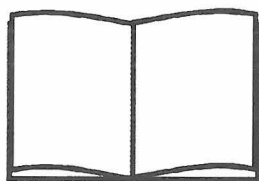
4. Plenary Work

In plenary, the selected spokesperson will present the outcome of the group work for further discussion with the rest of the group and the trainer.



Guidelines for Action at the Programme and Project Levels

1. All existing and future environmental guidelines formulated by national and international donors should clearly state the role and capacity of women in environmentally sound and sustainable development as a basis for allocating budgetary and human resources and for identifying objectives and relevant indicators in action-oriented framework.
2. Towards this end, it is recommended that in post-project evaluation, the effectiveness of the project be measured. Criteria should be established and promulgated through UNDP and donors to the effect that a designated percentage of all funds for programmes and projects related to sustainable development be allocated directly to support women's involvement, their concerns and priorities in environmental issues.
3. Women's traditional and professional knowledge, as well as practical experience in relation to environmental management, must be recognized, valued and incorporated at all phases of project development and implementation. In formulating environmental management strategies, women "knowledge leaders" in local communities, professions and governments, must be identified and their knowledge utilized.
4. Given women's multiple roles, a multisectoral and integrated approach to their participation in sustainable development should be seriously considered and supported fully.
5. A consultative, participatory approach is necessary for discussions and negotiations on the design, implementation and evaluation of innovative projects and programmes for sustainable development. Consultation with women at all stages and levels will lead to their commitment at programme and project level.
6. An information exchange network to disseminate information on gender issues related to programmes and projects dealing with environment and development should be supported by an organization or jointly by several organizations of the United Nations system.



7. An information and knowledge based system, to be called "Women Knowledge 21" is to be developed at national, regional and international levels to ensure that experience gained by the women's movement in environmentally sound and sustainable development be fully utilized and applied as a basis for programme design and throughout the project cycle.
8. All environmental impact assessments (EIA) should be based on data that are gender specific; this dimension should be required for acceptance of any EIA.
9. All training and education related to sustainable development programmes and projects must address women's roles and gender issues as a pre-condition to development success, and must include women participants.
10. Countries from both North and South should make concerted efforts to reduce wasteful consumption of resources, and at the same time support women's right to family planning. A broad dissemination of information aimed at women, as well as men, is required.
11. Technological options which are environmentally clean and sound should be identified, introduced and promoted, on the basis of leap-frogging process with the participation of women. Women should be involved in the selection of technologies which are appropriate and replicable.
12. Every effort should be made to recognize and utilize the potential of women entrepreneurs in the management of programme and projects on environmentally sound and sustainable development. This should be part of any promotion of the private sector's role in programme and project implementation.
13. Programme and guidelines related to women and sustainable development should be action oriented, but should allow time for reflection, consultation, monitoring and evaluation, consolidation and diffusion of lessons learned, and adaptation.



CHECKLIST*

Elements of Success

	Yes	No
1. Were women's roles and contributions to environmental management and protection acknowledge by:		
• involving them in the identification of a problem?	<input type="checkbox"/>	<input type="checkbox"/>
• relying on their participation, leadership and input in designing a solution to the problem?	<input type="checkbox"/>	<input type="checkbox"/>
2. Was the importance of community participation acknowledged in projects, through, for example:		
• adopting a participatory approach that empowers women and fosters a community spirit by promoting the idea of women as essential agents for community mobilization?	<input type="checkbox"/>	<input type="checkbox"/>
• engaging in campaigns to popularize new environmental ideas?	<input type="checkbox"/>	<input type="checkbox"/>
• encouraging and strengthening local NGO's organizational skills as well as their participation in environment and development activities?	<input type="checkbox"/>	<input type="checkbox"/>

* The checklist was elaborated on the basis of the text: "Integrating Women, Environment, and Development issues: Institutional Guidelines" from "Women and Environment: An Analytical Review of Success Stories", UN Environmental Programme and World Wide Network.



		Yes	No
3.	Was the importance of local and traditional knowledge emphasized, by:		
	<ul style="list-style-type: none"> • using local and traditional knowledge as much as possible to encourage understanding of its relevance and utility to solve the problems within the community? 	<input type="checkbox"/>	<input type="checkbox"/>
	<ul style="list-style-type: none"> • validating women's knowledge by incorporating it into project design and implementation? 	<input type="checkbox"/>	<input type="checkbox"/>
4.	Were activities undertaken in order to promote the environmental awareness and responsibility, such as:		
	<ul style="list-style-type: none"> • community sensitization through a variety of means, as for e.g. education; folklore; culture; songs; poems, etc. 	<input type="checkbox"/>	<input type="checkbox"/>
	<ul style="list-style-type: none"> • conservation of environmental ethic, especially in the environmental education projects? 	<input type="checkbox"/>	<input type="checkbox"/>
5.	Was the affordability and financial feasibility of projects enhanced for example by:		
	<ul style="list-style-type: none"> • leveraging of resources by identifying and promotion of collaborative efforts among community members 	<input type="checkbox"/>	<input type="checkbox"/>
	<ul style="list-style-type: none"> • promoting environmental sustainability as well as sustainable livelihoods, through the incorporation of economic incentives and income generating activities in the projects 	<input type="checkbox"/>	<input type="checkbox"/>
6.	Was the identification and adaptation of alternative and appropriate technologies and systems undertaken with women's involvement?	<input type="checkbox"/>	<input type="checkbox"/>



Designing Policies

- Designing policies to replicate these workable approaches is a major challenge.
- The approach adopted in each case should stem from a sound understanding of the role of women in economic, cultural, social and political lives in the community and be based on clearly stated policies to enhance these roles. Women's participation in each project, as producers, income earners, repositories of information and knowledge, and educators, should all be identified and effectively incorporated into project design and implementation.
 - I. Adopt policy (changes) on women, environment and development (WED).
 - II. Develop institutional guidelines for women, environment and development.
 - III. Identify resources and strategic partnership to effect change.



Institution's Overall Strategic Objectives

	Yes	No
1. Has the need for gender parity and environmental sustainability stated as goals at all policy, planning and decision making levels?	<input type="checkbox"/>	<input type="checkbox"/>
2. Does the policy emphasize the linkages between environment and development, gender roles and development, environmental degradation and quality of life?	<input type="checkbox"/>	<input type="checkbox"/>
3. Does the policy stress the importance of these linkages and is it reflected in national guidelines, strategies, and plans by policy makers?	<input type="checkbox"/>	<input type="checkbox"/>
4. Did the outcomes of governmental policies, strategies and plans resulted in more gender-responsive economic and social policies and programmes?	<input type="checkbox"/>	<input type="checkbox"/>
5. Are evaluation mechanisms built into the policies to ensure that the gender-disaggregated impacts of projects and activities can be measured?	<input type="checkbox"/>	<input type="checkbox"/>
6. Are the comprehensible and measurable objectives set specifically to incorporate the above mentioned elements of success?	<input type="checkbox"/>	<input type="checkbox"/>
7. Does the policy emphasize the full involvement of women in:		
• decision-making, and	<input type="checkbox"/>	<input type="checkbox"/>
• implementation of environmental management activities at all levels?	<input type="checkbox"/>	<input type="checkbox"/>
8. Does the policy emphasize the recognition and support of women's participation in national ecosystem management and control of environment degradation?	<input type="checkbox"/>	<input type="checkbox"/>



Overall Strategic Planning Process

	Yes	No
1. Will the appropriate strategy document be part of:		
• the national environmental action plan?	<input type="checkbox"/>	<input type="checkbox"/>
• the national environmental assessment?	<input type="checkbox"/>	<input type="checkbox"/>
• the national report of Agenda 21?	<input type="checkbox"/>	<input type="checkbox"/>
• the national report to the Commission on the Status of Women?	<input type="checkbox"/>	<input type="checkbox"/>



Examination of Relevance of Strategy

	Yes	No
<i>I. CONSTITUTIONAL</i>		
• Do women enjoy equal rights according to the constitution?	<input type="checkbox"/>	<input type="checkbox"/>
• Is environmental security emphasized as a national goal?	<input type="checkbox"/>	<input type="checkbox"/>
<i>II. LEGAL</i>		
• Is the role of women, as well as their control over or access to resources determined in the legal framework?	<input type="checkbox"/>	<input type="checkbox"/>
<i>III. ADMINISTRATIVE</i>		
• Is the administrative framework dealing with gender and environmental issues?	<input type="checkbox"/>	<input type="checkbox"/>
• Within the governmental structure are provisions being made within individual sectoral agencies to deal with gender and environmental issues?	<input type="checkbox"/>	<input type="checkbox"/>
• Do the administrative impediments at the governmental level result in the development of programs and activities that do not take into account the different roles and impact of both development and environmental activities on women?	<input type="checkbox"/>	<input type="checkbox"/>
• If government development policy emphasizes agricultural production, what role does sustainable agriculture play in this policy? What incentives, if any, are provided for organic farming?	<input type="checkbox"/>	<input type="checkbox"/>



Yes No

IV. CULTURAL

- Does the cultural and behavioural milieu present opportunities to sound environmental management? ☐ ☐
- Do these opportunities help the recognition and acknowledgement of the importance or relevance of work that women do, especially in ensuring agro-forestry practice? ☐ ☐
- Are these obstacles that hinder the recognition and acknowledgement of the importance or relevance of work that women do? ☐ ☐
- Have the communities cultural mores relating to the use of resources (collecting water from wells, fishing at only certain times of the year, etc.) that have an impact on regulating the resource base in a sustainable way? ☐ ☐

V. SOCIAL

- Does the social setting affect the types of work that women do? ☐ ☐
- Does it place any values on women's labour and contribution? ☐ ☐

VI. ECONOMIC

- Does the economic situation affect the availability and distribution of resources to help women attain a desired level of economic and social well-being? ☐ ☐
- Have women access to energy-saving technologies? ☐ ☐



	Yes	No
• Have women access to:		
– agricultural inputs;	<input type="checkbox"/>	<input type="checkbox"/>
– credit;	<input type="checkbox"/>	<input type="checkbox"/>
– extension services;	<input type="checkbox"/>	<input type="checkbox"/>
– information to assist them in pursuing environmentally sound practices?	<input type="checkbox"/>	<input type="checkbox"/>
• Does the present policy provide for the distribution of resources to help women obtain a desired level of economic and social well-being?	<input type="checkbox"/>	<input type="checkbox"/>
• Can the access of women to information assist them in pursuing environmentally sound practices?	<input type="checkbox"/>	<input type="checkbox"/>

VII. INTERNATIONAL STRATEGY FRAMEWORK

- Is Agenda 21 being used for monitoring and implementation of gender aspects? ☐ ☐
- Are you planning to use it as a building block for effective institutional strategies? ☐ ☐



Institutional Guidelines for Integration at Different Programmatic Levels

	Yes	No
<i>I. Encourage Research and Information Dissemination</i>		
• Are women identified as a critical link in environmental management for sustainable development?	<input type="checkbox"/>	<input type="checkbox"/>
• Are the barriers to women's effective participation in environmental management being addressed?	<input type="checkbox"/>	<input type="checkbox"/>
• Are basic gender issues such as improved access to education, training and credit, the right to decision making (both political and economic) leading to environmentally sustainable development and sustainable livelihoods being addressed?	<input type="checkbox"/>	<input type="checkbox"/>
• Are the positive impacts of including women in the decision making process for environmental management and sustainable development being measured?	<input type="checkbox"/>	<input type="checkbox"/>
• Are the negative impacts of not including women in this process being measured?	<input type="checkbox"/>	<input type="checkbox"/>
• Is collaboration among WID, WED, environment and other groups the play significant roles in the search for solutions being institutionalised?	<input type="checkbox"/>	<input type="checkbox"/>
<i>II. Define the Gender and Environment Connections by Sector</i>		
• Are the special role that women play in the major sectors (in different geographic regions, under different circumstances and conditions) regularly documented?	<input type="checkbox"/>	<input type="checkbox"/>



	Yes	No
<ul style="list-style-type: none"> • Does the actual environmental policy/ programme foresee the implementation of regular data collection? 	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> • Are the data collected analysed to improve knowledge base on the connections by sector, examining gender dimension such as women's activities, responsibilities and relationships, use of their time and knowledge? 	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> • Are these data used to design projects to advance the process of integration? 		
III. <i>Ensure that Training Programmes Incorporate Gender Analysis</i>		
<ul style="list-style-type: none"> • Do women benefit from the project? 	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> • Has the impact of the project on women's social and economic status been analysed? 	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> • Has the impact on women's time and workload been analysed? 	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> • Has the impact of the project on the community's environment been considered? 	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> • Will the project have an impact on the role of women as natural resource managers within the community? 	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> • Are technologies environmentally-friendly and suitable for women? 	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> • Have women been involved in the selection of appropriate technologies? 	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> • Is women's knowledge, especially on ecosystems and biological diversity, taken into account? 	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> • Are women professionals and experts engaged? 	<input type="checkbox"/>	<input type="checkbox"/>



Outline of Institution's Training

	Yes	No
• Did you identify the appropriate training tools - curricula, manuals, users guides, seminars, etc.?	<input type="checkbox"/>	<input type="checkbox"/>
• Did you identify and analyse the needs of the different target audiences for such training - government policy makers and planners, project planners in international and regional development organizations, NGO groups, grassroots organizations, etc.?	<input type="checkbox"/>	<input type="checkbox"/>
• Did you foresee the work with training or education experts as well as with the practitioners in gender and environment issues to design the training materials?	<input type="checkbox"/>	<input type="checkbox"/>
• Did you adopt as much of a participatory approach as possible, so that both the trainers and the trainees share information, and the benefits of women's knowledge is tapped?	<input type="checkbox"/>	<input type="checkbox"/>
• Did you design comprehensive methodology with the need, characteristics and circumstances of the different target audiences in mind. For example use as many different methods as possible, so that there is a focus away from the written word and emphasis on audio and visual methods?	<input type="checkbox"/>	<input type="checkbox"/>
• Did you emphasize non-traditional and non-formal methods, such as radio and television - focus more on site locations?	<input type="checkbox"/>	<input type="checkbox"/>



	Yes	No
• Effect an attitudinal and/or policy change on the environment and gender interface?	<input type="checkbox"/>	<input type="checkbox"/>
• Promote and provide environmentally-sound technologies that have been designed, developed and improved in consultation with women?	<input type="checkbox"/>	<input type="checkbox"/>
• Is the project going to provide for some income generated potential?	<input type="checkbox"/>	<input type="checkbox"/>
• Does the project require participation of women in decision making?	<input type="checkbox"/>	<input type="checkbox"/>
• Does the project foresee the participation of women in project implementation?	<input type="checkbox"/>	<input type="checkbox"/>
• Is it going to encourage consultation and feedback?	<input type="checkbox"/>	<input type="checkbox"/>



Promote Partnership through Intra-Inter Agency Collaborative Efforts

		Yes	No
1.	Are partnership and collaborative approaches being considered in view of the potentially beneficial impact of pooling resources as well as learning from different approaches that other have used?	<input type="checkbox"/>	<input type="checkbox"/>
2.	Are inter-agency collaborations (both at governmental and inter-governmental level) being explored strategically?	<input type="checkbox"/>	<input type="checkbox"/>
3.	Are networking activities between WID programme officers, environment programme officers and officers responsible for liaising with non-governmental organizations being implemented?	<input type="checkbox"/>	<input type="checkbox"/>
4.	To this end are efforts being made for joint budgeting, joint programming, co-sponsorship of projects and programmes?	<input type="checkbox"/>	<input type="checkbox"/>



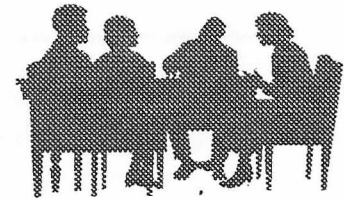
Facilitate Increased Public Participation

- | | Yes | No |
|--|--------------------------|--------------------------|
| 1. Are opportunities provided for local communities and community organizations and NGO's to consult and be consulted by development organizations to have their voices heard? | <input type="checkbox"/> | <input type="checkbox"/> |



Partnership with NGOs and Community Organization

		Yes	No
1.	Is the relationships between NGO's and governmental and inter-governmental organizations being promoted?	<input type="checkbox"/>	<input type="checkbox"/>
2.	Can the experience of NGOs and their dedication be used to the mutual benefit of the different types of organizations?	<input type="checkbox"/>	<input type="checkbox"/>
3.	Can the strengths of NGOs, and their abilities to mobilize their constituencies, be used as an example to encourage a heightened level of popular participation in development programs?	<input type="checkbox"/>	<input type="checkbox"/>
4.	Can governmental and inter-governmental institutions build strategic alliances with NGOs on the gender and environment linkage in order to encourage partnerships between institutions and people to address these connections?	<input type="checkbox"/>	<input type="checkbox"/>



Option No. 3: Gender Analysis and Planning

Time: 180 min

1. Objective

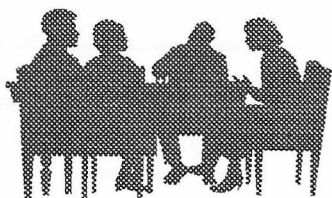
To undertake gender analysis and planning related to one's own field of work.

2. Group Work

- Identify a specific group of people whose needs are addressed by your organization (for example: women in waste management, women in forestry, women in agriculture, women in sanitation, women in waste handling, etc., in an urban or rural community).
- Fill the four matrixes herewith enclosed:
 - a) activity profile
 - b) resources and benefits profile
 - c) identification of needs
 - d) constraints and opportunity profile.

a) Activity Profile

1. How is the division of labour between men and women and between productive and reproductive work organized in the situation under analysis. In other words, who does what?
2. List all the activities in which men/boys and women/girls are involved in and indicate who is doing what.
3. Where do the activities take place? The location of the activity needs to be specified because it indicates the extent of mobility required and available to different groups.



4. When do these activities happen and how long do they take? Try to identify the time needed by the various groups to undertake each activity.

Gender Planning

1. Now that you have filled in the different matrixes, analyse the information you have collected and try to identify the main similarities and differences between men and women and how these influence their position in society.
2. How can your organization contribute to the promotion of equality within the group that you have analyzed?
3. Discuss your findings with your group.

3. Plenary Work

In plenary, the selected spokesperson will present the outcome of the group work for further discussion with the rest of the group and the trainer.



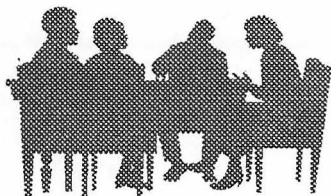
ACTIVITY PROFILE				
Socioeconomic activity	Women/girls	Men/boys	Time	Location
Production activities: paid labour/activities: - activity 1 - activity 2 - etc		
• unpaid labour/activities in the productive sphere: - activity 1 - activity 2 - etc		
Reproductive activities: • unpaid labour for the household: - activity 1 - activity 2 - etc		
• unpaid labour for the community: - activity 1 - activity 2 - etc		
• leisure time/education and training: - activity 1 - activity 2 - etc		



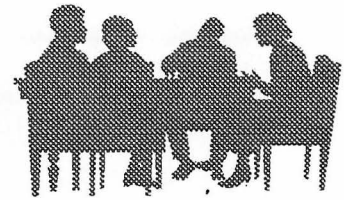
RESOURCES AND BENEFITS PROFILE				
	Access		Control	
	Women	Men	Women	Men
Resources (for example)				
- Land				
- Equipment				
- Labour				
- Cash				
- Education/training				
- Other				
Benefits (for example):				
- Outside income				
- In-kinds goods (foods, clothing, shelter, etc.)				
- Education				
- Political power/prestige				
- Other				
-				
-				
-				



IDENTIFICATION OF NEEDS PROFILE		
Identified needs of women (List in order of priority)	Practical needs	Strategic needs



CONSTRAINTS AND OPPORTUNITIES PROFILE		
Description	Opportunity	Constraint
For example:		
- Economic/demographic conditions		
- Institutional arrangements		
- Norms and values		
- Political events		
- Legislation		
- Training and education		
- Other		



Option No. 4: Ensuring Equal Opportunities for Women in Capacity Building Programmes

Time: 90 min

1. Objective

Plan for the implementation of measures indicated in Agenda 21 to ensure equal opportunities for women in capacity building programmes.

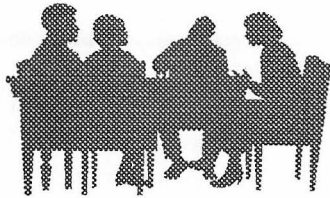
2. Individual Work

Review the enclosed document containing the recommendations to ensure equal opportunities for women in capacity building programmes (Agenda 21).

3. Group Work

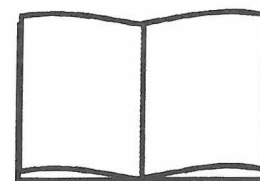
Through brainstorming with the rest of the group:

- Review and synthesize the sustainable development strategies associated with the capacity building needs for women;
- Identify the key process of capacity building that form the basis of the national Capacity 21 Programme and indicate the role that women will have.
- Within the above framework and considering INSTRAW's contribution to ensure equal opportunities for women, what kind of support would you expect from INSTRAW and from other UN bodies?



4. Plenary Work

In plenary, the selected spokesperson will present the outcome of the group work for further discussion with the rest of the group and the trainer.



Recommendations

Ensuring Equal Opportunities for Women in Capacity Building Programmes

At the Rio Summit, the international community recognized the need to promote the full, equal and beneficial contribution of women in all development activities, and the importance of women's active involvement in economic and political decision-making to achieve the successful implementation of Agenda 21.

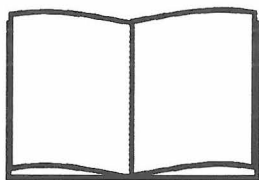
Chapter 8 "Integrating Environment and Development in Decision-Making" stipulates that:

- 8.10 Countries, in cooperation, where appropriate with national, regional or international organizations, should ensure that essential human resources exist, or be developed, to undertake the integration of environment and development at various stages of the decision-making and implementation process. To do this, **they should improve educational and technical training, particularly for women and girls, by including interdisciplinary approaches and other curricula.**

To this end, Agenda 21 urges all governments to implement the following:

- (1) **Measures to review policies and establish plans to increase the proportion of women involved as decision makers, planners, managers, scientists and technical advisers in the design, development, and implementation of policies and programmes for sustainable development;**
- (2) **Measures to strengthen and empower women's bureaux, women's non-governmental organizations and women's groups in enhancing capacity-building for sustainable development; and**
- (3) **Measures to eliminate illiteracy among females and to expand the enrolment of women and girls in educational institutions, to promote the goal of universal access to primary and secondary education for girl children and for women, and to increase educational and training opportunities for women and girls in sciences and technology, particularly at the post-secondary level.**

Agenda 21 recognizes that women as a group, particularly in developing countries, have had unequal educational and training opportunities



compared to men, and this inevitably affects the level of participation women can, and have had in national and international decision and policy making in environmental management and sustainable development.

It is also recognized that women need equal and affirmative opportunities in all human resources development programmes, starting from the grassroots levels in primary and secondary schools, adult literacy programmes, and post-secondary education at university and vocational training institutions to on the job training programmes. Only in this way can levels of women's participation be brought on par with that of men.

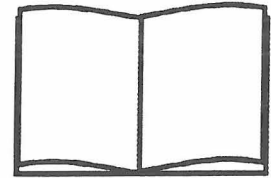
However, Agenda 21 does not give attention to issue of the need for fundamental changes in the curricula of educational systems which may be more supportive of women's way of thinking and processing information, as well as of women's different educational interests and priorities.

It is crucial that women gain a more effective level of participation in the making of decisions and policies governing environment and development, and in this way effect changes towards an appropriate sustainable development framework.

In this regard, governments, NGOs, international funding agencies and the private sector are urged to increase the number and level of women participating in capacity-building programmes and the human resources development programmes which complement these.

Chapter 36 of Agenda 21 deals with promoting education, public awareness and training, and contains particular reference to women:

- 36.4 Recognizing that countries, regional and international organizations will develop their own priorities and schedules for implementation in accordance with their needs, policies and programmes, the following objectives are proposed:
- (a) To endorse the recommendations arising from the World Conference on Education for All: Meeting Basic Learning Needs (Jomtien, Thailand, 5-9 March 1990) and to strive to ensure universal access to basic education for at least 80 per cent of girls and 80 per cent of boys of primary school age through formal schooling or non-formal education and to reduce the adult literacy rate to at least half of its 1990 level. Efforts should focus on reducing the high illiteracy levels and redressing the lack of basic



education among women and should bring their literacy levels into line with those of men;

- (m) Governments and educational authorities should foster opportunities for women in non-traditional fields and eliminate gender stereotyping in curricula. This could be done by improving enrolment opportunities, including females in advanced programmes as students and instructors, reforming entrance and teacher staffing policies and providing incentives for establishing child-care facilities, as appropriate. Priority should be given to education of young females and to programmes promoting literacy among women.

36.10 (k):

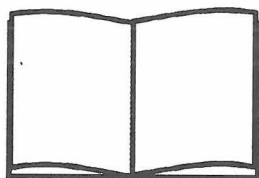
Countries, the United Nations and non-governmental organizations should encourage mobilization of both men and women in awareness campaigns, stressing the role of the family in environmental activities, women's contribution to transmission of knowledge and social values and the development of human resources.

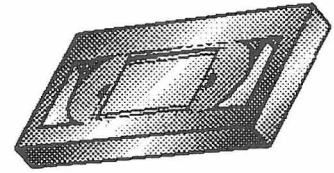
36.13 (a):

To establish or strengthen vocational training programmes that meet the needs of environment and development with ensured access to training opportunities, regardless of social status, age, gender, race or religion.

Training can be a dynamic and adaptable tool of interaction and a powerful means of bringing women into the development process. Special training can revive and strengthen traditional skills and build upon women's enormous reserve of indigenous knowledge, so transforming it into the capacity for action.

Most training programmes which women are encouraged to participate in, are often those involved with the so-called "feminine" occupations of health, nutrition, sewing, handicrafts, childcare and home economics. These skills, necessary though they are, do not enable women to participate equally in development. **Rather, women need to be helped to develop a capacity for income earning, to be trained in leadership, decision-making and in new technologies.**





Video Programme: “Gender Analysis and Planning”

1. Objective

Undertake gender analysis and planning in their field of work.

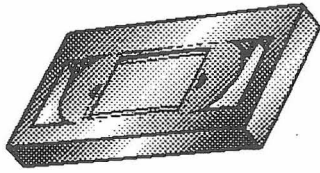
2. Outline of the Video Programme: “Gender Analysis and Planning”

FAO, 1994, 16 min, English

The video provides useful examples of how gender analysis and implementation of gender planning were successfully applied in projects. The projects were selected in different countries and the application of gender planning tools showed how a potentially unsuccessful project turned into a successful one. As the video programme is cross-cultural it is applicable worldwide.

3. Key Questions for Discussion

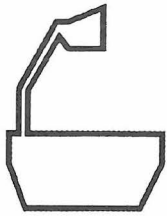
- What do you think of the projects presented in the video programme?
- Is gender analysis and planning applied in programmes/projects undertaken at national and rural levels in your country? If yes, please explain how.
- Why is the application of gender analysis and planning important for the overall development?
- Describe any programmes/projects where gender planning and implementation was applied and the lessons learned.





List of Transparencies

- No. 1: *Need for environmental indicators*
- No. 2: *Examples of indicators and indicator frameworks*
- No. 3: *OECD key indicators of national performance (1)*
- No. 4: *OECD key indicators of national performance (2)*
- No. 5: *OECD key indicators of national performance (3)*
- No. 6: *WWF and NEF indicators*
- No. 7: *Table of sectoral indicators: WWF/NEF*
- No. 8: *Issues*
- No. 9: *Recommendations to Commission on Sustainable Development (1)*
- No. 10: *Recommendations to Commission on Sustainable Development (2)*
- No. 11: *Women and environmental and sustainable development indicators (1)*
- No. 12: *Women and environmental and sustainable development indicators (2)*
- No. 13: *Making women visible*
- No. 14: *INSTRAW, time use measurement and unpaid work project SNA based activity classification framework*
- No. 15: *Guidelines for action at the programme and project levels (1)*
- No. 16: *Guidelines for action at the programme and project levels (2)*
- No. 17: *Working groups*
- No. 18: *Women's participation in all stages of project cycle*
- No. 19: *Constraints*
- No. 20: *From gender analysis to gender planning*
- No. 21: *Gender analysis and planning*
- No. 22: *Capacity building: a definition*
- No. 23: *Agenda 21*
- No. 24: *Capacity 21*
- No. 25: *Managing Capacity 21*
- No. 26: *Human resources development*
- No. 27: *Women and capacity building*



TRANSPARENCIES

MODULE FOUR

*WOMEN, ENVIRONMENTAL INDICATORS AND CAPACITY
BUILDING PROGRAMMES*

NEED FOR ENVIRONMENTAL INDICATORS

➡ TYPES OF ENVIRONMENTAL INDICATORS:

- **INTEGRATED ACCOUNTING SYSTEMS**
- **STATISTICAL FRAMEWORKS**
- **AD-HOC INDICATORS FRAMEWORKS**
- **OVERALL POLICY FRAMEWORKS**

EXAMPLES OF INDICATORS AND INDICATOR FRAMEWORKS

- ⇒ PILOT INDICATORS OF NATIONAL PERFORMANCE**
- ⇒ OECD DEVELOPED A CORE SET OF ENVIRONMENTAL PERFORMANCE INDICATORS**
- ⇒ WORLD WILDLIFE FOUNDATION (WWF) AND THE NEW ECONOMICS FOUNDATION (NEF) COMPILED A SET OF KEY SECTORAL INDICATORS**

OECD Key Indicators of National Performance

A. Critical Elements of Sustainability	B. Financial Resources and Mechanisms	C. Education, Science, Transfer of Environmentally Sound Technologies, Cooperation and Capacity Building
Human Development Index	Overseas Development Assistance given or received as % GDP (US\$)	Net primary and secondary school enrolment rates: total, female(5)
GDP per capital in real terms PPP (US\$)	Debt/service ratio (debt service as % of export earnings)	Mean years of schooling: total, female (%)
Income share: ratio of the highest 20% of households to lowest 20%	Military expenditure as a proportion of GDP (%)	Adult literacy rate (%)
Consumption of energy per capita and per unit of GDP (tonnes of oil equivalent)	Gross domestic savings as a proportion of GDP (%)	Proportion of GDP spent on education (%)
Depletion index of fossil fuels and other mineral resources (% of proven reserves)		No. of vocational (technical) graduates per 100,000 (no.)
Average calorie consumption proportion of minimum requirements (%)		
Annual rate of population growth (%)		
Population living in absolute poverty: total (no.) and proportion of the total (%)		

Source: WWF/NEF 1994 Paper 1 "Indicators for Action", p. 5

OECD Key Indicators of National Performance

D. Decision-making Structures	E. Roles of Major Groups	F. Health, Human Settlements and Fresh-Water
Public employees engaged in environmental protection and social services (% of total)	Human Freedom Index	Index of life expectancy (relative to OECD average)
Global treaties ratified (no.)	Participation in the formal labour market: total, female (%)	Infants and under 5 mortality rates (deaths per 1000 births)
	Elected national and local representatives per 1 million population (no.)	Burden of disease (DALYs per 1000 people)
	Females in national elected office as proportion of total (%)	Maternal mortality rates (per 1000 births)
	Major groups organizations consulted in national reports to the CSD (no.)	Population with access to sanitation: urban and rural (%)
		Water consumption (abstraction as a % of renewable supply)
		Biochemical oxygen demand (BOD) and dissolved oxygen (DO) in surface waters (mg/litre)
		Rate of urban population growth (%)

Source: WWF/NEF 1994 Paper 1 "Indicators for Action", p. 6

OECD Key Indicators of National Performance

G. Land, Desertification, Forests and Biodiversity	H. Atmosphere, Oceans and all kinds of Seas	I. Toxic Chemicals and Hazardous Wastes
Net rate of deforestation (%)	Fossil fuel emission: total and per capita (tonnes)	Hazardous waste and special waste generation per capita (tonnes)
Red data book species as proportion of total species (%)	Emissions of SO _x and NO _x total and per capita (tonnes)	Generation of municipal, industrial, nuclear wastes per capita (tonnes)
Protected areas (IUCN classes II-V) as proportion of total land areas (%)	Excedances of WHO air quality guidelines in major cities (% of days)	Imports and exports of hazardous wastes (tonnes)
Fish catch per available stock: marine and fresh-water (%)	Apparent consumption of CFCs: total and per capita (tonnes)	Recycling rates for paper and aluminium products (%) and glass recovery (%)
Net rate of soil erosion or % of solid degraded		
Fertilizer and pesticide use per Km ² of cultivated land (tonnes)		
Index of agricultural production per capita		
Energy intensity of agricultural production (MJ/\$US Agr GDP)		

Source: WWF/NEF 1994 Paper 1 "Indicators for Action", p. 7

WORLD WILDLIFE FOUNDATION AND THE NEW ECONOMICS FOUNDATION INDICATORS



COMPILED A LIST OF INDICATORS NEEDING FURTHER DEVELOPMENT

- **PROPERTY RIGHTS AND ACCESS TO
RESOURCES**
- **INTERNALIZATION OF SOCIAL AND
ENVIRONMENTAL COSTS**
- **DEMOCRACY AND PARTICIPATION ON
DECISION MAKING**
- **INSTITUTIONAL CAPACITY**
- **TECHNOLOGY TRANSFER**
- **CONSUMPTION**
- **ECOLOGICAL AND SOCIAL FOOTPRINTS**

Table of Sectoral Indicators: WWF/NEF

Energy	Transport	Shelter
Total primary energy supply (tonnes of oil equivalent)	Passenger cars (per 1000 people)	House-price-to-income ration
Energy intensity per unit of GDP (tonnes of oil equivalent)	Traffic volume (vehicle-km travelled by road)	Rent-to-income ratio
Consumption of fuel-wood: per capita (tonnes), as proportion of total energy consumption (%)	Road density (km per km ²)	Number of homeless or living in temporary accommodation (no.)
Volume of radioactive waste (tonnes)	Miles travelled by public transport as proportion of total miles travelled (%)	Median usable living space per capita (m ²)
Emissions per unit GDP and per capita (tonnes)	Proportion of transport plans put up for public inquiry (%)	Proportion of housing units with expected lifetime over 20 years (%)
Real end-use prices by fuel type (US\$)	Fuel price and taxation by fuel type (US\$)	Proportion of housing stock in compliance with existing regulations (%)
	Bicycles ownership per capita (no.)	
	Road traffic fatalities (no, per 1000 people)	
	Average fuel efficiency of new cars (km/l)	
	Proportion of public expenditure on public versus road transport (%)	

Source: WWF/NEF 1994, Paper 2 "Driving Forces: Sectorial Indicators", p. 4.

ISSUES

- ➡ **THE ESTABLISHMENT OF INDICATORS AND TARGETS AT THE NATIONAL LEVEL AGAINST WHICH ENVIRONMENTAL AND SUSTAINABLE DEVELOPMENT PERFORMANCE CAN BE MEASURED**
- ➡ **THERE IS A SHORTAGE OF INDICATORS DEALING WITH THE IMPACT OF SPECIFIC SECTORAL ACTIVITIES ON THE ENVIRONMENT AND SUSTAINABLE DEVELOPMENT**
- ➡ **THE INDICATORS IN COMMON USE PROVIDE ONLY PART OF THE PICTURE**
- ➡ **INDICATORS WHICH ARE DESIGNED TO PROVIDE A BROAD ASSESSMENT OF THE AGGREGATE IMPACT DO NOT READILY TRANSLATE INTO MEANINGFUL INFORMATION**

RECOMMENDATIONS TO COMMISSION ON SUSTAINABLE DEVELOPMENT - 1

- ⇒ ADOPT AT ITS 1994 SESSION A CORE SET OF INDICATORS...**
- ⇒ ESTABLISH A PROCESS TO REVIEW AND DEVELOP APPROPRIATE INDICATORS...**
- ⇒ DEFINE INTERNATIONAL POLICY TARGETS...**
- ⇒ HIGHLIGHT BEST PRACTICE IN THE ADOPTION OF NATIONAL LEVEL INDICATORS...**
- ⇒ FORMALLY RECOGNIZE THE NEED FOR SECTORAL INDICATORS AND TARGETS...**

RECOMMENDATIONS TO COMMISSION ON SUSTAINABLE DEVELOPMENT - 2

- ➡ SELECT A CORE SET OF INDICATORS...**
- ➡ ESTABLISH A PROCESS TO REVIEW AND DEVELOP KEY SECTORAL INDICATORS...**
- ➡ ENSURE THAT THE CHAPTER 40 REVIEW PROCESS COVERS INDICATORS...**
- ➡ EXTEND ITS SCOPE OF PRACTICAL RESEARCH AND CONSULTATION...**
- ➡ RECOMMEND THE DEVELOPMENT OF INDICATORS...**
- ➡ REVIEW THE EXTENT OF RELEVANT INDICATORS IN DECISION-MAKING...**

WOMEN, ENVIRONMENTAL AND SUSTAINABLE DEVELOPMENT INDICATORS - 1

- ➡ **NEED FOR GENDER-SENSITIVE INDICATORS HAS RECEIVED LITTLE ATTENTION**
- ➡ **NO ALLOWANCE FOR GENDER DISAGGREGATED DATA IN OECD SET OF INDICATORS OF NATIONAL PERFORMANCE OR IN WWF/NEF SECTORAL INDICATORS**
- ➡ **HUMAN DEVELOPMENT INDEX (HDI)**
 - **NO INDICATOR FRAMEWORK TO INCORPORATE SPECIFICALLY GENDER-SENSITIVE INDICATORS TO MEASURE:**
 - **LINKAGES BETWEEN WOMEN'S DOMESTIC AND UNPAID WORK TO ECONOMIC WELL-BEING (INCOME LEVELS, GDP);**

WOMEN, ENVIRONMENTAL AND SUSTAINABLE DEVELOPMENT INDICATORS - 2

- **WOMEN'S ACTIVITIES IN NATURAL RESOURCE MANAGEMENT AND ENVIRONMENTAL CONDITIONS;**
- **WOMEN'S HEALTH AND ECONOMIC PRODUCTIVITY;**
- **WOMEN'S ROLES IN REPRODUCTIVE AND ECONOMIC PRODUCTIVITY; AND**
- **WOMEN'S INPUT INTO DECISION-MAKING AND POLICY-MAKING PROCESSES AND ENVIRONMENTAL SUSTAINABILITY AS WELL AS OVERALL SUSTAINABLE DEVELOPMENT**

MAKING WOMEN VISIBLE

➡ UN SYSTEM OF NATIONAL ACCOUNTS

➡ IF WOMEN COUNTED:

- THE UN/SNA HAS (ALSO) DECIDED THAT CERTAIN AREAS OF HUMAN ACTIVITY LIE OUTSIDE OF WHAT IT CALLS THE PRODUCTIVE BOUNDARY. THESE AREAS ARE EXCLUDED FROM MEASUREMENT IN THE NATIONAL ACCOUNTS. GENERALLY, THE UN/SNA EXCLUDES HOUSEHOLD ACTIVITIES, THE PRODUCTS WHICH ARE "OBSERVED" AS SELDOM OR NEVER MARKETING. IN OTHER WORDS, THE SERVICE OF HOUSEWIVES AND OTHER FAMILY MEMBERS, HOUSEHOLD MAINTENANCE AND PRODUCTION, AND ILLEGAL TRANSACTIONS ARE ALL OUTSIDE OF THE UN/SNA'S PRODUCTION BOUNDARY (Waring 1988, p. 33)

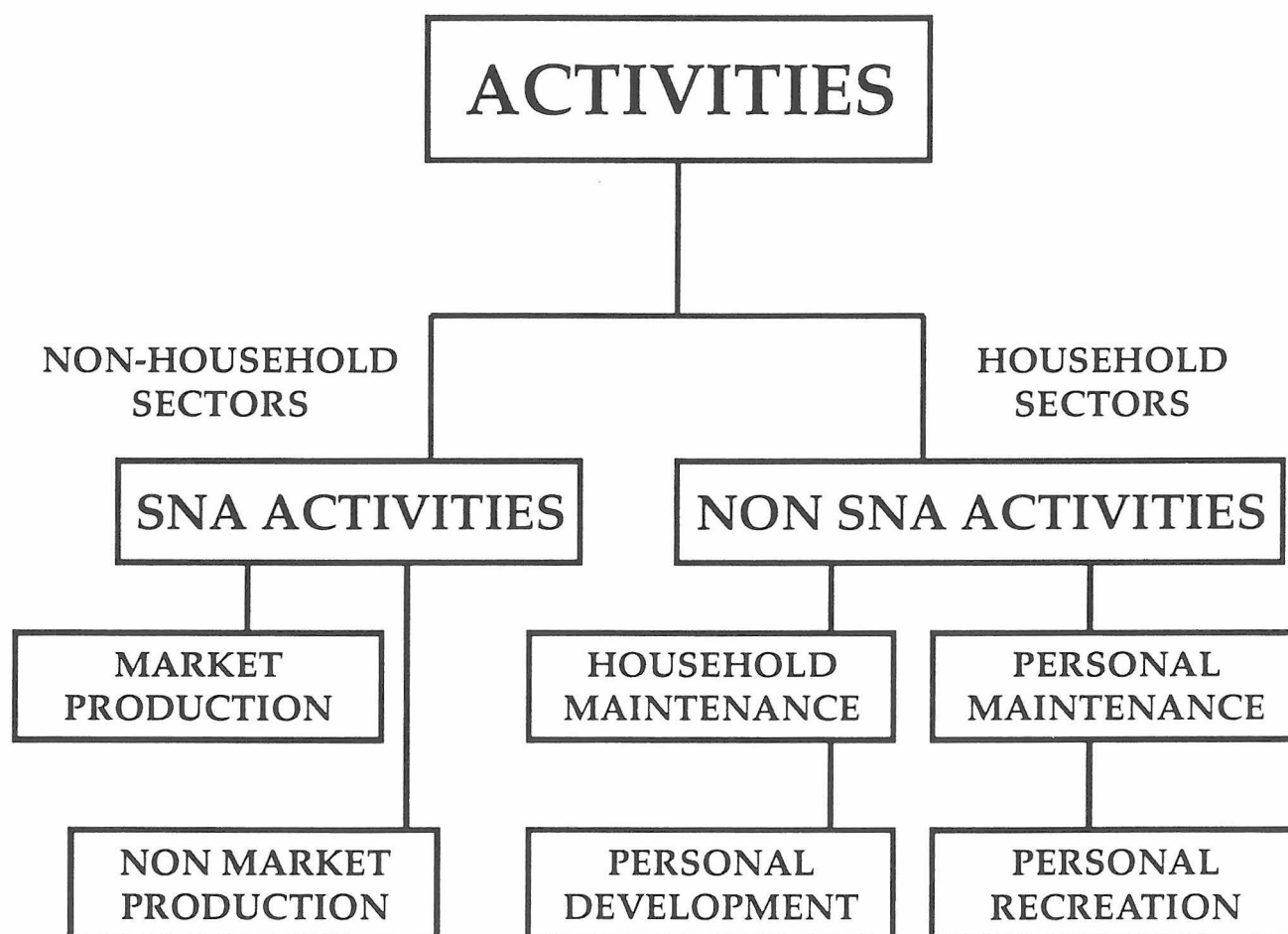
➡ INSTRAW REPORT "MEASUREMENT AND VALIDATION OF UNPAID CONTRIBUTION: ACCOUNTING THROUGH TIME USE"

➡ GROWING CONCEPTUAL AWARENESS AND ACCEPTANCE THAT THERE ARE WORKABLE TECHNIQUES FOR CAPTURING RELEVANT DATA ON NON-MARKET ACTIVITY

➡ HOUSEHOLD SATELLITE ACCOUNT

➡ HOUSEHOLD SATELLITE ACCOUNT FRAMEWORK

INSTRAW, TIME USE MEASUREMENT AND UNPAID WORK PROJECT SNA BASED ACTIVITY CLASSIFICATION FRAMEWORK



GUIDELINES FOR ACTION AT THE PROGRAMME AND PROJECT LEVELS 1

- ⇒ **State the role and capacity of women in ESSD as a basis for allocating budgetary and human resources**
- ⇒ **Women's traditional, professional knowledge and experience must be incorporated in all phases of project development**
- ⇒ **A multisectoral and integrated approach to women's participation should be fully supported**
- ⇒ **A consultative process with women at all stages of project cycle established**
- ⇒ **Information and exchange network set up within UN System**
- ⇒ **Women knowledge of database systems established at national, regional, international level**

GUIDELINES FOR ACTION AT THE PROGRAMME AND PROJECT LEVELS 2

- ➡ **Environmental Impact Assessments should be based on gender specific data**
- ➡ **Training and education must address women's roles and gender issues and include women participants**
- ➡ **"North" and "South" should make concerted efforts to reduce wasteful consumption of resources**
- ➡ **Support women's right to family planning**
- ➡ **Technological options that are environmentally clean and sound should be identified, introduced and promoted with the participation of women.**
- ➡ **Utilize the potential of women entrepreneurs in the management of programmes/projects**
- ➡ **Programme and guidelines should be action-oriented, allowing time for reflection, consultation, monitoring, evaluation, consolidation and diffusion of lessons learned**

WORKING GROUPS ON:

- ⇒ NATURAL RESOURCES**
- ⇒ POPULATION**
- ⇒ MANAGEMENT AND DECISION
MAKING**

WOMEN'S PARTICIPATION IN ALL STAGES OF PROJECT CYCLE

IDENTIFICATION

MONITORING AND EVALUATION

CONCEPTUALIZATION

OPERATION AND MAINTENANCE

PLANNING AND DESIGN

IMPLEMENTATION

From gender analysis to gender planning



Gender analysis

 Is a tool to identify

- What women do and why
- Who has access to and control over resources or benefits
- What needs men and women have and why
- Linkages of above factors with the larger social, economic, political and environmental context providing opportunity/constraints to ensure equality of opportunity

Gender planning

 Addressing participation patterns and assistance requirements of men and women at all steps of policy and programme development

CONSTRAINTS

- ⇒ ATTITUDES
- ⇒ TIME AND ENERGY
- ⇒ FINANCES

SKILLS AND TRAINING

CAPACITY BUILDING: A DEFINITION

- ➡ **CAPACITY BUILDING, WITHIN THE CONTEXT OF ENVIRONMENTAL MANAGEMENT AND SUSTAINABLE DEVELOPMENT, REFERS TO THE ABILITY OF PEOPLE AND INSTITUTIONS TO MANAGE NATURAL RESOURCES, TECHNOLOGY AND INVESTMENT WITHIN POTENTIALLY SOLVING DIFFICULT AND COMPLEX SITUATIONS. IT INVOLVES BOTH THE INSTITUTIONAL FRAMEWORK WHICH PROCESSES CAPACITY BUILDING PROGRAMMES AND POLICIES, AND THE DEVELOPMENT OF THE HUMAN RESOURCES TO DEFINE POLICIES, TO OPERATE INSTITUTIONS AND PROCESSES, TO IMPLEMENT AND ENFORCE POLICIES, TO CONDUCT RESEARCH, TO INTERNALISE AND USE THE KNOWLEDGE THUS GAINED, AND TO ENSURE GENUINE PUBLIC PARTICIPATION AND ACCOUNTABILITY THROUGHOUT**
- ➡ **MAKING CAPACITY BUILDING A REALITY**
- ➡ **AGENDA 21 THE FIRST INTERNATIONALLY CREATED FRAMEWORK**

AGENDA 21

- ⇒ SOCIAL AND ECONOMIC DIMENSIONS**
- ⇒ CONSERVATION AND MANAGEMENT OF RESOURCES**
- ⇒ STRENGTHENING THE ROLE OF MAJOR GROUPS**
- ⇒ MEANS AND IMPLEMENTATION**

CAPACITY 21

- ➡ **MAJOR NEW INITIATIVE OF THE UNITED NATIONS**
- ➡ **OBJECTIVES OF CAPACITY 21:**
- ➡ **ASSIST COUNTRIES TO INCORPORATE THE PRINCIPLES OF SUSTAINABLE DEVELOPMENT INTO THEIR DEVELOPMENT PLANS AND PROGRAMMES**
- ➡ **ASSIST COUNTRIES TO INVOLVE ALL PEOPLE INTO DEVELOPMENT PLANNING AND ENVIRONMENTAL MANAGEMENT**
- ➡ **CREATE A BODY OF EXPERIENCE AND EXPERTISE IN SUSTAINABLE DEVELOPMENT AND CAPACITY BUILDING THAT WILL BE OF CONTINUED MATERIAL VALUE TO (AND INFLUENCE THE OPERATION OF) DEVELOPING COUNTRIES, UNDP, SPECIALIZED AGENCIES, NGOs AND OTHER DONORS**
- ➡ **CAPACITY 21 HELPED ESTABLISH PROGRAMMES IN DEVELOPING COUNTRIES**

MANAGING CAPACITY 21



COMMISSION ON SUSTAINABLE DEVELOPMENT MANDATED TO:

- **SERVE AS POLICY ARENA FOR BUILDING AGREEMENT ON PRIORITIES FOR IMPLEMENTATION OF AGENDA 21**
- **HELP COORDINATE AND RATIONALIZE INTERGOVERNMENTAL PROGRAMMES ON ADVANCING SUSTAINABLE DEVELOPMENT**
- **DEVELOP REPORTING GUIDELINES FOR UN SYSTEM AGENCIES AND NATIONAL GOVERNMENTS**
- **PROMOTE THE REDIRECTION AND EXPANSION OF INTERNATIONAL FINANCE RESOURCES FOR AGENDA 21**
- **SET NEW STANDARDS FOR MEANINGFUL CONSULTATIVE RELATIONS**

HUMAN RESOURCES DEVELOPMENT

➡ INTERNATIONALLY COORDINATED FRAMEWORK FOR CAPACITY BUILDING:

- **EDUCATION AND TRAINING**
- **POPULAR PARTICIPATION**
- **MONITORING CAPACITY BUILDING
PROGRAMMES**
- **SHORT-TERM INDICATORS**
- **LONG-TERM INDICATORS**

WOMEN AND CAPACITY BUILDING

➡ NEED TO PROMOTE THE FULL, EQUAL AND BENEFICIAL PARTICIPATION OF WOMEN IN ALL DEVELOPMENT ACTIVITIES:

- **AGENDA 21: CHAPTER 8 INTEGRATING
ENVIRONMENT AND DEVELOPMENT IN
DECISION-MAKING**
- **ENSURING EQUAL OPPORTUNITIES FOR
WOMEN IN CAPACITY BUILDING**
- **CASE STUDY IN SENEGAL**
- **INSTRAW**