

Mainstreaming Gender in Environmental Assessment and Early Warning



UNEP



© UNEP, 2005

Published by the United Nations Environment Programme (UNEP).

ISBN: 92-807-2487-6

Job No.: DEW/0573/NA

February 2005

DISCLAIMER

This publication may be reproduced in whole or part and in any form of educational or non-proper services without special permission from the copyright holder, provided acknowledgement of the source is made. UNEP would appreciate receiving a copy of any publication that uses this publication as a source.

For further information, please contact:

Steve Lonergan

Director

Division of Early Warning and Assessment

United Nations Environment Programme

P.O. Box 30552, Nairobi 00100, Kenya

Phone: + 254 20 62 4028

Fax: + 254 20 62 3943

Email: steve.lonergan@unep.org

Beth Ingraham

Information Officer

Project Coordinator

Division of Early Warning and Assessment

United Nations Environment Programme

P.O. Box 30552, Nairobi 00100, Kenya

Phone: + 254 20 62 4299

Fax: + 254 20 62 4269

Email: beth.ingraham@unep.org

Design and Layout: Audrey Ringler, DEWA

Printing: UNON, Nairobi

This book is printed on 100 per cent recycled, chlorine free paper

*Mainstreaming Gender in Environmental Assessment
And Early Warning*

JONI SEAGER, PhD.

DEAN OF THE FACULTY OF ENVIRONMENTAL STUDIES

YORK UNIVERSITY, TORONTO, CANADA

jseager@yorku.ca

and

BETSY HARTMANN, PhD.

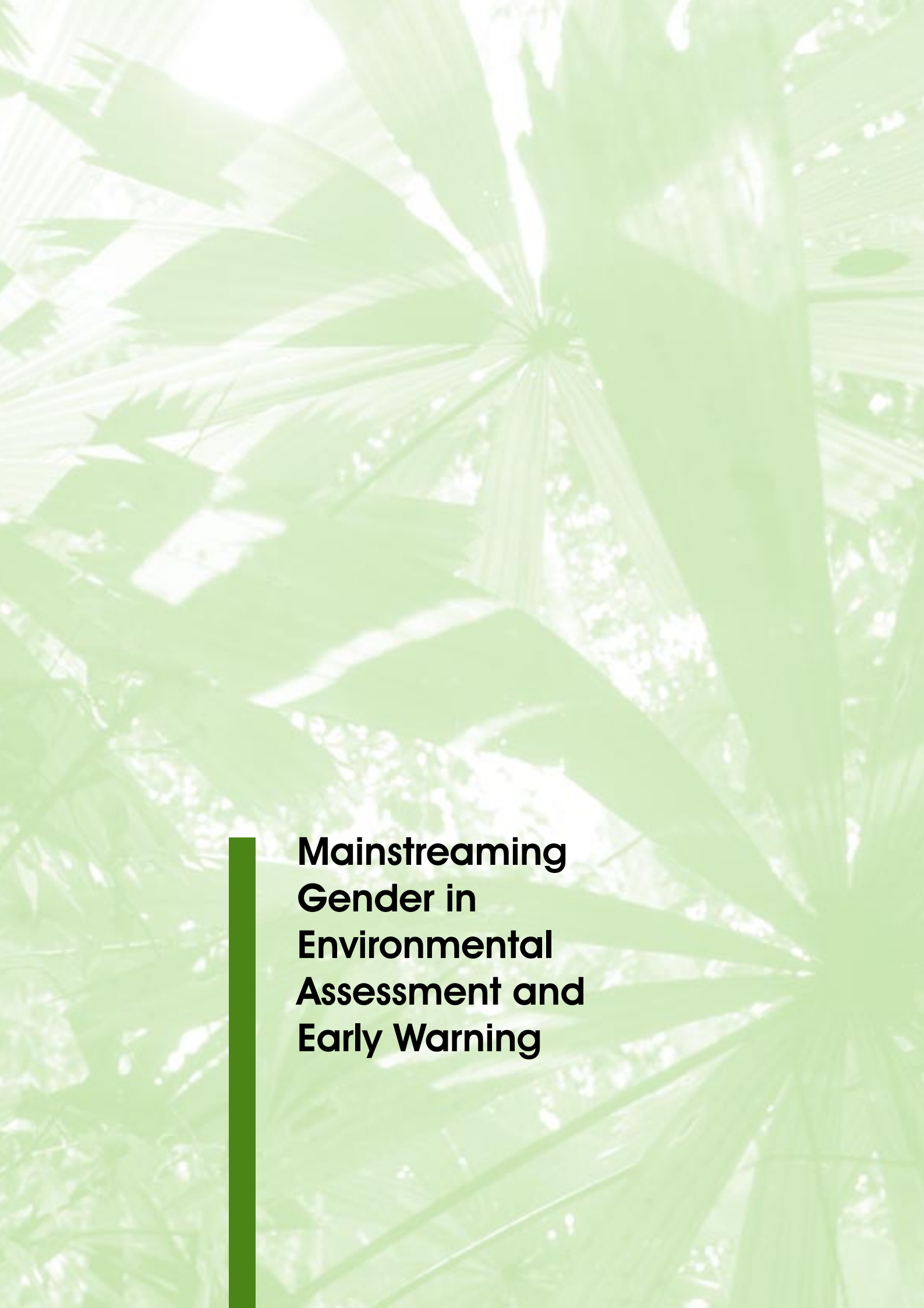
DIRECTOR OF THE POPULATION AND DEVELOPMENT PROGRAM

HAMPSHIRE COLLEGE, MASSACHUSETTS, USA

bhartmann@hampshire.edu

WITH RESEARCH ASSISTANCE FROM

ROBIN ROTH AND SOLANGE BANDIAKY, CLARK UNIVERSITY



**Mainstreaming
Gender in
Environmental
Assessment and
Early Warning**

Table of Contents

Acronyms and Abbreviations	i
Executive Summary	iii
Preface	vii
1. Introduction	1
1.1 Gender mainstreaming defined	1
1.2 Gender mainstreaming commitments in the UN, UNEP, World Bank, and key environmental NGOs	4
1.3 Lessons learned: What makes gender mainstreaming succeed and what makes it fail	10
2. Gender and Environment: Introduction and Context	13
3. Key Issues in Gender and Environment: Opportunities and Challenges for DEWA/UNEP	16
3.1 Water	16
3.2 Gender, poverty and environment	18
3.3 Gender, security, conflict and environment	19
3.4 Early warning, environmental change, disaster and preparedness; gendered vulnerability to environmental change	23
4. Challenges and Cautions in Developing a Gender Focus in DEWA's Work	31
4.1 Keeping gender on the agenda in the large frame of analysis in the face of competing mandates	31
4.2 The challenge of building bridges across the "two cultures"	32
4.3 Avoiding the pull of the "essentialized rural woman with a special relationship to nature" iconography	33
4.4 Interrogating scale and causality	34
4.5 Gender-disaggregated data and indicators	34
5. DEWA Assessment	39
5.1 Assessment of the institutional structure and culture of DEWA/UNEP	39
5.2 Assessment of the conceptual and programmatic work of DEWA	41
5.3 Assessment of gender representation in GEO	42
5.4 Assessment of gender representation in AEO	48
6. Recommendations to DEWA and UNEP	56
6.1 UN system-wide recommendations	56
6.2 Recommendations for DEWA and UNEP	58
7. Resources and Bibliography	62
7.1 Sources of gender-sensitive and gender-disaggregated social and environmental data and indicators	62
7.2 Bibliography: gender mainstreaming	64
7.3 Bibliography: gender and environment	65
Appendix	81
- Consultants and experts interviewed for this report	81

Acronyms and Abbreviations

AEO	Africa Environment Outlook
AMCEN	African Ministerial Conference on the Environment
CCC	Community Conservation Coalition
DAW	Division for the Advancement of Women (UN)
DEWA	Division of Early Warning and Assessment
ECOSOC	Economic and Social Council
ENSO	El Niño Southern Oscillation
FAO	Food and Agriculture Organization of the United Nations
FPC	Forest Protection Committees
GIEWS	Global Information and Early Warning System
GEO	Global Environment Outlook
GDP	Gross Domestic Product
HABITAT	Human Settlements Programme
IDS	In-Depth Studies
IIED	International Institute for Environment and Development
IISD	International Institute for Sustainable Development
ILO	International Labour Organization
INSTRAW	International Research and Training Institute for the Advancement of Women
ISDR	International Strategy for Disaster Reduction
IUCN	The World Conservation Union
JFM	Joint Forest Management
MERGE	Managing Ecosystems and Resources with Gender Emphasis
MDG	Millennium Development Goals
NEPAD	New Partnership for Africa's Development
OECD	Organization for Economic Cooperation and Development
OXFAM	A group of non-governmental organizations from three continents working worldwide to fight poverty
SAP	Structural Adjustment Programs
UN	United Nations
UNEP	United Nations Environment Programme
UNFPR	United Nations Population Fund
UNDP	United Nations Development Programme
UNHCR	United Nations High Commissioner for Refugees
UNIFEM	United Nations Development Fund for Women
UNISDR	United Nations International Strategy for Disaster Reduction
UNRISD	United Nations Research Institute for Social Development
USAID	United States Agency for International Development
SEGA	Socio-Economic and Gender Analysis (Programme of FAO)
SIDA	Swedish Development Agency
WEDO	Women's Environment and Development Organization
WID	Women in Development
WIDTECH	Women in Development Technical Assistance Project (WIDTECH) Small Grants Competition
WB	World Bank
WSSD	World Summit of Sustainable Development
WWF	World Wildlife Fund





UNEP/TopFoto

Executive Summary

.....

The purpose of this study is to assist the Division of Early Warning and Assessment (DEWA), a division within the United Nations Environment Programme (UNEP), in meeting its goals of incorporating gender mainstreaming throughout the entirety of its programme of work, activities, and products.

Gender mainstreaming is best understood as a continuous process of infusing both the institutional culture and the programmatic and analytical efforts of agencies with gendered perspectives. Gender mainstreaming means taking gender seriously – and taking it into account in all aspects of the workplace and the work products of the institution.

Key Features of this Report

This report provides:

- a summary of current definitions and best practices of gender mainstreaming in cognate international organizations and assessment of the institutional conditions under which gender mainstreaming succeeds or fails (Chapter One).
- a substantive review of four areas of gendered environmental research: water, poverty, security/conflict, and



UNEP/TopFoto

vulnerability/disaster. These four represent areas of work that already are high on the agenda of UNEP and DEWA; we identify promising research trajectories that could shape DEWA's contributions to these fields (Chapter Three).

- an analysis of the institutional and intellectual challenges that DEWA will need to take into account as it develops its gender mainstreaming agenda, including: keeping gender on the agenda in the face of competing mandates and in a climate of apparent diminishing commitment to gender analysis; combining science-based and technical environmental analysis with social science and qualitative-based gender analysis; avoiding iconic and essentialized tropes about women and the environment; and manage this information despite the lack of gender-disaggregated data and indicators (Chapter Four).
- a close reading and analysis of the current treatment of gender in two of the signature publications of DEWA, the *African Environment Outlook* (AEO) and the *Global Environment Outlook* (GEO), and detailed suggestions for ways to improve on this treatment (Chapter Five).
- a substantial set of recommendations to advance DEWA's institutional and programmatic integration of gender (Chapter Six).

Key Findings

- DEWA's mandate as the primary *rapporteur* to the world's governments about the state of the earth requires that it take on board the most sophisticated environmental assessments. It is not possible to fulfil this mandate effectively without incorporating the analytical insights and empirical evidence of gender in the environment.
- Three decades of deep and extensive work in gender and the environment from NGOs and academic researchers provide a strong foundation for DEWA's work.

- However, to date, gender has been largely absent from DEWA's and UNEP's main work programmes and work products.
- With their unique command of resources and global prestige, DEWA and UNEP are positioned to make strong contributions to the global agenda for gendered environmental research; DEWA can and should take global leadership in advancing gender and environment work and visibility. To date, neither DEWA nor UNEP has been proactive in bringing gendered analysis into its work, but the institutional conditions, including leadership commitments, are now in place for strong forward movement in this field.
- The four substantive issues discussed in this review (water, poverty, security/conflict, and vulnerability/disaster) represent areas of innovative gendered environmental analysis; currently, though, most of the work conducted by UNEP in these areas does not incorporate gendered analysis.
- DEWA is especially well placed to play an active role in advancing the "toolkit" available for gender and environment work. Rather than being a passive recipient of gender research generated elsewhere, DEWA can become an engine of cutting-edge research and, in particular, DEWA could undertake projects that prioritise the *development of* gender-disaggregated data and indicator sets that will support "gender and the environment" analyses.

Key Recommendations

- That DEWA (and UNEP) develop and support in-house gender expertise.
- That DEWA adopts this simple yardstick of the effectiveness of gender mainstreaming: every staff member should be able to give a "gendered account" of the work he or she is doing. The extent to which he or she is able or unable to do so suggests the extent to which gender mainstreaming is working.

- That DEWA/UNEP highlights gender issues in its public statements of mission, programs and policies – including on its web sites. It is crucial that UNEP and DEWA are seen to be taking a visible lead in this field.
- That DEWA institutes a standing procedure of internal “gender review” for all work products – and for all phases of work from project planning, to content development for publications, to final sign-off on work products.
- That DEWA commits to using independent (external) gender-review experts as part of the expert cohort in all cases where publications and work products are sent out for external peer review.
- That DEWA prioritises the inclusion of gender-disaggregated and gender-sensitive materials in all programmatic areas. In particular DEWA should issue guidelines to data-providing organizations requiring that they provide the broadest range of gender-disaggregated and gender-sensitive information available.
- That DEWA actively engages with – and advances – cutting edge intellectual research and researchers within the “gender and environment” field.
- That DEWA makes greater use of partnerships, both within and outside the UN system.





UNEP/TopFoto

Preface

.....


The Principal Investigators, Joni Seager and Betsy Hartmann, were contracted by the Division of Early Warning and Assessment (DEWA) of the United Nations Environment Programme (UNEP) to conduct an assessment of the current state of gender mainstreaming in the operations, mission, and work of DEWA. Further, we were asked to make recommendations for steps that will assist DEWA and UNEP in meeting their goals of incorporating gender mainstreaming throughout the entirety of their programme of work, activities, and products.

By agreement, the key elements in the workplan were to include: a literature review; consultation with key informants and experts in areas of gender mainstreaming and gender and environment; an overview of complementary gender mainstreaming efforts within other UN agencies (and like organizations); and a comprehensive assessment of the state of gendered mainstreaming within DEWA in at least these three dimensions:

- in the embedded gendered assumptions that undergird the mission, the “culture,” and the conceptual framework of the operational work;



UNEP/TopFoto

- 
- in the ways in which gender is – or is not – taken into account in the operations, scope of vision, and products of DEWA (with particular attention to the primary products, the *Global Environment Outlook* and the *Africa Environment Outlook*);
 - and in the institutional/organizational structure of the Division.

We owe thanks to a great many individuals who assisted our project. Robin Roth and Solange Bandiaky at Clark University provided outstanding research assistance. We literally could not have undertaken this project without them.

We also owe great thanks to Clark University, and particularly to the Graduate Dean Nancy Budwig, Joan McGrath in Graduate Studies and Research, and the Director of Women's Studies, Jody Emel, for providing such a welcoming institutional home for this project.

We extend our thanks to the dozens of individuals who shared with us their time and expertise; we list these individuals in the Appendix. Of these experts, we owe special thanks to Maureen Fordham, Lyla Mehta, Mary Hill Rojas, and Dianne Rocheleau who provided a review of the first draft. While these individuals have provided sound and critical guidance, any errors that remain are, of course, our own.

And lastly we owe thanks to the entire DEWA staff in Nairobi – a staff who works exceptionally hard to understand and protect the world's environment. It is our hope that this report will assist these efforts.



Peter Frost/TopFoto

1

Chapter One

Introduction

1.1 Gender mainstreaming defined

Gender is a powerful social and cultural construct that structures social relations between and among men and women. The purpose of gender analysis is to understand the relations that govern social, cultural and economic exchanges between women and men in different arenas from the household to the community. Gender relations also shape the work of – and the research agendas of – state and multilateral agencies. Gender analysis is not just about women but also concerns men. It addresses fundamental issues such as power and social relations between men and women as well as amongst women, and how and by whom notions of masculinity and femininity are defined.

Gender mainstreaming has been on the United Nations institutional agenda for almost two decades. A series of mandates starting in the 1980s – catalysed largely by the UN “Decade of Women” conferences – directs UN agencies to implement gender mainstreaming across their operations. At the United Nations Fourth World Conference on Women, held in Beijing in September 1995, this commitment was unequivocally renewed: participating governments undertook



UNEP/TopFoto

commitments to enact comprehensive “platforms for action” intended to ensure, in the words of the conference declaration, “that a gender perspective is reflected in all policies and programmes” and that “governments and other actors promote an active and visible policy of mainstreaming a gender perspective in all policies and programmes so that, before decisions are taken, an analysis is made of the effects on women and men, respectively.”

There are dozens of variants on the definition of “gender mainstreaming.” We do not here review this entire universe of definitions; rather we identify some of the most salient features of the current understanding of gender mainstreaming. Readers are referred to the Bibliography for resources for further exploration.

The “mainstream” is understood as the structural core of an organization – where the identity and sense of purpose of an organization are formed, validated, and renewed. The “mainstream” consists of interwoven sets of dominant ideas and directions, and the decisions, policies or actions taken in accordance with those ideas. The mainstream is where ideology (key theories and assumptions) and institutional capacity (budgets, staff allocation, and decision-making processes) converge.

The hegemonic power of this convergence suggests why it is so critically necessary to bring gender into the mainstream: the ideas and practices in the mainstream determine what gets done and provide a rationale for the allocations of societal resources and opportunities. Classically, women have been excluded – or, differentially included – from these opportunities. The remedy to this classic imbalance, gender mainstreaming, thus operates on two levels.

First, gender mainstreaming operates at the level of “institution formation” and organizational culture. The goal of mainstreaming in this context is to bring women into decision-making and policy-formulating positions within the organization.

An effective mainstreaming strategy seeks to bring women into positions where they can take part on an equitable basis with men in determining the institution’s values, directions and allocation of resources. It also seeks to ensure that women have the same access as men to resources within the institution. However, effective gender mainstreaming goes beyond simply ensuring the participation of women in equal numbers – it extends to facilitating a form of participation that enables women as well as men to influence the entire agenda and priorities of the organization. This requires an assessment of the gendered composition and personnel structure of the organization *as well as* an assessment of the more intangible “institutional culture.”

Secondly, gender mainstreaming requires the systematic inclusion of gendered perspectives throughout the programmatic, policy, conceptual, and analytical work of the organization. Gender issues need to be identified and incorporated into all planning stages and strategic initiatives.

ECOSOC, (the coordinating body for the social and economic policies of the United Nations), drafted an overarching definition of gender mainstreaming in 1997 that still stands as a “state of the art” definition:

“Mainstreaming a gender perspective is the process of assessing the implications for women and men of any planned action, including legislation, policies or programmes, in any area and at all levels. It is a strategy for making women’s as well as men’s concerns and experiences an integral dimension of the design, implementation, monitoring and evaluation of the policies and programmes in all political, economic and societal spheres so that women and men benefit equally, and inequality is not perpetuated. The ultimate goal is to achieve gender equality.”

ECOSOC goes on to specify core principles that follow from this commitment:

"B. Principles for mainstreaming a gender perspective in the United Nations system:

- Issues across all areas of activity should be defined in such a manner that gender differences can be diagnosed - that is, an assumption of gender-neutrality should not be made.
- Responsibility for translating gender mainstreaming into practice is system-wide and rests at the highest levels. Accountability for outcomes need to be monitored constantly.
- Gender mainstreaming also requires that every effort be made to broaden women's participation at all levels of decision-making.
- Gender mainstreaming must be institutionalised through concrete steps, mechanisms and processes in all parts of the United Nations system.
- Gender mainstreaming does not replace the need for targeted, women-specific policies and programmes or positive legislation, nor does it substitute for gender units or focal points.
- Clear political will and the allocation of adequate and, if need be, additional human and financial resources for gender mainstreaming from all available funding sources are important for the successful translation of the concept into practice."

In summary, gender mainstreaming might be best understood as a continuous process of infusing both the institutional culture and the programmatic and analytical efforts of agencies with gendered perspectives. Gender mainstreaming means taking gender seriously – and taking it into account in all aspects of the workplace and the work products of the institution.

Gender equality prioritised

The understanding that "gender equality" is key to achieving full human potential and development is synergistically linked with institutional mandates of gender

mainstreaming. Gender equality is the foundational goal of gender mainstreaming; key documents in gender mainstreaming, including the Beijing strategy for mainstreaming, are increasingly couched as vehicles for gender equality.

In this conceptual framework, then, a successful mainstreaming program is one in which gender equality becomes a fundamental value that is incorporated into policy choices and institutional practices, including budgeting processes. Mainstreaming thus is seen as a process or a strategy to work toward the goal of gender equality – mainstreaming is not an end in itself. Efforts to achieve gender equality are thus brought into the mainstream decision-making criteria and processes, and are pursued from the centre rather than the margins.

A vast analytical and case study literature underscores the importance of gender equality – and the costs of inequality. By now, understanding of the importance of gender equality to sustainable development has achieved the status of a conventional wisdom. The consensus of UN members – as expressed in series of conferences on population, human rights, environment and women – is that *gender equality is critical to development, and that development is critical to gender equality*. Strong statements of commitment to (and concern about) gender equality are numerous and unequivocal, and include these:

- "Promotion of gender equality and empowerment of women" is Goal Three (of the eight major goals) of the 2000 Millennium Declaration; gender is also to be treated as a "cross-cutting" issue for *all* of the Millennium Goals;
- One of the UNDP's foundational statements, now widely quoted, is that "development, if not engendered is endangered" (1995);
- The OECD "Development Assistance Committee" in the early 1990s rewrote their Gender Guidelines to emphasize an important conceptual shift from viewing women as a "target group" to prioritising

“gender equality as a development objective” in itself.

- The President of the World Bank states clearly “The World Bank is committed to a world free from poverty. And it is clear that efforts to achieve this must address gender inequalities... gender inequalities hinder development... ignoring gender disparities comes at great cost – to people’s well-being and to countries’ abilities to grow sustainably” (2001, p. iii). The World Bank report on gender inequality goes on to say that “gender equality is a core development issue – a development objective in its own right” (2001, p.1).

Indeed, some gender mainstreaming consultants prefer an explicit *equality* approach rather than a mainstreaming one: one consultant said that she viewed her main task as persuading “institutions ensure that everything they do will contribute to gender equality and not, by default, contribute to continued gender inequality.”

1.2 Gender mainstreaming commitments in the UN, UNEP, World Bank, and key environmental NGOs

Practices of operationalizing gender mainstreaming vary widely across institutions and organizations: among other variables, the core mission of an organization influences the character of gender mainstreaming efforts. However, there are broad lessons and parallels particularly pertinent to UNEP and DEWA gleaned in reviewing the efforts of cognate organizations. What follows is a brief review: the literature on gender mainstreaming is too extensive to be rehearsed here. For further reading, the Bibliography in Chapter 7 of this report identifies some of the key sources on gender mainstreaming.

At a system-wide level, the UN Secretariat has provided leadership in advancing gender mainstreaming. Key UN agencies devoted specifically to gender issues – **UNIFEM**,

INSTRAW, **DAW**, and the **Commission on the Status of Women** – provide leadership on substantive gender issues and on processes of gender mainstreaming.

Additionally, gender-mainstreaming efforts have been developed by a wide array of UN agencies, by international organizations, by NGOs, and by national governments. Among the most robust gender mainstreaming efforts (and those most relevant to the mission of DEWA and UNEP) are the organizations listed below. *A Swedish study in 1999 (OECD 1999) identifies some of the key gender and environment work across environmental agencies, and the Bibliography* contains references to key materials from these organizations that describe their gender mainstreaming efforts and experiences.

FAO

In 1993, the FAO developed a coordinated approach to meet the challenge of incorporating socio-economic and gender considerations into development projects and policies – the “Socio-economic and Gender Analysis” (SEAGA) program (www.fao.org/sd/seaga/4_en.htm). FAO developed SEAGA in cooperation with the International Labour Organization (ILO), the World Bank and the United Nations Development Programme (UNDP). Several consultants in conversations with us pointed to SEAGA as an example of a particularly strong and effective gender mainstreaming effort.

SEAGA emphasizes the socio-cultural, economic, demographic, political, institutional and environmental factors that affect the outcome of development initiatives and the linkages between them from a gender perspective. SEAGA examines the linkages at three levels – macro (programmes and policies), intermediate (institutions) and field (communities, households and individuals).

In 2002, the FAO updated its gender commitments with the *FAO Gender and Development Plan of Action 2002-2007*: “In pursuit of FAO’s mission to help build a

food-secure world, it aims at removing the obstacles to women's and men's equal and active participation in, and enjoyment of the benefits from, agricultural and rural development. It emphasizes that a transformed partnership based on equality between women and men is an essential condition for people-centered sustainable agricultural and rural development."

Of particular interest to UNEP, the FAO identifies "natural resources" as a priority area for its gender plan of action: "The preservation of biological diversity, including plant and animal genetic resources is now widely recognized as critical to achieving food security. The rural poor, who have benefited least from modern high-yielding plant varieties and cannot afford external inputs (such as fertilisers, pesticides, high quality feeds, etc.), grow the majority of their crop from seeds that they have selected and stored themselves. Gender-differentiated local knowledge systems play a decisive role in the conservation, management and improvement of genetic resources for food and agriculture."

Also of particular interest to DEWA, the FAO has developed a multi-layered "Global Information and Early Warning System" (GIEWS) on food and agriculture. In the view of one of our consultants, GIEWS is "the best early warning system that integrates gender" yet developed.

UNDP

As an organization, the UNDP has a strong and explicit commitment to gender mainstreaming. UNDP has been in the lead in asserting that gender equality is critical to achieving specific goals such as poverty reduction and sustainable economies. Its organizational statement of gender principle summarizes this commitment: "Making gender equality a reality is a core commitment of UNDP. As a crosscutting issue, gender must be addressed in everything the organization does. Why? Because equality between women and men is just, fair and right. It is a worthy goal in and of itself, one that

lies at the heart of human development and human rights. And because gender inequality is an obstacle to progress, it is a roadblock on the path of human development. When development is not 'engendered' it is 'endangered'."

The UNDP's annual *Human Development Reports* are an important influence in refocusing attention on the human dimensions of development. Within this framework – which includes human rights and social justice – UNDP locates gender equality as clearly fundamental to development. The annual *HDRs* are also key sources for gender-disaggregated social development indicators and statistical arrays. UNDP has taken the lead in developing indicators that reveal global progress (or lack of progress) in gender equality – indicators such as the widely-used "Gender Empowerment Measure" and "Gender Development Index."

World Bank

The World Bank is one of the major knowledge-producing agencies and a key source of data and analysis on gender, particularly on gender in relation to development. Its "genderstats" web portal is one of the key global sources for gender-disaggregated data (devdata.worldbank.org/genderstats/home.asp).

The Bank's organizational commitments to gender have emerged over several decades: the Bank appointed a "Women in Development" (WID) Adviser in 1977 and organized a WID unit in 1986. A major policy commitment to women was issued in 1994 ("The Gender Dimensions of Development"), requiring consideration of gender issues in the design of country programs. The World Bank strategy on gender mainstreaming in itself was endorsed and put into effect in late 2001. The Bank-wide mainstreaming strategy emphasizes working with country governments and other key partners on a country-by-country basis to diagnose key gender issues in each country, and from that to identify priority gender-responsive policy and intervention needs.

The development of "Country Gender Assessments" is the keystone of the Bank's gender mainstreaming approach. This emphasis on developing an empirical basis for country assessments and on developing diagnostic *indicators* on gender may be a particularly important model for UNEP and DEWA – agencies that also produce country-based analyses and work with multiple data-generating partners.

Despite these "on-paper" commitments, internal assessments suggest that the successes of gender mainstreaming within the World Bank are uneven. Even at the basic level of enhancing gender equity within its own operations, the Bank is far behind comparable institutions: in 2002, the Board of Governors of the World Bank was 94.5% men and 5.5% women, and the Board of Directors 91.7% men and 8.3% women (Clark, 2002). Furthermore, there is a massive gap between cutting-edge thinking on gender in the Bank and the way it is mainstreamed across the institution and in the field. In the project work of the Bank, as well as that of many other international institutions, advisors in the field may find resistance to gender mainstreaming from local policymakers. While this may be an obstacle, it should not be an excuse not to proceed – there must be an acknowledgement that taking gender seriously is an intensely political exercise that challenges power relations at all levels from the field up. There is also a tension around the rationale for pursuing gender issues at the Bank and similar organizations. Is the desired outcome greater efficiency in terms of projects which perform better due to the inclusion of women or is it real empowerment which is a political process requiring much greater institutional commitment?

It is worth noting that in 2001 the World Bank also developed an overall "Environmental Strategy" and made a commitment to mainstream environmental considerations throughout its operations. However, in World Bank discussions of these two overarching commitments there are no cross-references to one another, and the Bank's "Environment" website portal has no gender component

(lnweb18.worldbank.org/ESSD/envext.nsf/41ByDocName/environment).

OECD

The OECD has a long and progressive history of foregrounding gender issues, especially through the policies and programs of its "Development Assistance Committee" (DAC). As early as 1983, the OECD adopted "Guiding Principles to Aid Agencies for Supporting the Role of Women in Development." These principles have been updated several times since, and have led to the establishment of a standing "Expert Group" on gender and development.

In 2001, the OECD Secretariat created a post of Gender Coordinator for the organization as a whole to address gender in two areas: mainstreaming gender into the substantive work of the Organization and furthering equal opportunities and gender balance on the staff.

OXFAM

OXFAM was an early leader among NGOs in developing extensive gender mainstreaming commitments; it began its formal engagement with gender issues in 1985, when a specialist Gender and Development Unit (GADU) was established at the UK head office. In 1993, OXFAM adopted and ratified a formal Gender Policy. In 1994, OXFAM produced a 600+ page training manual (Williams, 1994) to guide the development of field-based development programs that fully mainstream gender considerations; through the publications of GADU, OXFAM gained a high-profile image as an international institution committed to gender equality. OXFAM's 1999 review of its long engagement with gender issues (Porter 1999) is a compelling cautionary tale and should be a "must-read" for UNEP's gender mainstreaming effort.

In particular, OXFAM's experience points to the tension between having a separate unit

responsible for taking the lead on gender versus mainstreaming it across the institution. GADU was closed in 1996, partly with the rationale that it had become too isolated from the rest of the institution and was more critical than supportive. However, the closing of GADU diluted OXFAM's organizational commitment to gender equality. Recent assessments point to how OXFAM's gender policy is not fully enforced across the institution and commitment to gender equality goals is more the result of the commitment of individual staff rather than institutional imperatives. Gender experts are too thinly spread across the institution and there is not enough gender training of staff. Moreover, gender has not been firmly integrated into changing management structures and business plans to avoid "policy evaporation". Recent assessments point to the need for a senior management position dedicated to taking the lead on gender.

UNEP

UNEP's commitment to gender mainstreaming is strong and has a long history. In brief review, evidence of *UNEP-wide* commitments to gender mainstreaming include:

- A series of UNEP Governing Council statements of commitment to gender mainstreaming including 17/4 of 21 May 1993, 18/6 of 26 May 1995, 19/7 of 7 February 1997, and 20/9 of 4 February 1999.
- In preparation for the 1995 Beijing conference, UNEP hosted a "four-day International Seminar on Gender and Environment, organized by the United Nations Environment Programme (UNEP) here at its headquarters, ...it ended by urging that policies and programmes reflect gender equality and empowerment as both the means and the goals of sustainable environment and development." (Press Release, April 13, 1995).

- A 1997 report in *UNEP Update from the Executive Director* (3:8) reports that: "On 10 July, the Executive Director participated in the special session of the coordination segment of the Economic and Social Council (ECOSOC) on 'Maintaining a Gender Perspective into all policies and programmes of the United Nations system' in Geneva. ... the Executive Director highlighted the need to foster and encourage the ability of women to contribute to effective environmental management. She delineated the progress UNEP had made in strategically addressing issues related to gender and equity announced at the Fourth World Conference on Women in Beijing in 1995. UNEP's strategy is based on ten specific commitments to meet the global priorities for the advancement of women by the year 2000. Foremost among those commitments are: the need to incorporate women's concerns into UNEP's policies, programmes and projects; adjusting recruitment policies to recognize the special constraints that women face and create a favourable environment for their recruitment; assessing managers' willingness to meet gender criteria in performance appraisals; ensuring participation by women and also ensuring that gender concerns are reflected in policy development work."
- A 1999 Report of the Executive Director of UNEP on the role of women in environment and development.
- The 2004-2005 programme of work reflecting gender as a crosscutting priority in all UNEP's activities.

In recent statements to the UN Interagency Network on Women and Gender Equality (www.un.org/womenwatch/ianwge/gm_facts/), UNEP asserts that it has in place a gender mainstreaming plan that guides its policy, programming and operational procedures – and suggests at the same time that accountability measures are in place. Unfortunately the evidence available to us through this institutional review does not support this conclusion. Indeed, UNEP's "on paper"

commitments are clear, but, as in many organizations, they have been less than fully implemented. Within UNEP, it has primarily been two Divisions (DEWA and Division of Policy Development and Law – DPDL) that have taken concrete steps towards incorporating gender into their work. In collaboration with the Women’s Environment and Development Organization (WEDO), DPDL, for example, recently organized meetings with women environmental activists and scholars and produced a publication on *Women and the Environment* (UNEP 2004). (See Chapter 5 for more on UNEP and gender mainstreaming.)

NGO Environmental Organizations

IUCN

Of all the environmental NGOs, the IUCN stands out for its commitment to and implementation of a specific gender mainstreaming policy. Lorena Aguilar (a central figure in IUCN’s gender programmes) describes the history in this way:

“IUCN’s first efforts to incorporate gender issues began in 1984. However, it did not define this process until 1996, when it became clear that for the Union to promote more equitable societies, the institution itself needed organizational change. During the first World Conservation Congress that same year, the union’s General Assembly called upon the Director General ‘to integrate a gender perspective across the IUCN Program and continue the work to formulate a gender program and policy for the Union’ (IUCN Resolution 1.5).

In 1998, the IUCN Council adopted a Gender Policy Statement and Action Plan. It states that ‘IUCN’s commitment to gender equality and equity is Union wide and it should be an integral part of all policies, programs and projects.’

The same commitment resurfaced at the second World Conservation Congress, held in Amman in 2000. The General Assembly this time approved Resolution 2.28. It requests the

Director General ‘to ensure the mainstreaming of the gender equity perspective in the development and actions of all programmes, projects and initiatives from the Secretariat as well as to put in practice the Gender Policy of IUCN.

Concrete actions followed when IUCN appointed a gender senior advisor at a high level, assigned a budget for the topic, created gender networks of focal points in all the regions, defined responsibilities in relation to the gender policy for all personnel, elaborated criteria for the approval of new proposals, and started the development of specific and practical methodologies for mainstreaming gender into conservation initiatives’ (quoted in WEDO, 2003).

The IUCN has an impressive publications track record in the field of gender and environment – (see www.generoyambiente.org/EN/secciones/subseccion_25_93.html) – and it supports ambitious training programs to bring gender into local environmental and conservation projects.

The Nature Conservancy

The Nature Conservancy, an international NGO, does not have a specific gender mainstreaming policy. However, in its core policy document, “Conservation by Design”, the Nature Conservancy includes gender within the purview of its work: “community conservation” refers to the interaction of conservation and human populations to “build a conservation ethic where people understand that their well-being depends on the health of ecological systems and that economic growth and community development must be compatible with maintaining the health of these systems”(Conservation by Design 1998). The emphasis of the Nature Conservancy on inclusiveness and the involvement of communities in conservation provide a framework for the inclusion of gender. Those who work with conservation recognize the diversity of stakeholders who are linked to the management of protected areas. Gender is

central to this community-based approach, affecting how communities and households are organized and, in turn, how they relate to the environment around them.

Further, gender has been considered throughout the history of the Nature Conservancy's keystone "Parks in Peril" program funded largely by the United States Agency for International Development (USAID). Parks in Peril, the largest program supporting parks in the western hemisphere, aims to secure the survival of some of the most endangered and biologically important areas in Latin America and the Caribbean.

And finally, the Nature Conservancy has formed research and project-based alliances with WIDTECH, a USAID Women in Development technical assistance project, and with MERGE, Managing Ecosystems and Resources with Gender Emphasis, and a collaborative network in Latin America housed at the University of Florida. MERGE has conducted strategic planning with non-governmental organizations in Brazil working with gender; worked together on a case study series on gender, community participation and natural resource management; and planned a regional conference on community conservation, gender and protected areas "From the Andes to the Amazon".

World Wildlife Fund

WWF has a long – although somewhat ambiguous – involvement in gendered environmental analysis. As early as 1993, WWF launched the "Women and Conservation Initiative" to expand women's involvement in conservation through economic improvement, enhanced knowledge and skills, and greater participation in the decision-making of resource management.

Like many environmental organizations, the WWF points out that at the field/operational level, their projects in conservation or biodiversity or ecoregion sustainability "naturally" include working with women as

well as – or even more than – men in affected communities. They make a strong case that at the field level gender is an inevitable and integral variable. However, this is not a global organizational mandate.

The "Conservation Strategies Unit" of the WWF has undertaken several gender initiatives. Among these:

- In 2002 it undertook an ambitious "population and gender review" of its own operations to "examine initiatives undertaken by WWF in seven eco-regions and one project site to determine how effective the integration of population and gender-related interventions into conservation programming has been in advancing progress toward goals or targets for biodiversity conservation." However, we would argue that the population lens is a problematic prism through which to examine gender and conservation issues, since it typically identifies population growth as the primary cause of environmental degradation and thus focuses mainly on women's reproductive roles such as reducing population size through the provision of family planning. When viewed through the population lens, the complexity of human interactions with the environment, both positive and negative, and their gendered dimensions are often missing from the picture.
- A recent publication, "Social Dimensions in a Biological World" presents a case-study review of the ways in which gender has contributed to specific conservation plans and actions in WWF projects around the world (WWF 2002).
- The CSU recently initiated an ambitious program examining the environmental dimensions of HIV/AIDS, within which gender analysis is integral (Oglethorpe 2002; ABCG 2002).

Engendering Eden is a recent multilateral research effort sponsored by the WWF, the IUCN, and several academic institutions and other NGOs, "Engendering Eden," assesses state-of-the-art research on linkages between

gender and “Integrated Conservation and Development Projects” in Asia and Africa (see Flintan 2003).

The **Community Conservation Coalition** (CCC), founded in 1999, is a Washington, D.C.-based forum consisting of diverse organizations interested in the human dimension of biodiversity conservation worldwide. The mission of the CCC is to contribute to the conservation of biological diversity by fostering communication, collaboration, and institutional change within member organizations and their partners concerning the linkages among conservation, population dynamics, health, education, and the economy. The CCC has foregrounded gender as part of its social focus; a 2003 CD-ROM produced by CCC, *Putting Conservation in Context* includes a far-reaching review of key gender and conservation research.

Our research suggests that few other mainstream environmental NGOs have explicit commitments to “gender mainstreaming”; few even bring gender into their work on any basis at all. Some NGOs such as the US-based **Sierra Club** deal with gender through a population lens – which typically is manifested through programs to influence women’s “fertility management” or other reproductive behaviour. A strong environmental justice and feminist advocate, Vernice Miller, put gender on the agenda of the US-based **Natural Resources Defence Council**, but the commitment seems to have recently lagged. The **National Wildlife Federation** has a US-based “capacity-building” program to bring women into leadership positions within affiliate branches.

Beyond these programs, few of the large established NGOs manifest gender consciousness. Amongst NGOs, it has been those groups with a specific feminist agenda that have moved the gender and environment field forward: groups such as Women Environment and Development Organization (WEDO), Grassroots Organizations Operating Together in Sisterhood (GROOTS), the Women and Environment Network (UK), the Women’s Environmental Network (Germany,

LIFE e.V./FrauenUmweltNetz), and the myriad grassroots movements founded by women that focus on gender/ environmental issues, including groups with an international profile such as the Kenyan Green Belt Movement and the Indian Chipko movement.

1.3 Lessons learned: what makes gender mainstreaming succeed and what makes it fail

By now, we have available almost two decades of efforts at gender mainstreaming to assess. Many organizations with explicit gender mainstreaming mandates have recently (or are now) undertaking reviews of the efficacy of those programs.

The overarching conclusion of most assessment reviews of the progress of gender mainstreaming is stark: gender is not satisfactorily mainstreamed in any UN or NGO organization. Discussions with a wide range of consultants for this report underscored this conclusion.

A plethora of review assessments substantiate and document the failures (or at best, the incomplete success) of gender mainstreaming. For example:

- The 2003 UNDP review of national reporting on the Millennium Development Goals concludes that: “gender equality perspectives are not adequately mainstreamed into the MDG [country] reviews” and that gender issues are “ghettoized” (p. 22). This review document goes on to conclude that indicators and data suitable to support the integration of gendered perspectives are in many instances lacking; but, further, that even when gender disaggregated indicators are available, most MDGs do not use them.
- A 1999 OECD assessment of gender mainstreaming across seven agencies doing work related to gender and the environment found that: “in general, the formal integration of gender equality issues in environment or environmentally

sustainable development policies is weak across the agencies surveyed. Several policies are totally 'gender blind' with no references to either gender equality or women. Others have marginal references... currently there is no agency with policies that make clear and explicit links between gender equality and environmental sustainability as complementary and supporting goals for development cooperation" (p. 9). This study further found that in many agencies staff questioned the importance of reflecting gender equality considerations in environmental policy documents.

- The UNDP's assessment of gender mainstreaming in development as a field and within the UNDP organization points to broad failures (UNDP, 2003): "In no area of international development is the gap between stated intentions and operational reality as wide as it is in the promotion of equality between men and women. Gender mainstreaming means identifying gaps through the use of gender-disaggregated data; it involves developing strategies to close those gaps, putting resources into implementing the strategies, monitoring the implementation and holding individuals and institutions accountable for the results. Despite much progress in many areas, the development community is falling short on all these issues" (p. 2).

Components of failure

In all of the assessments of the problems in gender mainstreaming, certain commonalities emerge as key factors contributing to failure. These include:

1. A hostile or indifferent institutional culture characterized by:
 - professional staff not knowledgeable about, actively hostile to, or indifferent to the importance of gender mainstreaming;
 - attitudes that trickle down if managers and directors are indifferent or hostile, gender mainstreaming will not be taken on board;
 - few women in positions of influence or authority within the organization;
 - an overtly sexist or misogynist institutional culture in which there is official tolerance of or inaction on issues of sexual harassment.
2. The "ghettoization" of gender:
 - the assumption that if one person in the organization is officially responsible for "doing gender," then no one else needs to worry about it;
 - the assumption that "gender" only means "women";
 - the assumption that gendered perspectives are relevant only to a limited set of issues, and that those are the issues already identified as "women's issues".
3. The framing of gender mainstreaming as a single and finite target:
 - the classic mistake of assuming that simply increasing the number of women in bureaucracies is sufficient;
 - the assumption that gender mainstreaming is a single, discrete goal that, once achieved, needs little subsequent tending. An overarching myth is that gender mainstreaming can happen overnight; that it is a fixed action that once taken is complete. In addition, there is often a failure to anticipate and prepare for a backlash against it.
4. The inadequacies in indicators, data, and analysis that reveal gendered dimensions of issues or that support gender-disaggregated work:
 - gender-disaggregated data and indicators are uneven, inadequate and poorly developed;
 - where such data do exist, they are often ignored (or the staff is unaware of their availability).

Components of success

The components of success are in many cases the obverse of the failures. Where gender mainstreaming has been most successful, we find these commonalities:

1. An institutional culture open to gender perspectives, and willing to undertake the self-assessment necessary to identify the obstacles and the potential for mainstreaming gender perspectives.

Predictors of success in this realm include:

- a professional staff that is given the resources, the tools and the encouragement to become knowledgeable about gendered issues;
- attitudes that trickle down: if managers and directors are overtly open to gender mainstreaming, and actively encouraging of work towards gender mainstreaming goals, others in the organization will take these issues seriously;
- a workplace culture in which women have achieved parity or near-parity across all job ranks;
- nonetheless, an understanding that increasing the numbers of women is a necessary but not sufficient condition for mainstreaming. Ensuring a staff that is committed to gender mainstreaming is a much more important goal than ensuring a female staff;
- a workplace culture based on respect and dignity for all workers (regardless of job position or rank), and one in which gender-based discrimination (including sexual harassment and sexist language) is explicitly and robustly proscribed including measures to deal with male backlash being firmly in place.

2. Gender mainstreaming as a cross-cutting responsibility:

- gender is often spoken of as a “cross-cutting” issue; gender mainstreaming is most successful when it is also conceptualised as an

institutional “cross-cutting” responsibility;

- an assumption that all members of the work team will take gender into account in their work, even at the same time that some staff members are designated with specific responsibility for gender implementation or review.
3. Gender mainstreaming understood as a continuous, fluid, and evolving responsibility, and the acknowledgement that gender mainstreaming is not a static “target.” Effective gender mainstreaming is an ongoing process. Gender issues themselves evolve and need to be continually renewed. Staff also turns over. The institutional goals, focus and structure can change (such as the processes of decentralization) and gender needs to be taken into account when such changes occur. Consequently, gender mainstreaming is a process that costs money and is long term.
 4. With respect to data, indicators, and analysis there is:
 - careful and consistent use of available gender-sensitive or gender-disaggregated data, indicators and analysis;
 - emphasis on the development of new and extended gender-sensitive data, indicators, and analysis;
 - deployment of suitable resources (including budget commitments, staff time, and staff training) to support the collection of gender sensitive data, indicators and analysis.



Doug Houghton/TopFoto

2

Chapter Two

Gender and Environment: Introduction and Context

In the next chapter (Chapter Three) we discuss four current research trajectories in the field of gender and environment and identify ways that DEWA could play a signal role in their further development. *This* current chapter is intended to provide a broader context and background to frame those particular issues.

The current gender and environment field has emerged through more than three decades of research, analysis, debate, and field-study. It is beyond our capacity to summarize the entirety of this field. Rather, we summarize here some of the key conceptual building blocks of the field.

Two overarching observations provide the foundation for the gender and environment field: first, that **gender mediates environmental encounter, use, knowledge, and assessment;** and, second, that **gender roles, responsibilities, expectations, norms, and the division of labor shape all forms of human relationships to the environment** (among other social axes that also shape environmental encounters). There has been such an accumulation of evidence on these issues that by now it is almost “conventional wisdom” to say that gender differences and inequalities influence the extent and nature of



TopFoto/The Image Works

almost every form of environmental encounter, use, and impact.

More specifically, these broad principles become manifest in a variety of environmental relations and interactions, including: that gender differences are evident in the:

- use and management of natural resources, and unequal relationships in the family, community, and other spheres that mediate women's access to resources;
- knowledge of the environment, knowledge of specific resources, and of environmental problems;
- responsibilities for managing, owning, or stewarding resources, and in rights to resources;
- encounters with the environment, in perceptions of the environment and in perceptions of the nature and severity of environmental problems;
- accountability, stewardship, and action for the environment.

These relationships turn up in the "real world" in such myriad forms as the following.

Institutional analysis is key to understanding gender relations. Institutions such as the household and community provide the rules for tenure, property rights, decision-making processes and control over resources. Usually, these are biased in terms of gender, with women often being disadvantaged. Women's voices tend to be marginalised in male-dominated institutions and decision-making processes. A focus on institutions enables a more in-depth understanding of gender-environment linkages than a focus exclusively on the roles that women and men play. Within different institutions, men and women enjoy different forms of access and control over resources. A woman's access to income and assets may be entirely reliant on her marital status or on other kinship networks. An institution-based analysis of gendered rights can ensure that women's existing rights in non-formal institutions and under customary law (such as women's use rights over forest

resources) are identified and safeguarded or strengthened.

A recent approach to environmental studies draws on feminist research into **the social construction of ideologies of "masculinity" and "femininity" and the ways in which those construct and shape environmental relationships**. For example, in North American consumer culture, marketing of the largest, least fuel-efficient automobiles and trucks depends largely on playing on/to notions of masculinity. Masculinity thus – becomes – or should become – an "issue" in discussions of climate change, pollution, and first-world accountability for fossil fuel use. In cultures where women's mobility (literally) is circumscribed by "traditional" norms of appropriate femininity, women will have more limited environmental resource and livelihood options; femininity, then, should be understood as an issue that shapes the possibility of altering livelihood strategies in times of environmental change or crisis. The analysis of men and masculinities has become an important addition to development studies and practice, based on the argument.

Women's and men's income-generating activities may require specific resources (fuel, water) that produce particular wastes; environmental contamination produces different health hazards for men and women; women may be particularly vulnerable to home-based hazards such as indoor pollution; women's workload in providing resources for the household (water, fuel, food) increases when resources become scarce. If environmental hazards produce illness, men and women have different responsibilities for caring for ill family members. Responses to environmental change vary with age, class, family hierarchy, and gender. Biases in educational and training systems may mean that women are less equipped than their male counterparts to understand, cope with, and anticipate environmental change or resource conditions. A particularly strong emergent theme (see Chapter Three) is the study of gender and environmental disaster – which is premised on the understanding that impacts of disasters are socially constructed. Not only

are they products of social practices, but as Morrow and Enarson cite “The social *experience* of disaster affirms, reflects, disrupts, and otherwise engages gendered social relationships, practices, and institutions. Disasters unfold in these highly gendered social systems.”

One of the cumulative effects of all these gendered relationships is that **perceptions of the environment and of the state of the environment are often shaped by gender.**

This raises an interesting “reliable narrator” conundrum in environmental assessment. Women may have distinctive views on the state of the environment and on identifying changes in the environment. Many of these situationally based (and locally-based) perceptions are not compatible with highly technologized and large-scale environmental change detection regimes. This conflict is another variation on the “two cultures” problem (see 4.2) that has serious implications for conventions of early warning and environmental detection. As a variant on this, we note that public-opinion polling, from around the world and on issues from the local to the global, almost always reveals a significant gender gap – women and men typically do not share the same views on what environmental problems are, how serious they are, or how to solve them. Much more research is needed to unpack the drivers of these differences, but the important lesson is that any single narrative about the environment is likely to be distinctively gendered.

“**Reciprocity**” is another dimension of gendered environmental relationships – that is, while gender shapes environmental relations, environmental factors can shape gender relationships. The privileged access of men to resources often exacerbates inequitable gender relations; in turn, inequitable gender roles shape to which resources women and men have access.

The accumulation of evidence on these dimensions of gendered environmental relations suggests that **tools of environmental analysis (including indicators of**

environmental quality/ distress) and conceptual approaches to environmental assessment and problem solving need to take into account gender differences.

Environmental assessment and problem solving are usually presented as a gender-neutral activity, but evidence from gender-based research points to the necessity of reassessing indicators, information, tools, conceptualisation of problems, and policy approaches.

Some of the early gender-environment literature assumed a simplistic linearity in women’s relationship to the environment: narratives of women as “natural environmentalists” or of women’s “natural” affinity for the earth remain part of the field today, but by and large have been replaced by much more nuanced explorations of the conceptualised and specific mechanisms of complex relationships between women, men, and environments. In 4.3 we caution DEWA against assumptions about simple narratives of women in nature.

DEWA’s mandate as the primary *rapporteur* to the world’s governments about the state of the earth requires that it assume responsibility for the most sophisticated environmental assessments. It is no longer possible, we would argue, to fulfil this mandate effectively without incorporating the analytical insights and empirical evidence of gender in the environment.



3

Chapter Three



Daniel Heuclin / Still Pictures

Key Issues in Gender and Environment: Opportunities and Challenges for DEWA/UNEP

The four issues described briefly in this chapter (water, poverty, security/conflict, and vulnerability/ disaster) represent areas of innovative gendered environmental analysis. They are not the only ones by any means – for example, there is also a considerable and sophisticated body of work on gender and forests. But these four represent areas of work that already are high on the agenda of UNEP and DEWA and that are currently being incorporated into their work. Currently, though, most of the work in these areas conducted by UNEP does not incorporate gendered analysis. In this section, then, we identify some of the most promising research trajectories that could shape gender-sensitive research activities in these fields at DEWA. DEWA and UNEP have a unique command of resources as well as the global prestige to set the global agenda for gendered environmental research – and were they to incorporate gender into their agenda, DEWA would be positioned for global leadership in these fields.

3.1 Water

NGO, governmental, and academic interest has recently turned to developing gendered analyses of water resources, management, and supply issues. Support for the integration



UNEP/TopFoto

of gender into water resource management has come from recent world water forums – in Marrakech 1997, The Hague 2000, and Kyoto 2003. Its current visibility on official UN and member-government agendas is to some extent the result of the International Conference on Water and the Environment held in Dublin in 1992. Principle 3 of the Dublin conference focuses specifically on “the pivotal role of women as providers and users of water and guardians of the living environment,” and recommends the implementation of “positive policies to address women’s specific needs and to equip and empower women to participate in all levels in water resources programmes... in ways defined by them.”

NGO and academic research on the gendered dimensions of water use and management is growing at an accelerating pace. In the social sciences, the understanding that environmental relations are primarily social relations has catalyzed research into key gendered dimensions of water such as: developing water policy and water strategy at national and international levels; gender-sensitive impact studies of water projects; and the gendered nature of water supply, use and informal water management within the context of household economies. It is clear that women and men have very different social locations with respect to water use and management. Political activism around large-scale water projects (such as the Narmada Dam in India) and around issues of the privatisation of water supply (particularly in South Africa, Bolivia, and Ecuador) add a sense of urgency and social engagement to the gender/water agenda: these are high-stakes issues that compel attention in the public policy sector.

In addition to the burgeoning research literature on gender and water identified in the Bibliography, some of the key resources in this field include the following. The UNDP has developed a comprehensive program on gender mainstreaming and water issues, available at www.undp.org/water/genderguide.html. WEDO has developed a thematic focus on women and water (2003a, 2003c), drawing particular attention to the

gender-specific impacts of water privatisation. The OECD has developed “gender tip sheets” that provide information on how to develop gender-sensitive water resource programs and policies. UNEP is already a participating member of the recently formed “Interagency Task Force on Gender and Water.” The international “Gender and Water Alliance” (www.genderandwateralliance.org), funded largely by the UK and Netherlands’ governments, is a clearinghouse for new research, electronic conferencing, and capacity building, and supports pilot programmes in integrating gender into water management. Another UK-based NGO, Wateraid, (www.wateraid.org.uk) incorporates gender analysis throughout its work.

Despite this activity, there are considerable gaps in the gendered understanding of water resource issues. For example:

- There is a considerably larger literature about women’s *domestic* roles related to water than their agricultural or wage-sector productive roles. A burgeoning research field is pushing these boundaries by examining “water for production” (see van Koppen 1999; Bell, 2001). The World Commission on Dams has tried to mainstream gender throughout its analysis with some significant success (see Mehta & Srinivasan, 2000; World Commission on Dams, 2000).
- The gender division of labour around water is a profound cultural and social construct that often lies unexamined. Its “naturalization” (such as the assumption that women are the “natural” water-carriers in rural areas) leads to incomplete and distorted analyses.
- Water management institutions and policies are highly gender-blind. In part this is because water management is dominated by economic and engineering perspectives. This predisposition is also “naturalized” and unexamined.
- Many of the water management indicators remain stubbornly gender-blind; for example, an innovative “water poverty index” (www.nwl.ac.uk/research/WPI)

developed by researchers in the UK in 2002 does not include any gender-disaggregated indicators.

- Field-based findings are available from an astounding array of gender-sensitive case-based field studies and small-scale management projects, but these remain scattered throughout the literature and are mostly unintegrated in any overall framework.

3.2 Gender, poverty, and environment

Interlinkages between poverty and the environmental stress are well documented, although there is considerable disagreement on the causal relationships between the two. Developing and maintaining a triangulated analysis – gender-poverty-environment – is even more challenging.

Nonetheless, the framework for such a triangulated analysis already exists in our understanding of certain gendered relationships such as:

- environmental and livelihood sustainability in rural areas depends on improving the security of land and resource tenure; tenure security is only possible when women have the same options as men;
- land and resource management sustainability can be improved by research, extension, and education activities, but these will only be effective if women are included in the loop as much as men are;
- improved access to credit and financial resources can reduce pressures to degrade resources; such access is highly gender-stratified, and unless this gender imbalance is addressed, such programs will not succeed;
- the urban poor are disproportionately affected by pollution and exposure to environmental ills; this exposure varies with class, race, age, and gender, and in many urban settings women are the most vulnerable to urban environmental hazards;

- housing tenure security helps to improve living conditions for the urban poor and, as in rural areas; tenure patterns are usually gender-distorted;
- water supply and sanitation infrastructure are critical urban poor needs; women and men typically have quite different perceptions of and relationships to water use, supply, management, expertise, ownership, and responsibility;
- gender inequalities, environmental deterioration, and deepening poverty are mutually self-reinforcing; conversely, improvements in any one of the three can leverage improvements in the other two.

One of the problematic aspects of combining poverty, gender, and environmental analysis is that “gender” often disappears or is subsumed into “the social”. In assessments of vulnerability to environmental change and disaster, for example, there is a current trend, reinforced by the Millennium Development Goals, towards identifying “poverty reduction” as the main factor in reducing vulnerability. DEWA’s own *New Way Forward* document states “the best defence against vulnerability [to hazards] is raising the financial and social capital of the world’s poor” (p. 38). This approach can erase gender. Kabeer, for example, warns that “gender may fit into poverty analysis but it is not reducible to it.” Furthermore, she adds, “the conflation with gender and poverty allows issues of gender discrimination and injustice which affect the well-being of women as women to disappear from the agenda.” Leach adds that:

“Issues of rights and resource access and control are now acknowledged, but not necessarily in relation to gender, and rarely through the relational, multi-layered lens which feminist political ecologists and gender analysts of land have seen as important. And gender-blind perspectives on ‘community’ and ‘the poor’ as actors in relation to ecological and global political-economic processes seem to be more prominent than ever.”

The risk of adopting poverty as the primary lens into vulnerability is that it can mask the issues

specific to gender discrimination and the related unequal access to and control over resources. Issues relating to gender inequality, however, are central to the ability of a community or region to cope with and recover from a disaster or environmental change event. Consequently, an approach that combines the insights of an integrated analysis of community livelihoods *and* a gender analysis is necessary to illuminate the real-world dimensions of vulnerability to global environmental change. Kabeer (1997) makes a similar suggestion with regards to poverty studies, recommending a revised entitlements approach to “shift attention away from a static view of poverty –poverty as end-state – to a more dynamic concern with the processes of exclusion, inclusion and marginalisation” (p. 2).

3.3 Gender, security, conflict and environment

The intersection of gender, security and environment is similarly “under-studied.” There are considerable activity and research in teasing out various aspects of the relationships among “gender/conflict/peace building” and a smaller “environment and security/ environment and conflict” literature, but very little linking the two. Bridging this conceptual and empirical gap is particularly urgent: conflict and conflict-resolution increasingly frame civil society, gender relations, *and* environmental relations in most regions of the world, and understanding these interlinkages is vital. “Security” is increasingly foregrounded in UN and especially UNEP agendas.

Gender and Security/Conflict/ Militarism:

The mandates of UN Security Council Resolution 1325 that women be included in post-conflict peace and reconstruction processes have sparked a concerted focus on the gendered repercussions of war/conflict and post-conflict reconstruction. This recent surge of interest draws on prior feminist work on militarism – work that illuminates the gendered underpinnings of militarism (see Enloe 2000). However, environmentalists have been largely absent from both of these conversations, and, conversely, the experts on gender have not

taken much account of the environment. We note, for example, that a UN “Interagency Taskforce on Gender and Security” has convened several meetings; as far as we can tell, UNEP is not represented in this area of activity.

Current intellectual, policy, and humanitarian frameworks on gender and security/conflict revolve around three interlocked concerns: protection, participation and prevention. A particularly good overview of the work and interest in this field is the UNDP/UNIFEM’s recent report on *Women, War, and Peace* (see Rehn and Sirley 2002).

Issues of *protection* have primarily focused on “impact” studies – documenting the myriad ways in which the abuse, hardship, violence, and dislocation of conflict (and the chaos of post-conflict reconstruction) are different for women and men. In conflict and post-conflict situations women need particular protection from *sexual* violence, and much of the most compelling work in the “gender and security” field focuses on identifying and meeting these needs. Accumulating empirical evidence documents the ways in which women experience increased levels of violence during conflict (Moser and Clark 2001; Rehn and Sirley 2002; Strickland and Duvury 2003; Enarson 1997): the disappearance of institutional support structures (such as a lack of secure housing); an absence of civil “policing” and a sense of immunity from repercussions among perpetrators of violence; and an overall climate of increased fear and insecurity. Strickland (2003), from the International Center for Research on Women, makes the argument that conceptions of masculinity and femininity shape “domestic” violence in times of conflict: “Some men who are unable to ‘protect’ their women during a conflict avenge their ‘thwarted masculinity’ by attacking female members of the household” (p.7).

A strong component of the “protection” efforts derives from and contributes to the work of the UNHCR with refugees. Women are displaced in particular ways, and as displaced persons or refugees have particular social, economic,

and sexual vulnerabilities. This is a substantial field of inquiry, and again one to which environmentalists have made very little contribution.

Interest in the gender dynamics of *participation* has been fuelled by Resolution 1325. Much of this work focuses on the ways in which women and men differently approach, understand, and participate in post-conflict reconstruction. For example, in terms of involving women in post-event recovery Moser and Clark (2001) make the argument that conflict, war and violence are gendered processes and events, and that a gendered analysis is necessary in order to build a sustainable peace. She emphasizes the need to recognize women's experiences, not just as refugees and war widows, but also as combatants, so that their specific psychological and material needs are addressed. In many conflict zones, women's networks have been key to peace building, and yet women are still largely excluded from formal peace/reconstruction efforts. In many post-conflict zones, including Angola, Somalia, Mozambique, Guatemala, and East Timor, women have been absolutely central to community rebuilding and peace building efforts, and yet this activity on the ground is often not reflected in official narratives of how conflicts are resolved and how peace is achieved. As Strickland and Duvvury (2003) note: "The power imbalance characteristic of gender relations generates a particularly pernicious effect for women by subordinating their concerns to the reconstruction priorities established by decision-making systems dominated by men and male-determined issues" (p. 20).

In the gender/conflict literature, there is much less work on the gendered dynamics of the *prevention* of conflict. As one consultant remarked to us, the UN and other international actors have generally been reluctant to talk about "preventing" war because this inevitably raises issues of sovereignty and national integrity.

Impact of Conflict on Environment: Very little of the environment/conflict literature is

"gendered." Environmental NGOs typically have avoided taking on controversial issues of militaries and militarism, although a few have focused on the impacts of particular armaments—nuclear weaponry, particularly, and more recently, depleted uranium weaponry. A recent study by the World Wildlife Fund (Shambaug), see references (Oglethorpe and Ham, 2001) provides a good overview of environmental impacts of conflict, and offers a guide for mitigation of some of those impacts, but does not include a gendered analysis of either impacts or mitigation.

In the mid-1990s, the idea of environmentally driven conflict had considerable currency in foreign policy circles, especially in the U.S. Its principal architect, Canadian political scientist Thomas Homer-Dixon, argued that scarcities of renewable resources such as cropland, fresh water and forests, induced in large part by poverty and population pressure, contribute to migration and violent intrastate conflict in the developing world. Although the field has expanded since that time, and now includes scholarship critical of Homer-Dixon's causal models, it largely lacks gender analysis. Women are viewed primarily through their reproductive roles, and male stereotypes, such as the angry young men of the "youth bulge", obscure deeper political and economic causes of both environmental degradation and violence (Hartmann 2001). Problematic neo-Malthusian narratives about population, environment and conflict, now linked to the "war on terror", continue to circulate in international policy circles (such as *The Security Demographic* published by Population Action International in 2003).

Complementary Lessons: Broad insights from the "gender and security" field might be extrapolated to situations involving environmental change; similarly, work on disaster, vulnerability, and environmental-change events (see next section below) might be extrapolated to apply to regions of conflict. For example, Moser and Clark relate experiences of some Latin American countries in building sustainable peace in

post-conflict situations. In studying Colombia, they find that:

“While women find the process of displacement itself more traumatic than men, they show greater flexibility in their adaptation to new environments and in the development of survival strategies. Men tend to expect assistance from formal institutions, and their skills are often not transferable” (p. 32).

This narrative of gender-differentiated responses to displacement points to the importance of adaptive capacity in moments of radical change, and suggests that women might be more self-sustaining in the face of diminished resources than men – largely because they are not as reliant upon the formal economy as men. They may also be less likely to be lured into accepting cash compensation and insist instead on access to land. However, their lack of integration into the formal economy can also have drawbacks. Because their rights are often enshrined in informal and customary relationships, they may bear the brunt of ill-conceived policies more than men. For example, women may not be adequately compensated for the income that they previously gained from common property resources or other resources to which they have no formal title (personal communication with Lyla Mehta).

In terms of community and individual capacity to cope with change, the conflict literature on gender has three main commonalities with the gender and disaster/vulnerability literature, commonalities that suggest particularly productive openings for environmental analysis: both literatures point to the importance of participatory development and gender mainstreaming in post-conflict/disaster planning and recovery; both establish that women experience increased violence during and after conflict/disaster; and both areas of research underscore the ways in which conflict/disaster can serve to “re-enforce” (or reinforce) inequitable gender relations or they can serve to transform them.

In terms of gendered impacts, there appear to be similarities between conflict and natural disaster, although not enough work has been done to develop our understanding of these dynamics. Enarson, for example, documents an increase in violence against women during and after the Red River floods in North America – a similar dynamic as in conflict zones. She argues that disaster relief needs to recognize that battered women are an extremely vulnerable group because their often-tenuous support networks become even more dispersed in periods of crisis. Furthermore, women’s shelters and the like are often neglected during disasters and are not incorporated into disaster planning or post-conflict reconstruction. UNISDR reports an instance in Honduras where an NGO, Puntos de Encuentro, used public education messages throughout post-disaster recovery work in order to reduce violence against women. The message read, “Violence against women is one disaster that men can prevent.” This allowed them to “challenge structural inequalities that undermine community solidarity in the face of disaster” (p. 4).

Much of the literature sees conflict/disaster as having two potential outcomes with regard to gender relations: they can either reinforce existing inequalities or provide an opportunity to address those inequalities. Using disaster/conflict as an opportunity to transform gender relations to move towards a more egalitarian society means that there must be awareness of gender relations and proactive planning that provides support for women in conflict/disaster scenarios. Vinas, Fothergill, and Enarson all document instances where women, in the wake of disaster, take on new and non-traditional roles and emerge as leaders in their communities. With the disruption of social norms, it is sometimes possible for women to move beyond their traditional roles and take on tasks that would normally be considered men’s work, at the same time, building their confidence and redefining femininity. Similarly Strickland (2003) emphasizes the need for peace building initiatives to work on transforming dominant, violent forms of masculine identity to forms more open to negotiation, equality and

cooperation. Disaster and conflict can provide opportunities to transform unequal gender relations into more equal gender relations – an agenda at the heart of any mainstreaming strategy.

*An Agenda for Gender-Integrative
Environmental Work on Conflict and War:*

Our overall assessment is that, despite the current flurry of research on gender and conflict and post-conflict, and despite the parallels that might be drawn with environmental disaster/vulnerability studies, there are enormous gaps in our understanding of the gender-environment-conflict nexus. A gendered environmental research agenda might include issues such as the following.

- The highly gendered driving forces of conflict. Assessment of this remains mostly absent from the environmental literature. Such an analysis would include a consideration of the ways in which ideologies of masculinity and femininity influence or drive things such as the development and deployment of weaponry, behaviour in conflict zones, or ideologies about the desirability of conflict itself (Enloe 2000, Seager 1993).
- The gendered dimensions of environmental change resulting from war and/or the specific tools of warfare. The environmental impacts of war and conflict and of the development and deployment of particular weapons are linked to the gendered ideologies that propel these weapons. Different tools of warfare, and their associated environmental effects, have gendered impacts (Cock 1992, Seager 1993, 1999). We have almost no empirical study of such gender-differentiated impacts at short – medium – and long-term time scales and at different spatial scales from local to regional.
- The gendered ideologies and the gendered impacts of conflict/war strategies that specifically target the environment (or particular environmental resources) as a conflict strategy as well as the (highly gendered) nature of conflicts around control of access to management of resources.
- The gendered environmental toll of “militarism”: the fiscal, political, economic, and social privileging of militaries and military values takes a toll in civil society that is specifically gendered. Similarly militarism has environmental impacts – particularly evident in the appropriation of land and resources by militaries, in the privileging of military “needs” over sound environmental practice, and in the exclusion of militaries from normal environmental surveillance and protection mechanisms. Gender crosscuts these issues too.
- The ways in which gender relations enable and constrain activity patterns during conflict and post-conflict settings. The ways in which gender roles facilitate or constrain capacities for post-conflict recovery and, specifically, post-conflict environmental recovery.
- The extent to which conflicts and wars escalate “domestic” violence against women and are increasingly associated with heightened sexual exploitation of women through prostitution and sex trafficking. Social/economic disruption on this scale also has environmental dimensions that remain entirely understudied. Post-conflict environmental and social reconstruction can be mutually informed by understanding such gendered impacts. Women’s concerns during and after conflict/ disaster are often ignored because of the excuse that aid workers do not have time and resources to deal with a “special” part of the problem. Yet, an increase in women’s vulnerability during such times is not surprising and can be anticipated.
- The disaster preparedness and planning which need to take into account the importance of women’s personal security in times of disaster including, especially, disasters created by conflict.
- The gendered and environmental impacts of post-conflict. The WWF study (2002), for example, suggests that

pressures on the environmental and resource base often accelerate in the immediate post-conflict period, when individuals and governments often “rush for resources.” Disarmament and the demobilization of former combatants must be understood as gender-specific processes – as are the pressures on environments.

- The recognition of gender as a lens for early warning. Gender-sensitive indicators are generally not included in early warning systems designed to anticipate, develop response scenarios for, and (ideally) prevent conflict.

Because of gender-differentiated social and economic roles, women are often positioned to notice particular signs of environmental change or changes in social activities that might provide early warnings of impending conflict; the indicators of potential conflict are often visible primarily in the routines of daily existence, which are largely undetectable by traditional espionage or “surveillance” mechanisms and which are only evident if women’s roles and knowledge are specifically recognized and incorporated.

Not only are women positioned distinctively to offer early warning, but also there are gender-specific indicators that can point to impending conflict. Rehn and Sirleaf (2002, p. 117) note that the stability of a country is often associated with women’s status; gross or escalating violations of women’s rights often indicate political disorder. They go on to identify specific gendered indicators that are often overlooked in early warning systems, including: escalation in propaganda emphasizing hyper-masculinity, sex-specific refugee migrations, engagement of women in a shadow war economy, and increase in female-headed households.

Similarly, women’s networks and women’s social organizing tools often offer distinctive opportunities for non-military preventive action – and also for post-conflict reconstruction.

3.4 Early warning, environmental change, disaster and preparedness; gendered vulnerability to environmental change

Gender, vulnerability, and environmental change:

The connections between gender relations and environmental change and vulnerability have only begun to be explicated. The starting point for thinking about change and disaster through a gendered perspective is the understanding that disasters – or environmental changes that exert sudden or long-term stress – have socially constructed impacts. Not only are they products of social practices, but as Morrow and Enarson add (1998 p. 4), “The social *experience* of disaster affirms, reflects, disrupts, and otherwise engages gendered social relationships, practices, and institutions. Disasters unfold in these highly gendered social systems.”

Moving beyond these basic starting points, the best-developed literature in this field focuses on two areas: “*impacts/vulnerability* – the ways in which men and women might be differently vulnerable to environmental change/ disaster; and *coping* – the gendered ways in which communities and individuals cope with/ adapt to/compensate for such change. Fothergill’s review of over one hundred gender and disaster studies suggests that perspectives, responses, and impacts surrounding disaster events are varied for men and women, and from case to case. Her review reveals patterns confirming that gender is a significant dimension in understanding disasters and that these patterns reflect not only gender differences but also inequalities such as women’s lack of decision-making power and exclusion from community leadership positions.

Much of the work in this field is based on the observation that because women and men have different sets of environmental rights and responsibilities and occupy different locations (sometimes literally) in the social and economic structure, they will experience

environmental change – or disaster – differently (Hannan 2002). For example, physical impacts of global warming – rising sea levels, flooding in low-lying delta areas and increased salt-water intrusion – can jeopardize sustainable livelihood strategies. To the extent that men and women pursue different livelihood strategies (or contribute to collective strategies in different ways), then these impacts will be gender-differentiated. In turn, this will have rebound effects on community and household well-being – for example, food security and family well-being are threatened when the resource base on which women rely to carry out their critical roles to provide food or obtain supplementary incomes is undermined.

Many researchers have found that because of their marginalized status women bear a disproportionately heavy burden of environmental change or disaster. Women also, generally, have unequal capabilities and opportunities for adjustments, rendering them more vulnerable to regional and global environmental perturbations. The livelihoods of rural women, for example, are closely tied to natural resources and, on the whole, are less integrated into market economies than men are, yet women do not have similar access to, or control over, natural resources. Annecke's (2002 p. 210), investigation into gender, climate change, and energy asserts that men are the owners and producers of energy services but that women perform most of the key daily reproductive and productive services "essential for maintaining the predominantly male workforce and enabling them to do their work each day. For a variety of reasons women have little control over or negotiating power in relation to pricing, production or convenience of the energy services they require." Without adequate access to and control over the resources they depend upon, women are more vulnerable to changes in those resources.

Much research has focused on women as victims of disaster. Cutter argues that women and children bear a disproportionate burden of global environmental changes – and will continue to do so in the absence of changes

in gender roles. Dual Doual (1993, p. 1) concurs:

"Women are the first casualties of drought, famine and war. They have to struggle to keep life going in this nightmare world of ruin and desolation. Poverty drives the men folk away to neighbouring countries or to swell the ranks of the urban unemployed, leaving women to cope alone with immense responsibilities. Deprived of traditional forms of support, they need new sources of income to ensure the survival of their families and communities, but illiteracy and lack of training invariably oblige them to seek employment in the informal sector."

Much of the literature that frames women as being a more vulnerable sector of the population argues that this is due to the gender-poverty link. There is ample evidence that the experience of poverty is gendered: women make up the majority of the world's poor and many of their vulnerabilities are due to their poverty. Women are also poor differently than men are poor. Morrow (1999) voices a widely shared assessment that gender effects are generally associated with poverty, and that poor women's vulnerability is accentuated when mixed with race, ethnicity, and old age marginalization. There are particular gendered and classed conditions existing independent of environmental change and disaster that frame the level of vulnerability an individual might experience. Similarly, during change or after disaster, there are particular classed and gendered conditions that frame the degree and quality of impact someone might experience. (This, of course, sometimes provokes a debate about whether poverty is really the key variable, not gender; most researchers conclude that the effects of the two are so intertwined as to be inseparable).

Other researchers, however, caution against assuming a universal level of disadvantage, and urge, instead, a contextualized and situated analysis. Waite for instance, tries to understand the *specific* gendered forms of disadvantage faced by female-headed households in Iraqi Kurdistan (rather than

assuming the universal vulnerability of this group). She concludes that female-headed households and male-headed households have *different* vulnerabilities in type but perhaps not in scale. Female-headed households, for instance, are more vulnerable in terms of household possessions and house ownership assets, and with their ability to use informal social capital to access money, whereas male headed-households are relatively more vulnerable with regard to land and livestock assets, and being more indebted. Waite finds that such differences in gendered access to and control over resources could represent vulnerabilities or resiliencies to change, depending on the nature of the change the community is experiencing. For instance, Waite suggests that women are more resilient to change because they own more livestock, but if the environmental change is a drought that kills livestock but that does not affect the household capital of men, then female livelihood strategies are more vulnerable to drought than are male ones. Cannon (2002), similarly, argues that the loss of livestock is often more detrimental to women because women often keep livestock as a source of income. However, it is not always the case that women are more likely to keep livestock than men. While there are general sets of principles, questions and research methods one can use to understand gender relations in farming systems, one always needs to establish what those relations are in specific contexts to incorporate gender effectively in disaster prevention and mitigation.

Indeed, from the few studies that are available, it is increasingly apparent that gendered vulnerability to environmental change requires a contextualized analysis that situates specific vulnerabilities according to type of environmental change and region – and yet, this sort of closely textured assessment is rarely undertaken.

As a broad operating framework, Cannon (building on Blaike and others 1994) identifies five components of vulnerability: 1) the initial conditions of a person (such as nutrition and mobility), 2) the resilience of his or her

livelihood (how quickly he or she can resume activities that earn money or food), 3) his or her opportunities for self-protection (such as the right type of housing in the right place and adequate knowledge of hazards), 4) his or her access to social protection (institutional support) and 5) his or her access to social capital. A brief review of the ways these factors are “gendered” includes the following observations.

The initial conditions of a person: A growing number of researchers highlight the fact that women in many countries have poorer health status than – men –, which makes them more vulnerable to chronic disease, epidemics and the effects of contaminated water. From a Bangladesh case study, Cannon (2002) attributes this to women having access to worse health care than men. Denton (2002) suggests that poor health is related to the gendered division of labour; as the primary fuel-collectors and cooks, women are exposed to indoor air pollution, and as water collectors they face high exposure to malaria (and other water-borne diseases). Crow and Sultana (2002) and Nelson and others (2001) both attribute poor health to food hierarchies that lead women to having poor nutritional status. Poor health can be exacerbated by water contamination, food scarcity and the physical strife often associated with environmental change/disaster. Bari and Bari suggest that prolonged malnutrition associated with women’s position in the Pakistani household and increased workload associated with drought have particularly negative health effects for women who are pregnant or lactating. Cutter states that environmental toxins cause cancer and disrupt hormonal systems that govern reproduction. Children’s young immune systems and women’s susceptible endocrine systems mean that they are more vulnerable to many environmental toxins than men.

Women are also the primary caregivers in times of disaster and environmental stress (as they are normally). Those they care for – children, the elderly and the sick – are often not as mobile, and require increased care during crisis. In addition, during times of

disaster women will be faced with a *magnified* burden of care giving since illness and injury increase for everyone. The care taking role of women also tends to make them less mobile, and thus less able to move out of harm's way in times of crisis. Other socially enforced restrictions on women's mobility may further exacerbate this problem of women being spatially "anchored".

Reyes (2001) further describes a case in the highlands of Peru during El Niño where discrimination against women, including low access to education, specialist technical assistance, and healthcare as well as little control over the family's productive resources, made women particularly vulnerable to the food insecurity experienced at the time. Roy and Venema (2001, p. 78) similarly report that the "asymmetrical division of labour, rights, and assets" experienced by poor rural women in India "leaves women more vulnerable to – and less able to cope with – the additional stress and deprivation brought about by climate change."

Livelihood Resilience: Environmental crises affect environmentally based livelihoods. Because men and women often have different livelihood activities and possibilities, such changes/disasters will have gendered impacts. An examination of particularly gendered impacts, as well as the ability of a livelihood strategy to recover from or adapt to (resilience) a change helps in an investigation of gendered vulnerability.

One of the most important impacts of environmental change often is on the "time budgets" of women. Bari and Bari, Crow and Sultana, Cannon, Hannan, Stehlik, Lawrence and Grey, Waite, among others, all show that environmental change/disaster (such as water contamination, floods and drought) increase women's domestic burden. Women are often faced with additional work to fetch water and collect fuel as well as increased time needed to care for the sick. Some environmental change, such as drought, increases male out-migration and decreases the availability of agricultural employment, thus leaving women with additional agricultural and household

duties (Bari and Bari 2000, Dual 1993, Reyes 2001). The increased time burden has implications for women's ability to diversify their livelihoods by seeking paid work and to restore their previous livelihoods (such as re-planting fields).

Hannan (2002) reminds us that households with capital (financial, physical, human and social) are in far better positions to recover quickly. This adds to Nelson's and others' observations that the informal economic sector – a predominantly feminized sector – is often the worst hit and the least able to recover as a result of disasters. We might speculate that the informal sector does not recover as quickly from disaster in part because it gets less attention during subsequent aid.

Graham (2001 p. 4) claims "the increasing degree of vulnerability of communities to natural hazards is most notable in low-income developing areas, particularly those with rapidly increasing urbanization." One of the reasons for this might be that the livelihoods in low-income communities of newly urbanizing areas are less diverse, and more reliant on one source of income. In times of disaster, if that income disappears, there is little to replace it.

Enarson has developed guidelines for community assessments of vulnerability. She developed the framework in the Caribbean and it is now being used elsewhere. In the work, women map their risks and vulnerabilities from their own standpoint, for it is they who best understand their livelihoods. Such a participatory initiative meets the twin goals of greater participation of women in planning and preparedness – generating greater awareness amongst women and officials alike – and gaining a better understanding of the different vulnerabilities faced by women and men separately, and in households.

Opportunities for self-protection: Early warning systems are meant to disseminate information to members of the community at risk. Since gender relations are expressed spatially, *where* information is disseminated is as important as *how*. Fordham (2001) argues that we collectively need to move from a culture of

reaction (to crisis) to a culture of prevention – and that a close examination of prevention systems shows how gendered they are. One important factor that disaster mitigation experts often ignore is the extent to which women are located (socially and/or spatially) “out of the loop” of information. For example, the 1991 cyclone in Bangladesh resulted in a disproportionate number of female versus male deaths (71 per 1000 versus 15 per 1000). Not only were the early warnings displayed in public, where women were restricted in their movement and so were not as likely to be informed as men, but researchers found that women delayed leaving their houses much longer in order to avoid the impropriety of being alone in public. Furthermore, women were less likely to know how to swim. Conversely, Nelson and others (2001) remind us that more men than women died in Hurricane Mitch, in part due to the desire to be heroic. Local gender relationships and the construction of masculinity and femininity in different places structure the gendered impacts of a climate event.

Saad, studying gender and disaster management in the Middle East, argues that women need to be better informed of environmental hazards. He blames women’s marginal education and lack of involvement in planning and decision making for their uninformed status. Like many other observers, he recommends that disaster mitigation and prevention programs increase women’s participation in planning, and incorporate education and outreach aimed at women. Similarly, UNISDR describes a situation in Peru in which officials knew of an upcoming ENSO event and only disseminated information to the fishermen, since they were deemed the impacted group. Because women were not told, they did not have the opportunity to adapt, adjust and redistribute risk in their household domain. And yet their livelihood activities were under increased pressure during ENSO because fishing declined in importance for the household.

Access to social capital: Drawing on the gender and development literature, there are

speculative assertions that women have access to, and provide, particular kinds of social capital that are not formally recognized or accounted for in relief efforts. “The role of women in preventive strategies and coping strategies in the aftermath of disasters has often also been overlooked. As a result, many of the important capacity-building initiatives in disaster prevention and management bypass women and the effectiveness of the initiatives are thus significantly weakened”. Fothergill explores women’s roles during the Red River floods in the US and Canada and emphasizes the community role that women play during such disasters. Vina describes how women actively organized to help the community after the Colomina earthquake by creating self-help associations and organizing relief efforts. The women she interviewed claimed that men “waited for help and turned to alcohol, while women helped themselves and turned to Catholicism.” The important point is that women play a different social role in communities before and after a disaster – roles that need to be taken into account and supported in order for preparedness and relief efforts to be effective.

Global warming/ long-term climate change:

An emerging interest within this broader field is in gender and global climate change. The climate change literature – and especially research on gender – reflects a growing acceptance that the impacts of natural disasters, hazards and long-term environmental changes are socially constructed, and thus the emphasis is no longer solely on relief efforts but also on building the capacity necessary to mitigate the impact of such “natural” events. Most of the current literature on gender and climate change focuses on impacts – and reflects the first two of Cannon’s components of vulnerability (preconditions, and livelihood resilience).

Most of the work on vulnerability to long-term climate change is speculative. This is indicative of a young field with few empirical case studies to build upon. Annecke (2002, p. 207) states

that the connection between gender, climate change and energy use is largely conceptual and that “the detail, in many cases, is still to be defined and the gender disaggregated data, which would facilitate such definition, has still to be gathered.”

Several researchers start by assuming that “The effects of climate change are *very likely* to be gendered. It is possible to infer this because of the strong relationship between poverty and vulnerability to environmental change, and the stark fact that women as a group are poorer and less powerful than men” (Skutsch 2002, p. 34). Skutsch goes on to ask whether women have particular roles and responsibilities that are especially prone to the effects of climate change. She concludes “most gender specific characteristics that make people vulnerable to climate change (heavy dependence on local natural resources, lack of alternative income possibilities, responsibility for care of the sick, and so on) are in fact characteristics of women in societies of extreme poverty.”

The locally manifested physical effects of global climate change (such as increased frequency and force of droughts and floods, sea level rise, and changes in rain patterns) affect the ability of people to sustain their livelihoods. Women are particularly vulnerable as a more marginalized group and because of already existing gendered inequalities. Women suffer increased workload, decreased opportunities for livelihood diversification, and adverse health effects. Denton (2002) argues the need for broad-based sustainable development initiatives that give men and women the opportunity to build their capacity, lower their vulnerability and diversify their sources of income. Nelson and others (2001, p. 58) similarly argue that “measures are needed that promote increased resilience of poor peoples’ livelihoods and that tackle gender inequality now, whilst increasing climate change ‘preparedness’ for the future.” Without taking into consideration both the gendered roles and responsibilities with respect to environmental management and the gendered experiences of environmental change, mitigation and relief efforts may

enforce instead of challenge unequal gender relations.

Questions about the *drivers* of climate change – and the ways in which those driving forces are (or may be) gendered – are almost entirely absent from the current gender-climate change research agenda. Some literature on gender and consumption (see for example Grover Hemmati and Flenley 1999, Hynes 1999) comes closest to this research question, but only tangentially so. UNEP identifies “sustainable consumption” as one of its key focus areas, but none of the consumption links on UNEP’s website refer to any of the gender literature.

The literature on gender and energy (for example, Annecke 2001, UNDP 2001a, Woroniuk and Schalkwyk 1998), which might bear directly on questions of climate change, is in itself thin, and often does not make the explicit link to climate change drivers. Roehr (2001) identifies some of the key areas in which research is needed on gender and energy issues, including:

- gender differences in environmental awareness around energy issues
- gender and energy consumption/use
- gender-differentiated impacts of privatization of energy markets
- gendered analysis of policy instruments in the energy sector, including policies on climate change
- development of gender-disaggregated indicators on energy use and saving.

Disaster mitigation/reconstruction/early warning systems/indicators:

One of the key areas of research and policy activity is in developing “early warning” systems for identifying impending environmental change or disaster. Early warning and assessment, done effectively, will decrease the loss of life and livelihood due to environmental change. This requires decreasing the vulnerability of communities and increasing their capacity to cope with change. Clearly, given the evidence of gender-differentiated exposure to environmental change, it is

imperative that early warning and assessment, disaster mitigation and prevention strategies incorporate gender into their planning and implementation. The United Nations International Strategy for Disaster Reduction states that "disaster-reduction policies and measures need to be implemented with a two-fold aim: to enable societies to be resilient to natural hazards, while ensuring that development efforts decrease the vulnerability to these hazards" (UNISDR 2002, p. 1). A recent UNISDR report argues that gender analysis is central to these goals and that gender relations need to be taken into consideration at all stages of assessment, planning, warning and relief – an argument consistent with broad-based international agreement that gender equality is a pre-condition for sustainable development.


De Waal and Whiteside's recent work (2003) draws on famine analysis to illuminate the impact of HIV/AIDS on communities. They point out that HIV/AIDS renders communities as a whole increasingly vulnerable to hazards and shocks. As younger women – traditionally the main caregivers in society – die, the burden of care increases beyond the coping capacity of communities and families to the point that communities and families as a whole begin to sink into states of collective pathology. This weakened social fabric means that families cannot recover previous levels of social functioning, and may even resort to survival strategies that imperil them – and the environment – still further. Looking at women's agricultural labour, for example, often shows the first signs of HIV/AIDS community disruption – for example, in Malawi, Mozambique, Zambia and Zimbabwe a progressive increase in cassava production (less labour-intensive) as a shift from the staple-food maize production (more labour-intensive) to compensate for the labour lost through HIV/AIDS.

Gender equality is also a necessary precondition for recovery and rebound following disaster. Gender-biased attitudes and stereotypes often complicate and extend women's recovery, inhibiting, for example, some women from seeking care for physical and mental trauma experienced in disasters

(United Nations Divisions for the Advancement of Women [DAW] 2001). Morrow (1999) recognizes that women's domestic responsibilities and status make it difficult to get to relief and assistance sites. "Responding agencies operate on the assumption that the first person applying for assistance from a household, such as a more mobile man, will share it with everyone living there. Unfortunately, there are many examples of misuse by applicants of disaster resources intended for the entire household" (pp. 9-10). Khonder (1996) underlines that in the Bangladesh flood in 1992, the majority of women did not go to relief centres because of cultural and religious values, noting that: "In a situation of poverty and scarcity women suffer most in the traditional society of Bangladesh. The sanctification of Motherhood, self-sacrifice, and obedience to the husband as head of the family leads to women putting their own interests last always" (pp. 289-90).

Fordham (personal communication) emphasizes the lack of research directed at the early warning/environment/gender nexus; only focused research will help to clarify the gendered nature of environmental change. Fordham and UNISDR (2002) both underscore the importance of developing sex-disaggregated data relevant to early warning climate assessments – which are currently not being collected. Khonder extends this point by highlighting the problem of the ubiquitous aggregated "household" level of analysis: "While the uneven impact of disasters along class lines is very obvious, the unevenness relative to gender is often very subtle. It is not easy to determine the unevenness of flood impact along gender lines because most studies, as well as administrators in charge of relief distribution, take the household as their unit" (Khonder 1996, p. 287).

The SEAGA program of the FAO has developed gender guidelines for emergency preparedness, as have several disaster-relief NGOs including OXFAM. An international "Gender and Disaster Network" (http://online.northumbria.ac.uk/geography_research/gdn/) is developing the state of knowledge in this field. Among the



barriers to incorporating gender into disaster planning, Fordham (2001) and others point out that the field of disaster management is highly masculinized which typically results in the actions and knowledge of women being marginalized, unrecognized and undervalued. Women are still poorly represented in planning and decision-making processes in disaster mitigation and protection planning (United Nations Division for the Advancement of Women 2001). Gender mainstreaming in the institutional structure of disaster management might thus be a prior task for gender mainstreaming in the broader research arena of environmental vulnerability.



4

Chapter Four

Challenges and Cautions in Developing a Gender Focus in DEWA's Work

In this chapter we identify five key conceptual issues – and cautionary – notes – that might guide DEWA and UNEP in developing a sound gender and environment research trajectory. The first two are broad conceptual concerns; the following three relate more directly to issues of research design and approach.

4.1 Keeping gender on the agenda in the large frame of analysis in the face of competing mandates:

As DEWA and UNEP take on board new mandates, particularly the mandate of poverty-reduction, researchers might bear in mind that a concerted effort will be required to keep gender as a focus.

In the view of many gender-mainstreaming experts, gender is slipping from the UN spotlight. Critics point to three recent developments that suggest this: the ascendancy of the Millennium Development Goals, the shift to poverty-capability assessments, and the platform of the recent World Summit on Sustainable Development.

Millennium Development Goals: The Beijing platform for action had a very good recipe for



ImageWorks/TopFoto

mainstreaming, but since then the focus on the Millennium Development Goals has trumped it. MDGs have been good in unifying approaches across development agencies but there is only one goal relating to women (Goal 3) which has to do with women's empowerment, and only one gender indicator is mandated which is women in education. The MDG focus has, thus, narrowed the larger focus when it comes to women. The UNDP (2003) assessment of gender mainstreaming points specifically to failings in the Millennium Development Goals: that gender is not specifically identified in targets or indicators for achieving the Goals, and that in the absence of this specification, gender is easily overlooked.

Poverty-Capacity Focus: Similarly, the downward trend in gender focus that many observers detect might also be attributed to a UN system-wide shift from rights-based approaches (that are amenable to gender analysis) to poverty-based approaches that are less amenable. A poverty-capability focus is essential and powerful, but unless gender is specified as a lens of analysis, gender disappears. For example, standard poverty measures such as "household income" mask gender differences in agency and power within households. Analysis of the linkages between poverty and environment similarly must be *specifically* gendered (see Chapter Three). Similarly, focusing on livelihood, capability and entitlement approaches to sustainable environmental management can undermine gender. Theoretically, such approaches *can* include gender as a key factor but typically do not.

WSSD commitments: A growing focus on explicating the links between environment/environmental management and gender marked the UN conferences of the 1990s. In "Agenda 21" (the Rio Declaration, 1992), in the Copenhagen Declaration (1995), and in the Beijing Platform for Action (1995), the importance of a gender-environment focus was fore grounded. However, many observers note that this focus was strikingly missing from the WSSD (Johannesburg) forum in 2002. In the WSSD "Plan of Implementation," sections on

globalisation, energy, capacity building, and science and technology fail to mention the central role of women; consideration of gender is limited to issues of education and health. At Rio, there was considerable talk about women and the environment both in policy and activist circles whereas in Johannesburg the same activist groups were using their platform to make bigger arguments about social justice and the environment. Gender is a useful way into understanding social differentiation more generally and it is always crosscut by other differences. When such a clear axis of difference is abandoned as the primary means of understanding, people often start thinking about "community" which offers an opportunity (but not a necessary commitment) to think about gender relations. More typically, such work is gender-blind.

4.2 The challenge of building bridges across the "two cultures"

Much of the work of environmental analysis – and much of the work of DEWA – is framed by a technical and scientific paradigm and a reliance on quantitative/biophysical data. Much of the work on gender and environment, on the other hand, is framed by a social science and humanistic approach marked by a reliance on qualitative data, case study narratives, and personal-scale experiences. Merging these two paradigms is a challenge.

One part of this challenge is simply to convince technical experts that gender matters. One consultant remarked that her experiences at various "Early Warning" conferences drove home the point "that just mainstreaming 'the social' within environmental work is difficult, never mind gender." Unease about introducing gender into a science-based paradigm is deepened by the sense of urgency that motivates most environmental analysts. Many people in the environmental field (rightly) see issues such as climate change or loss of biodiversity as urgent, first-order global problems. Bringing a gender perspective into the discussion is thus

often dismissed as trivial – or at least not essential to first-order, urgent problem solving. It is not unusual for environmentalists to consider that attention to gender diverts energy and time from pressing issues; “like rearranging the chairs on the Titanic,” one environmentalist was recently cited as saying (UNDP 2003, p. 31).

In many ways, this is an enduring intellectual dilemma beyond the scope of DEWA: C.P. Snow’s 1950’s analysis. Of the “Two Cultures” (the sciences and the humanities) remains salient, unresolved, and pressing today. DEWA is not going to bridge this gap alone. Nonetheless, the challenge in introducing gender into environmental work is to make the case that analyses of social power and exclusion strengthen and sharpen environmental analyses. Advocates for gender need to be able to explicate the ways in which our understanding of environmental problems is incomplete and inadequate if we exclude the “social” from assessments of the state of the earth. Scientific experts need to be open-minded enough to consider that a scientific view is a partial one – necessary but not sufficient.

4.3 Avoiding the pull of the ‘essentialized rural woman with a special relationship to nature’ iconography

Researchers who are not immersed in the contemporary internal critiques, contextualized debates, and new research directions in the field of “gender and environment” should be cautioned against drawing on stereotyped representations of women. Although more nuanced and contextualized representations inform the *current* gender and environment literature, there is still considerable momentum to old iconographic images – and none more than the image of the “essentialized earth-nurturing rural woman who has a special connection to nature”. One of our consultants noted especially, for instance, the naturalization of images of women carrying water. Such images exist in a tension because in many

places women *do* have a particular relationship to the environment – and they *do* carry water. The danger is in naturalizing the relationship – and thus blunting curiosity about causality. For example, water management programs in western India largely benefit large irrigators who are usually men, and their practices can draw down local wells used by women. Since no one is disturbed by the image of women carrying water, if they carry it a bit more each day—who is to notice?

As DEWA constructs its gender and environment research trajectory, it will be crucial to draw on and contribute to contextualized counterweights, particularly these understandings:

- not all women are rural. In fact, it is more important than ever to develop knowledge about gender in urban environments, and DEWA is in a particularly strong position to do so;
- not all women are “earth-nurturers”. Women’s relationships to nature, like men’s, are complex and are shaped by social, political, and economic forces that produce complex and sometimes contradictory agency and action;
- women as a group do not have an essentialized “special” connection to nature. Women are often socially *located* differently than men to local environments, and thus may have distinctive or particular relationships to and perceptions of environments, but there is not consequent “special” relationship. If women in particular settings are seen to be closely involved with resources or ecological processes, this needs to be explained – not assumed to be “natural” (Leach 2003).
- the need to “unpack” associations with “women”. Conceptualising “women” as a category is often useful, but can also be misleadingly simplistic. The best work in gender and environment “unpacks” women as a category, understanding environmental interactions in the context of a range of social variables including class, race, and other social power

hierarchies. As we say in our discussion of the GEO and AEO reports, the employment of a gender lens is a way not only to bring women's concerns to the fore, but also to deepen the understanding and treatment of other power relations (such as class, ethnicity, age, rural/urban divides) and to explore the intersections between them. Often, issues of power are obscured through the equalizing language of "stakeholders", "communities," "households," and so on. One of the first things gender analysis can do is to interrogate these categories by asking if there are gendered (and other) differentials in access to power and resources within these ostensibly homogenous categories.

4.4 Interrogating scale and causality

Analytical and fieldwork on gender and environment needs to be scale-flexible. Some of the very best work in this field has been developed from local, community case-study analysis. This kind of fine-grained community study is invaluable – and is exactly the scale of analysis that is missing in "big-picture" environmental analysis. The "heroic" and global scale of much contemporary environmental analysis is exactly the scale at which social differences such as gender become smoothed out and invisible.

However, the opposite is also true. The local-scale focus of much of the gender/environment work often does not illuminate larger processes and "drivers" – which are themselves gendered. The OECD/SIDA (1999) study makes this point: "Although an understanding of the community level is vital, it is important to expand the areas under consideration to include broader spheres of activity such as gender issues in institutions involved in decision-making around environmental issues and resource use, national structures and institutions, and international bodies." In Chapter Three, we identify some of the large-scale "drivers" analyses that need to be addressed.

Because it is at the micro-scale where the bulk of gender and environment work can be found, many environmental practitioners dealing with larger scale issues may be the least aware of gender and environment relationships.

DEWA and UNEP are in a stronger position than most to develop and support analyses along the scale from fine-grained community-based local studies to global-scale interrogations.

4.5 Gender-disaggregated data and indicators

Gendered environmental analysis at all scales, in all regions, and across all topics is hampered by the lack of appropriate data and indicators. All of the consultants whom we talked with in the course of this assessment said that one of the greatest contributions that DEWA could make would be to develop gender-disaggregated databases.

In quick review, the challenge for DEWA is twofold: the first problem is the lack of appropriate gender-disaggregated and gender sensitive data; the other is that DEWA analysts need to be trained to use a gendered lens in analysing non-disaggregated social data and environmental data. However, one of our consultants cautioned that it is generally more productive to model new types of surveys and data sets and use those to suggest what may lie hidden in non-disaggregated data.

Data needs for vulnerability studies

DEWA already uses data on socio-economic issues in order to assess a population's vulnerability to environmental change and its ability to adjust to disaster – but, to date, DEWA treats such data in a gender-aggregated form. Data, which is *currently* used by DEWA on the individual – level – such as health-adjusted life expectancy, percentage of the population in secondary education, percentage of the population that is illiterate, and percentage of the population in primary

education – is all available in gender-disaggregated form. The data collected at the household level, such as percentage of the population in poverty, percentage of the population with freshwater access, and percentage of the population with electricity access, are best analyzed alongside data on female-headed households and female-managed households. In female-managed households men may be temporarily absent due to labour migration. Having such gender-disaggregated socio-economic data allows for the assessment of specifically gendered pre-existing conditions that can help assess potential gendered impacts of environmental change or disaster.

Enarson (2002, p. 6) identifies nineteen gender factors that increase the vulnerability of women to environmental disaster. The list provides a quick review of gendered conditions and experience that should be included in environmental assessments, disaster mitigation and preparedness, and disaster relief planning. Some of these factors can be incorporated through current data collection of DEWA and some may require additional data gathering. They are:

- childbirth- and pregnancy-related health limitations;
- longer life span and increased mobility limitations, chronic illness, disabilities;
- limited reproductive control;
- greater risk of domestic and sexual violence;
- more likely to be sole economic providers;
- lower incomes, more economic dependency, less access to credit;
- fewer land rights and less control over labour;
- more often employed as part-time, “flexible” workers and in free trade zones;
- more responsibility for dependents;
- more dependent on child care centres, schools, clinics, and other public services;
- less access to transportation;
- higher illiteracy rates, lower levels of schooling and training;
- more dependent on water, fuel wood, crops and other natural resources;

- less free time and personal autonomy;
- more often socially isolated;
- less decision-making power in homes and political institutions;
- subject to intersecting vulnerabilities;
- low representation in emergency management organizations and professions;
- less knowledge of how to access emergency assistance or capacity to do so.

Because the initial health conditions of individuals influence their ability to be resilient to environmental change and crises, it is important to gather gender-disaggregated health data. Some literature suggests that women are more likely than men to experience chronic nutritional deficiency, catch water-borne disease and malaria (because of time spent near water bodies) and have asthma (because of cooking in closed spaces with wood). Child disease and mortality are also indicators of environmental stress; for instance, incidences of “blue baby syndrome” indicate high nitrate content in water sources. In industrial and urban environments, breast and other cancer rates can indicate the presence of environmental toxins.

Expert gender/environment scholars and practitioners emphasize the need to develop regionally specific sets of indicators. While there are broad generalizations that can be made with respect to the relationship of gender relations and environment, they manifest themselves quite differently in different regions of the world. This is due to both environmental/ecological variation and cultural/social variation. Consequently, experts recommend developing a framework within which member countries and their regions can develop the sets of indicators most useful to their needs. Gendered landscape and gender resource mapping, including land use and tenure relations, can be useful tools as well.

Social vulnerability indices recognize gender inequality as a key factor. The male-female literacy gap and the percentage of girls in

school in the 0-6 age group are classic indicators of gender inequality.

A key factor in assessing the differential impact of environmental change and disaster is monitoring the gendered nature of resource-based livelihoods. Certain economic sectors may be more susceptible to different kinds of environmental change and disaster. For instance, coastal fisheries may be adversely impacted by sea-level rise, small livestock rearing may experience high losses in floods, and informal agriculture may be disproportionately impacted by drought because scarce water resources will be diverted to formal agricultural activities. Consequently, a gendered assessment would require data showing employment statistics for each economic sector such as percentage of women and men employed in the formal economic sector, and percentage of women and men employed in different economic sectors including agriculture. These indicators would further deepen the ability of DEWA to assess gendered livelihoods and their differential susceptibility to environmental change.

Another useful statistic might be numbers of men and women permanently or temporarily migrating to cities or to other rural areas (to seek work on plantations), for example. Significant increases in such migrations could indicate a decrease in rural labour opportunities, or a degradation of rural environments making them less productive for rural livelihood strategies. Such a relationship, however, could not be confirmed without the collaboration of other qualitative and quantitative data.

There is a considerable literature on the ways in which poor populations are more vulnerable to environmental change and disaster. There is also a considerable literature on the disproportionate burden of poverty borne by women. For these reasons, it is important to collect data on percentage of female-headed households and female-managed households, and on male out-migration. (In regions of male out-migration, women are often left as heads of households for much of

the year.) In general, gender/environment and gender/disaster scholarship has argued that women manage and use significant environmental resources, but that they do not have the same control over and access to such resources as men do. This, on the whole, constricts their ability to respond to environmental change. Such a relationship can be intensified in female-headed and/or female-managed households or after a disaster when men may migrate to acquire work, leaving women to adapt to post-disaster circumstance but without the capacity and privilege of men. Measuring vulnerability and resilience to environmental change requires the gathering of socio-economic data that can help identify situations where families as a whole, and women in particular, are less able to cope with environmental change. These regions are thus at high risk to experience an environmental change as an environmental disaster.

In urban and peri-urban areas, women tend to occupy the more informal economic sectors that suffer the most losses when disaster strikes. Furthermore, research has shown that such sectors suffer most after economic crises whether or not initially caused by environmental change. Consequently, data on informal – economies – for instance, the percentage employed in the informal – sector – may be useful in gendered assessments. In some regions, the more useful indicator may simply be the percentage of women employed (outside of the home). Such an indicator may denote the amount of choice women experience in terms of livelihood diversification.

More specific data, in addition to general indicators, need to be collected to conduct regional vulnerability assessments that can aid in disaster prevention and relief. Collecting such data is consistent with the growing popularity of entitlements, capabilities and livelihoods approaches to sustainable development and assessments of adaptive capacity. While there are growing number of case-studies in the academic literature and from think tanks such as IDS, IISD and IIED, there is not yet a concerted effort to collect

such data with an explicit intention of making it relevant to the task of early warning and assessment. The UN International Strategy for Disaster Reduction concurs that while anecdotal evidence exists regarding the gendered dimension of disaster and environmental change, there has been no systematic collection of gender-disaggregated data.

There is growing use of time budgets to document the livelihood activities by gender. Such budgets help to show how time is allocated between formal and informal activities and amongst household activities. Drastic changes in these budgets can indicate environmental changes. One important indicator, already mentioned in the introduction, is the hours spent daily gathering water. In general, the literature on gender and environmental vulnerability points to an increased demand on women's time in the wake of a disaster. An increase in time spent, probably by women and children, gathering water and fuel and caring for the sick would all be expected. Changes in time budgets can be used as a clear early warning of environmental stress.

Research has shown that in times of stress, domestic violence increases. A regional increase in domestic violence could indicate the degradation of environmental conditions causing household livelihood stress. A regional increase in domestic violence can also emerge post-disaster for similar reasons. Consequently, data on reported domestic violence, despite the recognized limitations of such reporting, may prove helpful for early warning and also for disaster relief planning.

In general gender/environment and gender/disaster literature argues that women's and men's differential control over resources gives rise to differential ability to harness environmental resources in their favour. Because women rely upon natural resources as much, and often more, than men do and because they are often primarily responsible for household well-being, many scholars/practitioners argue that creating equal access to and control over resources is critical for

community well-being, adaptive capacity and environmental governance.

Indicators should try to measure process, change, degrees of control and institutional relationships. For instance, they could relate to women's empowerment: that is, women's capacity to influence and control processes of change in their favour and their involvement in local institutions. To this end, the percentage of women in formal and informal natural resource management institutions and in formal environmental education programs would be a good place to start.

Assessing a country's program on early warning and assessment should include the presence/absence of a gender expert and employment of women. Such data would give a quick indication of the country's commitment to incorporating gender into their program and would help DEWA assess the country's ability to deal with the specifically gendered dimension of disaster and environmental change.

Looking at gender-neutral data through gendered lenses

Some of the indicators already collected, such as indicators on annual average change in forest area, cannot be gendered in their collection but need to be understood through a gendered lens. For example, a decrease in particular kinds of forest cover can indicate more difficulty in obtaining firewood for warmth and cooking – usually a woman's occupation. It can also be a result of increased demand placed on forest resources due to environmental stress in other sectors. It is also important to note that what counts as "forest" is often highly gender-biased so that women's small garden-forests or patch and ribbon forests may not be included in forest statistics, leading to over-estimates of deforestation and fuelwood shortages. Another example is the data types in the matrix dealing with water: changes in floodplain or deltaic wetlands might disturb a particular kind of agriculture, the loss of which may be felt differently amongst men and women.

Such a gendered analysis requires an understanding of regional gender and environment relationships. Regional experts need to know gendered agricultural patterns, such as who is planting what crops or raising which livestock and experts need to have an understanding of gendered responsibility, control and labour relating to environmental resources. Such expertise can help to analyse differential vulnerability to different kinds of disaster and environmental change and can help inform mitigation and relief strategies. An effective gendered analysis requires additional data: for instance, maps of the environmental resources women depend upon and the location of livelihood activities, data on informal and formal economic sectors, and land area of market and subsistence agriculture. Changing percentages of land in each of these land-based economic sectors, some of which are more vulnerable to environmental change, may represent gendered impacts.

New Opportunities for DEWA

In addition to working on issues of specific data collection and management, DEWA has the opportunity to develop new indicator initiatives. The critical need is for a new research initiative that can both set baseline regional assessments of gendered resource use and help identify regionally relevant indicators useful in warning and assessment activities.

DEWA is already using disaggregated data on land tenure. Areas of the world where women do not have legal tenure rights can be considered more vulnerable to environmental shocks or conflict. DEWA might develop this into a more ambitious “gendered livelihood mapping” and “gendered resource mapping” endeavour where, at the regional level, practitioners map “natural” capital and gendered resources – what resources and landscapes for example are used for what by whom. This process could help to identify (regionally significant) key livelihood resources to be tracked. So, for instance, if the mapping revealed a particular tree species that is very

significant for women (perhaps because it provides fodder for their livestock and a vegetable they sell on the market) then how environmental change impacts that tree species could be tracked.

DEWA could be on the leading edge of such efforts by building on well-developed PRA and mapping methodologies and developing a framework that can be used by member countries to begin building such a database (see for example, Feldstein and Jiggins; Thomas-Slayter, Esser and Shields 1993; and Rocheleau, Thomas-Slayter and Edmunds 1995).



J. Schumacher / Still Pictures

5

Chapter Five

DEWA Assessment

5.1 Assessment of the institutional structure and culture of DEWA/ UNEP

The easiest entry point for assessing the state of gender mainstreaming within an organization is to examine the extent to which women are represented in decision-making and policy-formulating positions.

The raw personnel figures on this for UNEP and DEWA reveal a classic gender imbalance:

Proportion of women among all employees in the "general staff":

UNEP:	81%
DEWA:	79%

Proportion of women among all employees in the "professional staff":

UNEP:	42%
DEWA:	30%

In UNEP senior management, only two of seven division directors are women.

Figures as of end January 2004; data provided to Hartmann/Seager by DEWA office, Nairobi.



Charlotte Thege / Still Pictures

The information above seems to be “centralized” in terms of margin alignment; looks “unaligned” in this context.

These figures do not need much explication. (However, a finer-scale analysis would be useful – to determine, for example, the female:male ratio by seniority rank, and job description *within* the larger categories of “professional” and “general” staff. Such data were not available at the time of this report).

Organizationally, UNEP and DEWA are characterized by a not unusual top-heavy male pyramid: women are clustered in the lower-paying, lower-prestige job categories, and are under-represented in the policy, research, and decision-making sectors. To some degree, the representation of women in DEWA and UNEP’s professional staff ranks is “better” than in many UN agencies and better than in many private sector companies. Nonetheless, there is considerable room for improvement in both the general staff and professional staff profiles – and in mobility between these categories. (See Recommendations, Chapter Six).

However, effective gender mainstreaming goes beyond simply ensuring the representation of women in equal numbers – it extends to facilitating a form of participation that enables women as well as men to influence the entire agenda and priorities of the organization. This requires a more challenging assessment of the intangible “institutional culture”.

Our review of DEWA reveals many strengths. The institutional culture of DEWA in many ways seems to be open and unthreatening.

All of the staff we spoke with in Nairobi seemed “open to” gender perspectives and many were genuinely curious about ways to bring these perspectives into their work. Many of DEWA staff feel that they do not have the skills, training or time to take this on as a new workload, but they seem to be more than willing to learn more about the usefulness of bringing gender into their environmental work. They all felt that leadership initiatives set the

tone for the organization as a whole. Most of our informants thought that DEWA had a more amenable, accountable, and open institutional culture than many of the other divisions within UNEP.

These are strengths that could be built on to move forward strongly with a gender mainstreaming plan – confidence in leadership, a willingness among the staff to be open to new ideas, and a broad curiosity about how gendered knowledge might improve the quality of the work DEWA performs.

However, there are also broad areas of institutional intractability that the DEWA and UNEP leadership will need to address:

- Many of the women whom we interviewed at DEWA headquarters felt – in various ways – devalued. They reported examples of organizational and inter-personal dynamics that are, unfortunately, common and familiar patterns in large organizations: many women for example, said that in groups they felt that their voices were not heard; that men more typically were the ones called on in meetings to speak with authority about a subject, or to represent the “expertise” at the meeting; that women’s points were taken seriously only when a male staff member reiterated them (and then that the male staff member was credited with the idea); that women were sometimes put in awkward social/professional roles (being asked by male co-workers, for example, to get coffee); that their efforts were often not publicly acknowledged.
- There is no one within DEWA whose intellectual job is to think about gender. This results in real gaps in coverage (see discussion below of key publications, for example), *and* it also sends a clear message that gender simply is not important to the mission or work of DEWA. This is relatively easy to remedy, and we address ways of doing so in our Recommendations chapter.

- In broad brush, the mission of UNEP as a whole and of DEWA particularly is conceptualized as science-based and technology-driven. “The environment” is still viewed dominantly as a biophysical realm – rather than as a socially framed and inhabited domain. Scientific expertise and approaches are, thus, privileged; perspectives of the social sciences and humanities are represented within DEWA/ UNEP, but are still relegated to a supporting role. This intellectual tilt reinforces the likelihood that men will be brought on board as experts (given the heavily male-biased structure of scientific professions), and it makes the introduction of “social” considerations such as gender all the more difficult. As we discuss in the last section of the Chapter Four, the challenges of introducing gender into a science-based paradigm are magnified by the sense of urgency that motivates environmental work.

5.2 Assessment of the conceptual and programmatic work of DEWA

Successive Executive Directors of UNEP and of DEWA have set a tone of commitment to gender issues through declarations of intent (as described in Chapter One). In 1996, UNEP developed “Guiding Principles for Integrating Gender Into UNEP Activities,” which laid out questions for UNEP staff to consider before undertaking a UNEP project. Despite initiatives such as this, gender remains largely absent from DEWA’s and UNEP’s main work programs and work products.

Unfortunately, this is characteristic of virtually all environmental policy, academic, and activist organizations. As we note in Chapter One, very few of the mainstream environmental NGOs have a gender mainstreaming commitment, and gender is remarkably absent from most environmental analysis. This conclusion is echoed in a 1999 OECD assessment of gender mainstreaming across seven agencies doing work related to

gender and the environment: “in general, the formal integration of gender equality issues in environment or environmentally sustainable development policies is weak across the agencies surveyed. Several policies are totally ‘gender blind’ with no references to either gender equality or women. Others have marginal references... currently there is no agency with policies that make clear and explicit links between gender equality and environmental sustainability as complementary and supporting goals for development cooperation.” This study further found that in many agencies, staff questioned the importance of reflecting gender equality considerations in environmental policy documents.

The same OECD report went on to say that “Agency environment tools rarely include gender equality considerations, except in a general and non-specific fashion. Environmental Impact Analysis...tends to focus on biophysical aspects. Although some agencies have moved to strengthen the social dimensions of these impact assessments, there is little emphasis or explanation of gender-specific implications”. And this assessment found that staff from several of the agencies were divided on whether the absence of gender considerations from EIA guidelines was a weakness.

Against this backdrop then, UNEP and DEWA might be seen to be further ahead on the gender mainstreaming track than its peer cohort – if nothing else, DEWA is at least undertaking this current gender assessment! However, this is faint praise. More importantly, the absence of gender on the environmental agenda means that DEWA is well positioned to take global leadership in this field – if it has the political will to shape a research agenda to do so. DEWA and UNEP could set the pace for environmental NGO, academic, and policy work for the foreseeable future if it chooses to take gender seriously. If DEWA is to make this turn, the place to start is with its two signature documents – the 2002 editions of the Global Environment Outlook (GEO) and the African Environment Outlook (AEO).

5.3 Assessment of gender representation in GEO

In this section we consider how both the GEO and AEO reports could benefit from more gender analysis. We use as sample texts GEO Chapters Two (section on forests), Three and Four, and AEO Chapters Three and Five. This is by no means an exhaustive review – its aim is to show problems and identify points of entry within the text for gendered analysis. Our report as a whole offers conceptual frameworks and lists of resources which could be used to introduce a gender lens into the GEO and AEO processes.

First, several general observations are in order

1. Aside from a few references to women, both reports have very little gender analysis. This is quite problematic given that these reports are important policy documents with wide circulation and are two of UNEP/DEWA's most visible publications. The AEO, in particular, is designed to have an impact on emerging environmental institutions and policy instruments in Africa; lack of attention to gender sends the wrong signal to policymakers.
2. The employment of a gender lens is not only a way to bring women's concerns to the fore, but to deepen the understanding and treatment of other power relations (such as class, ethnicity, age, rural/urban divides) and to explore the intersections between them. Not just in these reports, but in much of international environment and development policy literature, issues of power are obscured through the equalizing language of "stakeholders", "communities," "households," and so on. One of the first things gender analysis can do is to interrogate these categories by asking if there are gendered (and other) differentials in access to power and resources within these ostensibly homogenous categories.
3. By bringing issues of inequality into the discussion, gender analysis can also help challenge entrenched policy narratives that restrict, rather than illuminate, the political economy of environmental degradation and lead to ineffective and misguided policies. For example, both the GEO and AEO reports invoke poverty and population pressure as key drivers of environmental degradation. (For a critique of this degradation narrative, see Hartmann 2002). In this narrative, the undifferentiated poor become both the primary victims and perpetrators of environmental decline. While there may be truth to this narrative in certain times and places, it often serves to deflect attention from powerful actors engaged in environmentally harmful resource extraction, such as logging and mining firms operating under the patronage of corrupt (usually male) government officials. The poor may be the primary losers as environments are degraded, but who are the winners? (See Boyce 2002). Blaming environmental degradation disproportionately on population growth also has a hidden gendered dimension in that it targets women's fertility as the source of the problem.
4. In challenging prevailing narratives, there is always the danger of replacing them with equally simplistic ones. The first images of "women and the environment", for example, drew on stereotypes of women as closer to nature and natural caretakers of the environment (Leach 2003); from there, they became, in the eyes of many policymakers, potential (unpaid) environmental "managers". Still, today, the main images of "women and the environment" are of women collecting water or fuel in a Third World rural environment. As Richard Schroeder notes, the image of the quintessential Third World woman is an African woman carrying a large bundle of firewood on her head. "The wood-gathering icon represents Third World women as Africans, African women as peasants, and peasant women as a single type. There is no geographical detail at either the

localized or macropolitical scales that might serve as an explanation for the plight thus portrayed" (Schroeder 1999, p.6).

This is not to deny the continuing importance of women's reproductive labour but how does one present more complex, multi-faceted, multi-layered views of diverse women's relationships to the environment in both rural and urban areas? One strategy that GEO and AEO might employ is to provide a number of case studies based on the substantial body of scholarly fieldwork that already exists to show that there is no "one-size-fits-all" narrative, and that each situation involves complex power relationships from the household on up to macroeconomic policies at the national and international levels. Case studies can also spark new thinking about what kinds of research and indicators are required to identify and mitigate gendered vulnerabilities to environmental change.

These general points are elucidated further in the following discussion of the selected GEO and AEO chapters.

GEO: Chapter Two, Forests (pp. 90-119)

This section on forests has very few references to gender and other forms of social differentiation. Following are suggestions on how they might be included.

General Framing: Population pressure is invoked numerous times as a driver of deforestation. It is important to specify under what circumstances population growth is implicated in deforestation. Fairhead and Leach (1998, 2000) offer a compelling critique of neo-Malthusian deforestation analyses in West Africa and explore how this approach has biased the collection of forest cover statistics. They point out how population increase is associated in some circumstances with forest cover increase. Neo-Malthusian narratives mask the way population change interacts over time with "diverse institutional and policy arrangements, ways of valuing vegetation at certain times, and dynamic ecologies" (Leach and Fairhead 2000, p.39).

Gender relationships are implicated in these processes (see Leach 1994).

Placing disproportionate blame on population pressure can also mask the role of powerful national and international actors. For example, the World Bank is now involved in discussions with the Democratic Republic of the Congo to open up an area larger than the size of France to commercial logging by foreign firms (Rainforest Foundation 2004). The AEO (Chapter Five) has several more examples in this same vein, but the macroeconomic policy link is not emphasized sufficiently in GEO.

There is also the issue of not seeing the trees for the forest. It would be useful for GEO to point out (as it does in the box on shade-grown coffee on p. 109) that tree cover takes many forms, from what we think of conventionally as large forest tracts to small patches of trees near the homes of peasant families which in many places are planted and tended by women (for example, see Rocheleau, Ross and Morrobel 1996).

Human actors should be more carefully differentiated. Humans are not necessarily bad for forests – they can be both makers and takers of biodiversity and forest stands. On p. 94, under the section on forests and biodiversity, there is the phrase "further exploitation by humans." Which humans? Precisely who is exploiting the forest unsustainably?

Possible places to insert gender analysis:

Forest governance/community forestry:

Joint forest management (JFM) schemes are mentioned in several places (pp. 96, 100, 103). This is an excellent place to introduce gender analysis. Case studies in India have shown how important it is to challenge the homogenous view of community in JFM in terms of gender, class and caste differentials in power over resources. Agarwal (1997) notes that while on the positive side JFM attempts to establish some degree of communal property rights, those rights are predicated on formal

membership in Forest Protection Committees (FPCs) rather than on *citizenship*. In many areas, women are rarely members of the FPCs and even if they are, they do not have a strong voice due to prevailing patriarchal attitudes and family structures. "In the absence of participation in the FPCs, the rules framed for forest protection and use tend to take little account of their [women's] concerns," Agarwal writes. This leads to a number of negative consequences:

- In many cases women have been banned from entering protected areas where they previously collected firewood and other products. As a result, they have to spend longer hours and travel further to collect wood, and some have to rely more on the labor of young daughters, with negative consequences for their schooling.
- Male household heads who are members of the FPCs derive most of the benefit from the sale of forest products; these benefits are not likely to be shared equitably with women and children.
- The exclusion of women from FPCs undermines the efficiency and sustainability of JFM schemes since women may be forced to break the rules in their need for daily supplies of firewood and fodder. Moreover, the schemes do not receive the benefit of women's considerable knowledge of indigenous species.

Sundar (2001) notes how JFM schemes have also led to deepening power imbalances between settled agriculturalists and nomads, and higher castes and lower castes, as well as pitting one village against another in boundary disputes. Sometimes the result is inter-community violence, in which women are often the victims. In addition, because of their need to collect fuel and fodder, women "are often the first to suffer the coercive policing of new conservation efforts, and the first to be turned into 'offenders'" (p. 346).

Perhaps GEO could point out these negative consequences of ignoring gender in JFM, and on a more positive note, offer examples of

gender/class-sensitive projects, which have better outcomes (see Agarwal 1997).

Tree plantations: In discussions of the pros and cons of tree plantations, it would be useful for GEO to ask the question of who are the major beneficiaries of plantations. What are the labor arrangements? How do they impact women? How does species choice impact women's reproductive labor and health? For example, large-scale eucalyptus planting can reduce water supply.

Fuelwood collection and charcoal production:

On p. 100, fuelwood collection and charcoal production are cited as contributing significantly to forest and savannah degradation. Are they really equal in magnitude? This question has a gendered dimension as women are most often the collectors of fuelwood for daily cooking needs. A village study by the Indian Institute of Science found that because cooking fuel is largely composed of branches, twigs and roots, gathered firewood did not contribute in any significant way to deforestation, casting "serious doubts on the widespread belief held by many environmentalists that the firewood demand of the poor is leading to extensive deforestation" (Center for Science and Environment 1982 p.152). Does this vary by region and ecosystem?

Land rights: On p. 93 there is mention of "outgrower" schemes in which communities or small landowners produce trees for sale to private companies. In these schemes, as well as small-scale reforestation efforts in general, lack of attention to the gendered nature of private land rights can have negative results. For example, a study of a rural reforestation project in the Dominican Republic found that like near-landless families, "women face a land tenure barrier when attempting to control the nature and benefits of forestry production." Most of the women in the area lived in households and on land legally controlled by men. Lack of clear tenure rights prevented many women from planting trees on family land; in certain cases when women did plant trees, their husbands cut them down. There were also cases of men planting trees without

consulting their wives and taking over land, such as vegetable gardens, previously farmed by women, thereby reducing the family food supply. Overall, the effect was to make women more vulnerable in terms of control of land (Rocheleau, Ross and Morrobel 1996, pp. 235-238).

In Africa, Rocheleau and Edmunds (1997) identify three different approaches to the complexity of gendered control of forest resources: "differences in men's and women's rights to own land with formal title; differences in the spaces and places in which men and women use trees and forest resources and in which they exercise some control over management; and differences between men's and women's access to trees, forests and their products through several, nested dimensions (that is, gendered space, gendered access to resources within a given space, gendered access to products of a given resource, and gendered access to season or other measure of time)" (p. 1353).

Market Impacts: It is important to point out how market penetration can have a gendered impact in terms of forest use. For example, a study in the Indian Himalayas found that the promotion of cash cropping in the region meant that subsistence crops were being displaced, creating a shortage of agricultural residues needed for animal fodder. This was forcing women to rely more on forest resources to meet this need (Mehta 1996).

Another market impact that needs to be interrogated is the growth of ecotourism in forested areas. *Who* in local communities benefits from these schemes? Are they really win-win situations, or do they lead to deepening gender and class inequalities? Do such schemes deny poor women access to the communal forest resources on which they once depended in exchange for exploitative low-paid jobs in the tourist industry?

GEO Chapter Three: Human Vulnerability to Environmental Change

This chapter presents a number of opportunities for introducing gender analysis of the sort described in 3.4 of this report, "Early Warning, Environmental Change, Disaster and Preparedness: Gendered Vulnerability to Environmental Change." Below are some possibilities:

The section on **Vulnerable Groups** (p. 303) states vulnerability to environment threats and change "is most extreme among the poorest people and disadvantaged groups such as woman and children." The point is made again on the following page that women and children are especially vulnerable. Here, one could utilize the existing literature on gender and vulnerability to explore what are the underlying gender dynamics that increase women's vulnerability, using case studies from different regions as illustrations. One must be mindful, however, of not always portraying women as victims. As one of our consultants noted, in disaster situations it is common to have women represented as passive victims, often crying and in a child-caring role. Few disaster images can be found of active women and professional women responders.

The section on **Health** (p. 306) could do much more to discuss the effects on women's health of declining environmental conditions, looking, for example, at toxic impacts on women's reproductive and endocrine systems. (A gendered analysis could also look at the impacts on men's health, such as increasing rates of sterility caused by environmental toxins). Here there is an excellent opportunity to use gender-disaggregated data in describing the status of poor women's ill-health in many countries. Can we assess if there are gender differences in the global burden of disease attributable to environmental factors? (p. 307).

The section states "most developing countries still lack the resources to deal effectively with public health crises" (p. 307). A gendered analysis would probe further, looking at the underlying reasons that this is so. The de-funding of public health, introduction of user

fees, privatization of services and removal of subsidies on pharmaceuticals were (and in some places continue to be) hallmarks of structural adjustment programs (SAPs). By reducing access to health services and increasing women's caring work for other family members, SAPs have deepened women's vulnerability. By way of a positive example, the section might point to women's organizing efforts against the negative health effects of environmental contamination, with illustrations from both the North and South (for example, the environmental justice movement in the U.S.; women's activism in the Philippines around urban air pollution and toxic contamination from military bases).

In the section on **Economic Losses** (p. 309), one could discuss the extent to which the potential economic losses of non-marketed ecosystem goods and services could disproportionately affect poor women.

The section on **Responding to Human Vulnerability** could benefit from incorporating the literature and insights provided in 3.4 of this report, including the work of other UN agencies, notably the work of the Division for the Advancement of Women for the International Strategy for Disaster Reduction (ISDR). Case studies drawn from the literature could point to the many ways vulnerability is gendered, and how failure to take gender into account has negative outcomes; and conversely, how taking gender into account has positive results.

This is also a place where DEWA/GEO could take the lead in proposing the re-design of early warning systems to take gendered vulnerabilities as well as coping strategies into account. As Fordham (2001) notes, "The traditional emphasis in this field has been placed on "hard") scientific, technical and engineering approaches to the identification and mapping of hazards and hazardous areas, and to the solution of the problems.... Experts (mostly male) dominate this field and little attention is given to the role of NGOs and citizen groups in developing informal warning systems" (p. 4). The types of information obtained from satellite imagery and from

consulting people, including women, who actually live in the affected or potentially affected areas are very different, but both are valid forms of knowledge and should inform each other.

Formal early warning systems not only need this kind of "informal" local knowledge to better predict events, they also need informal community networks to implement preventive measures and get the word out in times of emergency. Thus, engaging in more participatory forms of research at the field level will also strengthen emergency planning and response. Such a development is not likely to occur, however, unless early warning institutions themselves include researchers with gender and social science expertise. At the local level, there must be recognition that not all "stakeholders" (p.315) have equal power or view the situation in the same way. A concerted effort must be made to consult with marginalized groups who understand first-hand the realities of vulnerability.

Two additional points. Beginning the chapter with Rosita Pedro being born in a tree "high above the raging, muddy waters of the Limpopo" (p.302) may have dramatic appeal, but it reinforces gender and African stereotypes. Ending the chapter on the note that "People are less and less the helpless victims of 'acts of God' and more and more the victims of 'acts of man'" (p. 315) is a reductionist view of human and environmental history that does not do service to the preceding material. One also is tempted to ask: "which men?" Who bears the greater share of responsibility?

GEO Chapter Four: Outlook 2002-3

General Comments: Before employing these four scenarios again, it might be useful to convene a representative group (in terms of class, gender and region) of environmental scientists, social scientists, policymakers and activists to consider whether these drivers and scenarios are in fact appropriate ones, and indeed, if this kind of scenario approach is analytically rigorous and useful from a policy

perspective. The time and resources devoted to this section might be better spent in other ways since it is so speculative in nature. For example, we believe a chapter devoted to innovative and best practices (including gender sensitivity) in environmental research, policy and praxis would be very useful and point the way more concretely to a sustainable future. Here, one could give a sense of what is actually happening in the field. For example, one might profile the work of a women's environmental network, movement or NGO in some detail, not as a "puff piece", but as a way to address critical issues.

If GEO is going to continue to use this scenario approach, there are a number of problems that need to be addressed:

1. Once again, the over-emphasis on population growth as a driver of environmental change, poverty, migration and conflict. The first two paragraphs of the Demography section (p. 323) set the neo-Malthusian stage.
2. NGOs versus social movements. In terms of civil society, NGOs are largely represented as the agents of positive change, neglecting the transformative role of social movements, such as women's movements, labour movements, environmental justice movements, and the like. Similarly, in the Governance section (p. 326), human rights and women's rights are placed under the category of individual rights, when in fact many movements to advance these rights have a more collective social justice vision.
3. The neo-liberal view of the state. Even in the Sustainability First scenario, "relatively more of the provision of basic needs comes from groups outside the public sector, both businesses and nongovernmental organizations" (p. 325). Others might argue here, including many concerned about the well-being of poor women, that in fact the state needs to

revive its public welfare functions and that these cannot be left to private agencies.

4. Under Culture (for example, p. 326) adequate attention is not paid to the global rise of religious fundamentalisms and the particular challenges they pose to women's rights. It is also problematic (p. 346) to promote cultural renaissance "rooted in respect for tradition," without specifying to what kind of traditions one is referring.
5. There should be more attention paid to the negative impacts of militarism generally and on women specifically. Here one could draw on the gender, environment and conflict literature presented in 3.3 of this report. Other forms of violence against women also warrant more consideration.
6. Some of the language around migration is alarmist and dehumanizing, for example, "rising floods of migrants" (p. 379), "the stream of people on the move grows into a river of the desperate" (p. 342), and the comparison of resurgent infectious diseases to migrants (p. 342). In general, migration is cast in a negative light in this chapter and types and impacts of migration are not sufficiently differentiated. (One could look, for example, at the positive role of remittances in investments in land improvements and how much migration is temporary in nature and tied to livelihood sustainability.)

Other places where gender analysis could be inserted are:

- | | |
|---------|---|
| p. 330: | As privatization spreads, the gendered effects of shrinking social safety nets. |
| p. 331: | The gendered effects of commercial exploitation and privatization of natural resources such as water. |



- p. 339: The gendered effects of HIV/AIDS.
- p. 358: Gender, land rights, and farming systems in Africa (see below).
- p. 360: The gendered effects of coercive conservation measures.

At the end of the chapter, under "Lessons for the Future," it would be useful to have a lesson which draws more explicit attention to the role of gender inequality (as well as to other social, economic and political inequalities).

5.4 Assessment of gender representation in AEO

AEO Chapter Three: Human Vulnerability to Environmental Change

General Framing: The second paragraph of this chapter (p. 267) unfortunately sets the stage for inadequate recognition of the impact of social, economic and political inequalities on environmental processes. The claim that socio-political issues including "racial segregation, discrimination, colonial and other forms of oppression, and foreign domination" have "virtually been eliminated in the region" unfortunately does not ring true. The chapter as a whole could benefit from more attention to social differentiation and discrimination, including gender roles, as these have a powerful effect on environmental choices and outcomes.

There are several key gender themes that should be integrated into this chapter as well as into Chapter Five. The first involves **gender relationships and rights in regards to land**. In rural Africa both men and women play critical roles in agriculture, forestry, food production, and natural resource management. However, they do not experience natural resource management problems and systems in the same way. This is due to the fact that the socio-economic status of African women determines their access to land and

agricultural technologies. "Sustainable development means taking into account social, economic and environmental issues at the same time, not one at a time" (AEO, p. 299). If the AEO recognizes the interrelations among these different factors, it should acknowledge that women's access to and control over natural resources are constrained by cultural, social, economic, and political factors at the local, national and international levels.

African women contribute labour to the agricultural sector in many ways, but they generally have less land to work and less capital. They lack access to sophisticated and appropriate agricultural technologies. Although rural women are assuming an increasingly prominent role in agriculture, they remain among the most disadvantaged of populations, with divorced women, widows and female-headed households the most vulnerable. There is an imbalance between men and women's ownership rights, division of labour, and income.

There are three major issues to consider in terms of land access and tenure: traditional land tenure systems, private property reform, and state-owned property. Generally, people think that women will be better off if traditional customary laws are replaced by legal or modern property reforms. However, women's access to land is not only constrained by customary laws. The current fashion is to give to women's associations involved in natural resource management access to communal or state-owned land. In many rural areas in Africa, women do market gardening or raise other agricultural crops on their communal land. However, they often do not have the financial means to afford water for irrigation or to buy inputs, and therefore their income-generating activities are restricted.

Today in Africa one must also go beyond the simplistic assumption that men are doing extensive, commercial agriculture and women intensive agriculture for family consumption. War, rural-to-urban migration of men in search of paid employment, and rising mortalities attributed to HIV/AIDS are leading increasingly

to a "feminization of agriculture" in which women assume primary responsibility for both kinds of production, at the same time that they remain disadvantaged in terms of access to resources.

A second crucial theme is the **gendered nature of institutions**. One cannot assume that the institutions that make and execute policy regarding the environment and natural resource management are knowledgeable about or committed to redressing gender inequalities. For example, to what extent are continent-wide organizations such as AMCEN and NEPAD gender-mainstreamed? Are gender concerns sidelined in state bureaucracies; how integrated are Ministries of Women's Affairs in critical issues to do with gender, the environment, and vulnerability? At the local level, farmers' organizations are often male-dominated and inattentive to the needs of women farmers. There are many rural women's organizations in Africa, but they remain invisible at the local, national, and international policy levels. Institutional gender blindness means that women's critical needs for land rights, credit, agricultural inputs, and appropriate technologies for farming and food production go unmet.

A third critical theme is **the impact of conflict on African women**. Women and children are the majority of the population displaced by conflict. According to Dirasse (1999), women account for up to eighty percent of Africa's displaced people. Gender-specific aspects of conflict include: the double burden of women refugees who have to flee their homes and at the same time continue to play their traditional roles as providers of household food security and carers for children, the sick, the injured and elderly; gender-specific reproductive health problems; sexual violence and rape ending in undesired pregnancies; and the difficulty of legalization of refugee status.

Whereas women are the most impacted in conflict situations, they are often left out of peace building and reconstruction processes. As noted by Johal and McKenna (2003): "As steps are taken on the continent to address the difficulties that women face in conflict

situations, and to achieve the objective of increasing women's participation in peace processes, awareness needs to be raised on, firstly, why women are particularly at risk and the challenges they face on the continent, and secondly, what achievements have been made to mainstream gender at decision-making levels of sub-regional organizations." Some serious questions need to be asked: How can women be visible in the peace building process? What can be done to reduce African women's vulnerability before, during, and after conflict situations? How can gender be mainstreamed in peacekeeping operations (Hudson 2000)? How does vulnerability due to conflict intensify women's vulnerability to environmental change? Post-conflict resettlement and rehabilitation efforts are only just beginning to recognize and address specific vulnerabilities encountered by women.

In the following commentary, we note concrete places in the text where (1) there is lack of social differentiation or where the analysis seems problematic; (2) gender issues could be introduced or expanded; and (3) better images provided.

Lack of differentiation and other problematic areas:

- p. 267: Here again (last paragraph) there is reference to "human overuse of land." Which humans? Similarly, under "Disasters" (p. 275) "human mismanagement of environmental resources and processes" is mentioned without specifying an agency.
- p. 268: In the second paragraph, it is stated that "Environmentally unsustainable and inappropriate practices, such as unsuitable agricultural methods, deforestation and water pollution, are the major human-induced causes of vulnerability to environmental change." What are the underlying social, economic



and political drivers of these practices?

p. 270: The box on "Coping capacities and sustainability" states that social equity "suggests that promotion of livelihood opportunities for one group should not foreclose opportunities of other groups." Not all situations are win-win, however; social equity concerns might require that certain groups relinquish some of their wealth and power (such as land tenure reform that redistributes land to poor women farmers).

pp.271, 298: The concept of "environmental refugees" has come under increased scrutiny (see Black 1998); moreover, the cited figure of 25 million environmental refugees was not arrived at in a rigorous fashion. Similarly, the figure of 50 million environmental refugees in Africa by 2060 (Box 3.23, p. 298) seems alarmist rather than scientific.

p. 272: In the first paragraph under "Impacts of Environmental Change" the poor are once again blamed disproportionately (through the effects of rapid population growth and poverty) for environmental degradation, letting more powerful actors off the hook.

p. 273: It is noted in the first paragraph that conservation, through displacement and exclusion, has been devastating for hundreds of thousands of poor Africans. It would be useful for AEO to

give more information about this, and also to suggest ways that positive biodiversity conservation could result without this kind of exclusion.

p. 277: A better title for the "Poverty" section would be "Inequality," which would allow for more in-depth consideration of power relationships. In so many discussions of poverty in both GEO and AEO, the rich seem to be missing. It would be helpful in this chapter to include a box on income distribution over time in the various countries of the region. In general, "inequality" is a much more dynamic category than "poverty."

pp. 281-282: The main model of environmental conflict the AEO employs (that of Thomas Homer-Dixon) has been the subject of many critiques. In Africa, recent scholarship points to the *abundance* of natural resources, especially easily lootable ones, as a driver (and funder) of conflict in the region (see Fairhead 2001, Collier 2000). In fact, it would be useful for the AEO to look at the social and environmental effects of conflict over such resources (for example, diamonds in Sierra Leone and coltan in the Congo) as another dimension of "environmental conflict."

p. 283: While it is important to point out the Congo war's effects on wildlife, there should also be mention of the millions of people who have been killed, especially as the staggering level of casualties has all

but been ignored by the international press.

p. 278:

Table 3.2 would be an excellent place to include gender-disaggregated data on poverty indicators. For example, one source is www.worldbank.org/afr/gender/countryprofile2.htm. Women's lack of land rights and access to credit and inputs should be included in the list of the characteristics of rural poverty.

Possible Places to Insert Gender Analysis:

This section offers numerous places where gender issues could be integrated or highlighted in the discussion.

p. 269: "People, as individuals or as a community, will be at different stages of the vulnerability/security continuum depending on the socio-economic situation of each individual or group." Gender relations could be added to this key consideration.

pp. 279-281:

In the discussion of health, it is critical to introduce more on gender-related vulnerabilities. They are mentioned, but not sufficiently addressed. In Table 3.3 statistics on maternal mortality could be added as could gender-disaggregated statistics on life expectancy.

p. 270: The first paragraph could offer some insights as to why women and children are more adversely affected, and gender inequality could be added to the list of social and economic aspects of vulnerability in the second paragraph.

p. 285:

Introduce analysis of how SAPs – especially reductions in health and other social expenditures – often disproportionately affect women. Also, has the removal of subsidies for agricultural inputs placed these inputs even more out of the reach of women farmers?

pp. 274, 281: In discussions of conflict over land resources, both in colonial times and presently, the gendered nature of land tenure systems needs to be taken into account.

Lack of differentiation and other problematic areas:

p. 274: Here under "Impacts of freshwater mismanagement and pollution" one could discuss how these issues affect women specifically.

pp. 287-290:

The section on food security needs serious gender analysis, including attention to the gender/age dimensions of intrahousehold distribution of food resources and the multiple livelihood strategies of women farmers (Gladwin, Thomas, Anderson and Peterson, 2001). In terms of policy prescriptions, how can it be ensured that women farmers benefit from

p. 277: Introduce gender issues into the first paragraph in terms of smallholder agricultural production and gender issues *within* households and communities.



strategies to increase agricultural output and the provision of alternative forms of livelihood, given their substantial disadvantage in many places? If possible, the data in Table 3.7 should be gender-disaggregated.

p. 290: To what extent has the South African government taken gender considerations into account in its policy of buying land and resettling the landless?

p. 293: Under poverty alleviation, there should be a specific bullet on redressing gender inequalities (also missing from Box 3.17).

p. 293: Integrate gender concerns into the discussion of early warning systems and vulnerability assessment, and Figure 3.3. In general, it would be good to distinguish more clearly the different gendered vulnerabilities associated with diverse environmental hazards. One idea would be to have a box with case study illustrations on gendered vulnerabilities to drought, flood, desertification, and other natural occurrences. Also, positive examples of how women have organized and responded in these situations so they are not universally presented as victims would be appropriate. Here one could also speak more about the impact of HIV/AIDS on rural populations. According to Erich G. Baier (1997): "Although interrelations between the epidemic and overall development have been acknowledged, the

linkages to agriculture have received less attention because the epidemic was perceived as being largely urban... While prime concern was aimed at eastern Africa in assessing the socio-economic impact of HIV/AIDS on rural households and their production systems, little is known about the impact of the epidemic on agriculture and rural societies in West Africa." Clearly, the gender dimension needs to be included in the discussion of the impact of HIV/AIDS in rural areas.

pp. 294-295: As noted in the commentary on GEO, community-based natural resource management often ignores gendered power differentials.

p. 296: Gender issues should be integrated into the discussion of indigenous knowledge systems.

p. 298: Gender needs to be incorporated into this bulleted list, both as its own bullet and as a component of SAPs, land tenure reform, and other factors. Also, the phrase "bring demographic pressures under control" raises concerns in terms of gender. In Africa there is a long history of international donors emphasizing population control programs, targeted at women, at the expense of basic health care services. This is not to argue against the provision of family planning (on the contrary), but family planning delivered as a population control strategy is very different from family planning as a tool to

advance women's autonomy, health and rights. (For a case study of Tanzania, see Richey 1999). Also to speak of demographic pressures, without mentioning the demographic disaster of AIDS in many countries, seems insensitive.

p. 299: It is stated that "Women and children will continue to bear the brunt of environmental change, particularly in the region." By elucidating how in the previous text, this statement would have more validity.

Images:

pp. 267: As mentioned in the GEO commentary, the narrative image of a woman giving birth during a flood disaster is problematic.

p. 271: The caption to this picture of slum dwellings in front of a wealthy house, "Refugees from a degraded agricultural land living in a slum in Nairobi, Kenya," reinforces negative stereotypes of African peasants. A more apt caption might point to the vast gap between rich and poor in Kenya, and how the wealth of one might have something to do with the poverty of another.

In general, this chapter has mainly negative photographs, and there is not a woman to be seen. A few positive examples of women's and/or community agencies would help redress these imbalances. In the context of early warning, a consultants notes, one typically sees pictures of technology and if women are present, it is as receivers of warnings rather than as the initiators. Positive

images of women in these situations are extremely important in order to challenge gender stereotypes.

AEO Chapter Five: Policy Response, Analysis and Action

A key general point to be made here is that the institutions responsible for policy response, analysis and action need to be gender-mainstreamed as noted in the previous section. How such a change might come about would be an interesting area for UNEP to consider in the next edition of AEO. Following are suggestions on the immediate text:

Lack of differentiation and other problematic areas:

p. 367: Table 5.1 presents trends in per capita GDP, but it would be illuminating to know how income distribution has shifted over the same period.

p. 373: Once again, there is the problematic (and unproven) statement that "the underlying cause of much of Africa's widespread poverty is the high rate of population growth," and that poverty is the driver of environmental degradation. Population control is also put forward as a solution. This is another instance of placing disproportionate blame on the poor and on poor women's reproduction. Interestingly, this is somewhat contradicted by the statement at the top of the page that "economic instruments in support of agricultural policy goals...have had the most detrimental effect on the environment." It would be good to elaborate here on



what kinds of economic instruments in support of agriculture might have had a more positive effect on both rural livelihoods and the environment. Missing from the picture is the role of resource extraction by logging and mining interests.

Possible places to insert gender analysis:

p. 377: Under "Better Valuation of Environmental Resources," the statement that the exploitation of the region's wealth has mainly benefited the global community "while Africa's people remain in poverty" leaves out the important linkages between powerful African elites and international corporate and financial interests.

pp. 366-367: Gender issues could be highlighted more strongly in the overview in terms of social capital (women's empowerment is now mentioned but not elaborated) and the distribution of capital.

p. 385: AEO states that African governments "need to attract private sector investment to forestry." What kinds of forestry and on whose terms? In various places in the AEO it has been shown how macroeconomic policies promoting commercial logging have had negative effects on the environment.

p. 368: It would be refreshing to have a statement by an African woman leader in the next edition of AEO. Perhaps there could be more than one: a statement by each of a government leader, an activist and a prominent African scholar all pointing to the need to take gender into account.

p. 390: It is problematic to conclude this chapter and indeed the entire document on the note that poverty is the main cause of environmental degradation.

p. 372: Gender concerns could be included in the section on land in Table 5.3.

p. 374: Under "Promotion of Regional and Sub-Regional Cooperation" gender should be included as part of institutional capacity building.

p. 375: Under "Decentralization of Environmental Management," include women in the planning and management of environmental resources but not in unpaid exploitative roles.

Missing from the analysis in general is a consideration of the role of militaries in degrading the environment. Land mines in war-ravaged areas like Angola are a case in point.

p. 378: Under civil society, stress the important role played by women in NGOs and social movements; here one could point to national and regional women's networks involved in environmental issues.

- p. 381: Include gender concerns in Box 5.4.
- p. 382: Gender warrants more substantive attention in the "Reducing Poverty" section. Perhaps, this should be reframed as "Reducing Inequality."
- p. 385: What is the role of women in situational conservation of crop genetic diversity (presumably quite important in many areas).
- p. 386: Here there should be consideration of the negative effects of water privatization on poor communities and poor women in particular.
- p. 388: Women's NGOs should be explicitly mentioned in the promotion of greater involvement of women in environmental management.
- p. 390: "Redress gender inequalities" should be one of the bulleted points.

Images:

Once again, women are largely missing from the photographs except for the Western ecotourist on the camel (p. 378). On p. 383, one could have had a photograph of women engaged in sustainable agriculture instead. More positive of images of women (and poor people in general) are needed in the report. A gendered visual eye would complement a conceptual one.

6

Chapter Six



WHM Bildarchiv / Still Pictures

Recommendations to DEWA and UNEP

6.1 UN-system wide recommendations

While it might appear to be beyond our brief to address problems that are UN system-wide, we feel that we cannot do justice to our divisional review without mentioning larger systemic practices that hinder the ability to solve problems at the local level.

1. **Gender Focal Points:** The current configuration of the “gender focal point” system of implementing gender mainstreaming is largely ineffective as a stand-alone mechanism for effective gender mainstreaming – this conclusion is widely shared across most critical reviews of the system (for reasons discussed in Chapter One). A recent UNDP assessment (2003) May or September 2003? puts this succinctly: “Although gender focal points have made tremendous contributions to gender mainstreaming and women’s equality, they have done so ‘despite of’ rather than ‘because of’ the support of their respective institutions. Lack of seniority, resources, and management commitment, as well as the multiple tasks assigned to them, hamstringing their efforts” (p. 7); this report summarizes the status of gender focal points as “creative, dedicated, and marginalized”.



UNEP/TopFoto

If the system of designated gender focal points is to be retained, we recommend these structural changes:

- the person designated as the gender focal point must have a background, an expertise, and an interest in gender matters;
- this person must, further, be expected to and be allowed the opportunity to acquire training to understand the gendered dimensions of *the conceptual and programmatic work* of the agency for which s/he is the gender focal point. That is, the core work of the gender focal point is not only to ensure affirmative action or equal representation in the committee work of the agency; being an effective “gender focal point” requires contextualized expertise and interest in the core conceptual and programmatic work of the agency;
- the task of being the gender focal point cannot be simply added on to the designated person’s workload; being the gender focal point must be a key, perhaps sole, job designation;
- resources must be provided to support the work of the gender focal point; we repeat the warning of the Norwegian government (see Chapter One) that gender mainstreaming is neither cheap nor easy;
- many mainstreaming consultants recommend that the gender focal point be a senior-level appointment, and the focal point must be included in the agency’s decision-making process; in principle we agree with this, but we also note the danger that having senior management as gender focal point can be problem for junior staff who may be reluctant to approach him or her. A “multiple-points-of-entry” gender approach might solve this problem.

2a. **Mobility across personnel categories**

In the current UN system there appears to be almost no possibility for employees to jump from the ranks of “general staff” into the “professional staff.” This is extremely demoralizing for individual staff members, but it also poorly serves the UN. “General staff” – many of whom have long tenure in an – agency – are often among the most valuable, knowledgeable, and motivated employees. Many of them undertake training and educational advancement. Such employees should have the opportunity to advance into “professional” positions as part of a normal workplace promotion process.

2b. **Mobility across job grades**

All of the women we spoke within the UN system expressed disaffection and dissatisfaction with the inflexibility of the UN job-promotion system. Within the sclerotic job-promotion bureaucracy of the UN, it seems almost impossible to advance across job-grade ranks while remaining within one’s home agency. The main mechanism to “jump” job ranks seems to require a staff person to apply for a job elsewhere within the UN –system – often in a posting geographically distant. As staff acquire experience and seniority they hit the job-grade ceiling and then face two possibilities: either stay within their position (in a state of increasing dissatisfaction), or uproot themselves and their families to move up the job ranks.

This is a destructive system: it robs agencies of productive, seasoned staff. **This is also a system that disadvantages women.** It is a system that implicitly rests on the assumption that an employee will have a “trailing spouse” who will facilitate a geographically nomadic career trajectory. This is facilitating a household arrangement on which men can rely

much more than women. A substantial academic literature – and a review of personnel experiences – establishes that women are more geographically “anchored” than are men. Thus, to have in place a job-promotion system that *requires* geographic mobility places women at a disadvantage.

6.2 DEWA/UNEP recommendations

(See also previous chapter for specific AEO and GEO recommendations.)

1. That DEWA develop a gender-mainstreaming plan that includes a detailed plan of action, a timetable, specific goals, and accountability measures. Gender issues need to be identified and incorporated into all planning stages and strategic initiatives. *Mechanisms to hold managers accountable for gender mainstreaming need to be developed.*

The basis for such a plan is present in this report. This plan should take into account the experiences of other organizations and the work of key UN agencies on gender (see Chapter One).

Since gender expertise within DEWA is currently thin, development of such a plan might be most efficient if it is contracted outside the agency. The “Resources” section of this report identifies key contributions to the conceptual and “practices review” literature that would most profitably guide the development of DEWA’s gender plan. The authors of this report can provide suggestions of gender experts to develop this plan. Perhaps of interest, the site, <http://www.siyanda.org/index.htm>, lists gender *mainstreaming* consultants (not necessarily environmental consultants); we have not vetted this list and we do not necessarily endorse the individuals listed, but this resource may prove valuable.

2. That DEWA and UNEP move deliberately but quickly to improve the staff ratios of women and men (see Chapter Five for current figures). Item 4, below, directly addresses this issue in more depth.
- 3a. That DEWA and UNEP leadership continue to be vocal and unwavering in their commitment to gender mainstreaming. They also need to be prepared to take strong measures to ensure a workplace environment free from sexism and harassment. The importance of leadership on these issues cannot be overestimated.

Communication of policy objectives and guidance to staff are key for gender mainstreaming effectiveness. Weakly-stated strategies will diminish staff commitment.

- 3b. That DEWA leadership include the staff as a whole in discussions about introducing a gender mandate into their work, and that, as part of this discussion, this current report be circulated to all DEWA staff.
4. That DEWA (and UNEP) cultivate in-house gender expertise; this could be most rapidly accomplished by filling existing and several subsequent staff vacancies with individuals who have specific and deep expertise in gender.

This need not be their only area of expertise, but “gender” expertise should be an explicit and core qualification for several of the next DEWA hires. We say “several” hires because of the danger of isolating and trivializing gender if this expertise is designated solely in the domain of one individual.

We consider it of the utmost importance that DEWA pursue a two-pronged strategy: gender needs to be integrated into everyone’s job AND there also needs to be specific gender advisors or a gender unit and resources devoted to this. The institutional problem with making

gender a “crosscutting” issue is that making gender everyone’s job often means that it becomes no one’s job. Crosscutting initiatives cannot be seen as replacing the need for specific, targeted attention to gender.

We concur with the emerging consensus that the current “gender focal point” system within the UN – is – alone – inadequate to the task of gender mainstreaming. (See Chapter One and UN-wide recommendations above).

5. That UNEP commit time and resources to training all staff – or strategic webs of staff across various – departments – in gender and environment issues. This might be most efficiently achieved by bringing together the staff of several (or all) UNEP divisions for training; in any event, gender and environment training should be coordinated among the divisions at UNEP.

It is not realistic to expect that staff (already facing escalating work demands) will somehow manage to train themselves in this field on their own time. The field of “gender and the environment” is a large one and the analytical framework can seem forbidding to staff members unfamiliar with this field. This training might take various forms: day-long seminars in which staff is given training on specific issues (such as gender and water resources) for example or a series of both broad and topic-targeted training workshops could be built into the daily work of DEWA over the course of several months. Single-topic or one-time training would be insufficient, and a system of ongoing skill-building would need to be implemented.

Targeted training might be done in week-long intensive workshops: for example, gender consultants could be brought in for a week just to work with the GEO team (and/or the AEO team).

DEWA might consider implementing incentive systems encouraging staff to

pay attention to gender issues in their work. Gender awareness could be a factor in reward systems and promotion; conversely, neglecting gender should be framed as an indicator of poor performance. However, this approach has strong potential for backlash and fears of “gender policing”; the success of such a plan would be dependent on the skill of the leadership of each division.

6. That DEWA adopt this simple yardstick of the effectiveness of gender mainstreaming: every staff member should be able to give a “gendered account” of the work he or she is doing. The extent to which he or she is able or unable to do so suggests the extent to which gender mainstreaming is working.
7. That DEWA/UNEP highlight gender issues in its public statements of mission, programs and policies – including on its web sites. It is crucial that UNEP and DEWA are seen to be taking a visible lead in this field.

The absence of women or gender on the websites of both UNEP and DEWA is problematic – and peculiar, given the close level of analysis otherwise presented there. For example, the UNEP website offers a “focus area” on sports and the environment, but gender is invisible; its “consumption and the environment” focus button leads to detailed reports including one on “youth and consumption” – but, again, remarkably, nothing on gender.

8. That UNEP develop a stronger base of in-house information and support resources on gender and the environment.

The library in the UNEP Nairobi facility has strikingly poor coverage of this field; to the extent that UNEP can assist in expanding central library holdings, it should do so.

Staff training in finding and using on-line resources should be a high priority. This is particularly pressing as more and more information is available on-line, and given

the constraints of other resources available at UNEP headquarters.

- 9a. That DEWA institute a standing procedure of internal “gender review” for all work products – and for all phases of work from project planning, to content development for publications, to final sign-off on work products, and incorporate gender issues into all planning stages and strategic initiatives.

As staff become more familiar with gender issues, this will become a less time-consuming and more naturally-incorporated task. We do not recommend using a “check-list” device (as this becomes too often rote and unreflective), but rather encouraging and equipping staff to develop an intellectual discipline of self-checking for gender inclusion and analysis. (We note that recommendations 3, 4, and 5 are preconditions for this recommendation).

- 9b. A serious component of this review should include screening for sexist language. Reflexive use of “man and the environment” language – including time worn phrases such as “man-made disasters” remains entrenched in much environmental research.

10. That DEWA commits to using independent (external) gender-review experts as part of the expert cohort in all cases where publications and work products are sent out for external peer review.

- 10a. To facilitate this gender-review process, DEWA and other units of UNEP should collaborate on identifying a pool of qualified experts who can be called upon for this work. We strongly urge that UNEP/DEWA make more effective use of “local” gender and environment expertise (Eastern Africa, Kenya/Nairobi).

There are many ways to identify such experts. This task could be prioritized in

the development of the gender-mainstreaming plan.

11. That DEWA prioritize the inclusion of gender-disaggregated and gender-sensitive materials in all programmatic areas. In particular, DEWA relies on “upstream” coordinating agencies to supply data (and analysis) for much of its work, including for key publications such as GEO and AEO. DEWA should issue guidelines to these agencies and data-providing organizations requiring that they provide the broadest range of gender-disaggregated and gender-sensitive information available.

12. That DEWA plays an active role in advancing the “toolkit” available for gender and environment work. DEWA could undertake projects that prioritize the *development* of gender-disaggregated data and indicator sets that will support “gender and the environment” analyses.

13. That DEWA actively engages with – and advances – leading intellectual research and researchers within the “gender and environment” field. DEWA can make greater use of partnerships, within the UN system but also outside the UN.

In Chapter Three we identify some of the “emerging issues” in gender and environment research, and in Chapter Four also some of the conceptual obstacles to advancing this field. DEWA has the opportunity to advance knowledge in this field – and to become a center of intellectual excellence – by putting its substantial resources and prestige into developing the state of knowledge in this field. There is any number of entry points for DEWA into this area of activity: DEWA might, for example, organize seminars or conferences on particularly thorny gender and environment issues; DEWA could establish a series of “occasional papers” or monographs on thematically-focused issues; and DEWA could develop

the in-house original-research capacity to address emerging issues in the field.

It would be of great mutual benefit for DEWA to liaise with the environmental NGOs most active in doing gender work and for both DEWA and the Division of Policy Development and Law to share information and contacts and coordinate activities as both seek to integrate gender more fully into their work (see Chapter One).

14. That DEWA actively search out other efforts within the UN system in relevant fields and devise means of strategically allying/ contributing to/ participating in these efforts. For example:
 - a UN "Interagency Taskforce on Gender & Security" is active (see task force list in Appendix 2); UNEP appears not to have a representative to this taskforce. We would recommend that UNEP participate in this taskforce – or if that is logistically difficult, then UNEP should at least be in the information routing loop for this taskforce;
 - there will be meetings and UN system-wide activity around "Beijing Plus 10" assessments in 2005; UNEP should have a representative at these meetings, and be prepared to present a gender-centered environmental work plan to these meetings. The Beijing Platform for Action remains one of the most comprehensive feminist documents on the international policy stage. It is a more effective guide for action than recent agreements such as the Millennium Development Goals.

7

Chapter Seven



Matthews/UNEP / Still Pictures

Resources and Bibliography

7.1 Sources of Gender-Sensitive & Gender-Disaggregated Social and Environmental Data and Indicators

This review is not meant to be a comprehensive or complete review. Rather, it serves to point DEWA researchers in the direction of most immediately available core gender data.

Foundational sources

Standard and comprehensive gender-disaggregated social analysis data are routinely available through the UNDP's annual *Human Development Report*, the occasional publication from the UN, *The World's Women: Trends and Statistics*, and through the annual series published by UNIFEM, *Progress of the World's Women*.

Several UN, multilateral, and NGO agencies publish a steady stream of high-reliability gender-disaggregated data; a regular screening of the publications and research activity of these three agencies, in particular, will yield good data:



Hafimul Schwarzbaach / Still Pictures

- UNFPA
- UNIFEM
- UN Division for the Advancement of Women (DAW)

On-line multi-sector data gateways: (most sites continuously updated).

<http://www.un.org/womenwatch/asp/user/list.asp?ParentID=60> – main UN portal to other data sites: a comprehensive directory of UN statistics and indicators on gender and women.

<http://devdata.worldbank.org/genderstats/home.asp> – World Bank portal to a broad range of gender-disaggregated data.

www.worldbank.org/gender/resources/sectoraltools.htm#sectoralprogram – provides guidance on developing project-specific gender programs.

<http://www.focusintl.com/widnet.htm> – women in development network database on gender indicators.

On-line thematic databases:

<http://www.gstgateway.wigsat.org/data> – gender disaggregated databases for natural resource management.

<http://www.fao.org/gender/en/stats-e.htm> – gender and food security statistics available.

<http://unstats.un.org/unsd/methods/timeuse/index.htm> – time use survey paid.

<http://www.ilo.org/public/english/bureau/stat/> - ILO statistics on economic sectors.

http://www.ihc.fiu/lsbr/Pages/LSBR_CVALW.html – Community Vulnerability Assessments by Local Women.

www.worldbank.org/gender/resources/sectoraltools.htm#sectoralprogram – site includes a “toolkit on gender in water and sanitation”.

<http://www.bridge.ids.ac.uk> – BRIDGE reports online - accessible gender and development information on a wide range of topics to support gender and non-gender specialists in mainstreaming gender.

http://online.northumbria.ac.uk/geography_research/gdn/ – Gender and Disaster Network website, an important resource for researchers and activists working on gender relations in disaster contexts.

<http://www.eldis.org/gender> – Eldis portal to high quality, current research and information on gender and development. Can subscribe to weekly e-bulletin on latest information and news on gender at Eldis from same page.

<http://www.siyanda.org> – Searchable collection of international material on gender and development from a wide range of sources. Materials include tools, manuals, case studies, policy papers and research.

www.cifor.cgiar.org – The Center for International Forestry Research (CIFOR) includes impressive gender and forestry research initiatives.

On-line regional databases:

www.worldbank.org/afr/gender/countryprofile2.htm – gender stats on Africa.

<http://www.unece.org/stats/gender/web> – gender stats for Europe and North America.

Secondary Sources

Enarson, E. 2002. Working with women at risk: practical guidelines for assessing local *disaster risk*. Florida International University, Miami, Florida.

FAO. *Filling the Data Gap: Gender-Sensitive statistics for agricultural development*. 1999. <http://www.fao.org/docrep/x2785e/x2785e00.htm>

- Saith, R and B Harriss-White. 1998. *Gender Sensitivity of Well-Being Indicators*. Discussion Paper No. 95 UNRISD – A comprehensive assessment that might serve as a model for developing gender-sensitive indicators in other fields.
- Seager, Joni. 2003. *The Penguin Atlas of Women in the World*. NY: Penguin.
- ## 7.2 Bibliography: Gender Mainstreaming
- Key works on gender mainstreaming (including implementation and assessment tools):
- Anderson, Mary. 1993. *Focusing on Women: UNIFEM's Experience in Mainstreaming*. UNIFEM.
- Bastia, Tanja. 2000. *Qualitative and Quantitative Indicators for Monitoring and Evaluation of the ILO Gender Mainstreaming Strategy*. ILO.
- Derbyshire, H. 2002, *Mainstreaming: Gender Manual: a Practical Guide for Development Policymakers and Practitioners*, UK: DFID http://www.siyanda.org/docs_gem/index_implementation/genderman.htm
- ECOSOC. 1997. *Report of the Economic and Social Council for 1997 (A/52/3, 18 September, 1997)*.
- Jahan, Rounaq. 1995. *The Elusive Agenda: Mainstreaming Women in Development*. London, Zed.
- Kabeer, Naila. 2003. *Gender Mainstreaming in Poverty Eradication and the Millennium Development Goals*. London: The Commonwealth Secretariat.
- March, Candida; Ines Smyth and Maitrayee Mukhopadhyaya. 1999. *A Guide to Gender-Analysis Frameworks*. Oxford: Oxfam.
- Moser, C., Tornqvist, A., and van Bronkhorst, B. 1998. *Mainstreaming Gender and Development in the World Bank: Progress and Recommendations*. The International Bank for Reconstruction and Development/The World Bank, Washington, D.C. www.wds.worldbank.org/servlet/WDSContentServer/WDSP/IB/2000/02/24/000094946_99030406260119/Rendered/PDF/multi_page.pdf
- OECD/DAC. 1999. *DAC Guidelines for Gender Equality and Women's Empowerment in Development Cooperation*.
- OECD/Development Co-operation Directorate, Working Party on Gender Equality. February 1999. *Reaching the goals in the S-21: Gender equality and environment Volume III*.
- OECD. 2002. *Catching Up on Gender Mainstreaming and Gender Equality: An Action Program for OECD*.
- Office of the Special Adviser on Gender issues & Advancement of Women. 2002. *Gender Mainstreaming: An Overview*. NY: UN.
- Porter, F et al. 1999. *Gender Works: Oxfam Experience in Policy and Practice*. Oxford UK: Oxfam.
- Razavi, S., and Miller, C. 1995, 'Gender mainstreaming: a study of efforts by the UNDP, the World Bank and the ILO to institutionalise gender issues', Occasional Papers, No.4, UNRISD, Geneva [www.unrisd.org/80256B3C005BCCF9/\(httpPublications\)/FC107B64C7577F9280256B67005B6B16?OpenDocument](http://www.unrisd.org/80256B3C005BCCF9/(httpPublications)/FC107B64C7577F9280256B67005B6B16?OpenDocument)
- Schalkwyk, J.; H. Thomas and B. Woroniuk. 1996. *Mainstreaming: A Strategy for*

- Achieving Equality between Women and Men*. Stockholm: SIDA.
- Schalkwyk, J. 1998. *Building Capacity for Gender Mainstreaming: UNDP's Experience*. New York: GDP/UNDP.
- SIDA. 1999. *Making a Difference. Gender Equality in Development Cooperation*. Stockholm: SIDA.
- UN OSAGI. 2003. *UN Gender Mainstreaming: an Overview*, New York: UN <http://www.un.org/womenwatch/osagi/pdf/e65237.pdf>
- UNDP: www.undp.org/gender/tools.htm: provides a comprehensive directory of gender mainstreaming principles, programs, and training institutes for developing gender mainstreaming plans.
- UNDP. May 2003. *Millennium Development Goals: National Reports A Look Through a Gender Lens*. New York.
- UNDP. September 2003. *Transforming the Mainstream: Gender in UNDP*. NY
- UNDP. January 2001. Gender and Development Programme. *Gender Mainstreaming Programme and Project Entry Points*.
- UNDP. Gender and Development Programme. June 2000. *UNDP Learning and Information Pack – Gender Mainstreaming*.
- UNIFEM. 2003. *Progress of the World's Women 2002, Volume Two: Gender Equality and the Millennium Development Goals*. NY.
- Williams, S et al. 1995. *The OXFAM Gender Training Manual*. Oxford, UK: Oxfam.
- World Bank Operations Evaluation Department. 2001. *Integrating Gender in World Bank Assistance*. Report 23035. Washington, DC: World Bank.
- World Bank. 2002. *Integrating Gender into the World Bank's Work: A Strategy for Action*. Washington, DC: World Bank.
- World Bank. Operations Evaluation Department. *The Gender Dimension of Bank Assistance*. Report 23119. Washington DC: World Bank.
- World Bank. 2003. *Implementation of the gender mainstreaming strategy: First annual monitoring report, FY02*. Washington, DC: World Bank.
- World Bank. Gender & Development Group. 2003. *Gender Equality and the Millennium Development Goals*. Washington, DC: World Bank.

7.3 Bibliography: Gender and Environment

Key Works on gender & environment and related issues:

- ABCG. 2002. *HIV/AIDS and Natural Resource Management Linkages*. Workshop Proceedings, Nairobi 2002. Africa Biodiversity Collaborative Group.
- Adebayo, Yinka. 1999. "An Analysis of Environmental Emergencies, the African Crises and Aspects of Energy Issues." *African Journal of International Affairs and Development*. Volume 4 #2, pp. 116-143.
- Agarwal, Bina. 1997. "Re-sounding the Alert: Gender, Resources and Community Action." *World Development* 25 (1): 1373-1380.
- Agarwal, Bina. 1998. The Gender and Environment Debate. In Keil Roger et al., Eds. *Political Ecology: Global and Local*. Routledge, London/ New York.
- Aguilar, Lorena. 1999. *A Good Start Makes a Better Ending: Writing proposals with*

a *Gender Perspective*. Towards Equity Series, No.1. World Conservation Union and Arias Foundation, San José.

Aguilar, Lorena. 2002. *The Unavoidable Current. Gender Policies for the Environmental Sector in Mesoamerica*. Executive summary. Absoluto S.A., San José.

Aguilar, Lorena. Gustavo Briceño and Iles Valenciano. 2000. *Seek and Ye Shall Find: Participatory Appraisals with a Gender Equity Perspective*. Towards Equity Series, No.2. World Conservation Union and Arias Foundation, San José.

Aguilar, Lorena and Itzá Castañeda. 2000. *About Fishermen, Fisherwomen, Oceans and Tides: A Gender Perspective in Marine-Coastal Zones*. World Conservation Union, San José.

Aguilar, Lorena; Itzá Castañeda and Hilda Salazer. 2002 *In Search of the Lost Gender: Equity in Protected Areas*. IUCN/Mesoamerican Office, San José.

Alfaro Quesada, Cecilia. 2002. *If We Organize If We Can Do It: Project Planning with a Gender Perspective*. Towards Equity Series, No.3. World Conservation Union and Arias Foundation, San José.

Anneck, Wendy. 2001. "Gender, Poverty and Energy." Paper Presented at the Seminar for the Technology and Development Group, University of Twente, the Netherlands, April 19, 2001.

Anneck, Wendy. 2002. "Climate change, energy-related activities and the likely social impacts on women in Africa." *International Journal of Global Environmental Issues* 2 (3/4): 206-222.

This paper attempts to draw the links between climate change, energy-use, gender relations and the subsequent impacts on the every-day lives of poor women in Africa. The approach is one of broad-brush strokes in an attempt to provide an overview of the breadth and complexity of factors to consider in such an analysis. The paper highlights the difference in energy use in developed and developing countries and between men and women and goes on to explore the impact of energy use on climate change. The most vulnerable energy sub-sector is biomass fuels, which are used by the largest and most vulnerable category of consumers - poor women. The paper examines women's susceptibility to changes in the sectors mentioned and concludes with some recommendations on preparations which should be made towards sustainability.

Baier, Erich G. 1997. The impact of HIV/AIDS on rural households/communities and the need for multisectoral prevention and mitigation strategies to combat the epidemic in rural areas. Rome: FAO, January 1997.

Bari, Farzana; and Sarwar Bari (2000). *Impact of Drought on Women*, www.drought.sdnpk.org.

Bell, Emma. 2001. Water for Production: an overview of the main issues and a collection of supporting resources. BRIDGE. Report prepared for Royal Danish Ministry of Foreign Affairs (DANIDA).

Berger, Leah. (2002). *Conflict Prevention, Gender and Early Warning: A Work in Progress*. 3rd Expert Consultative

Meeting on Gender and Early Warning, London, UK.

The integration of gender specific indicators into early warning systems is crucial for sustaining an effective approach to estimating conflict potential. Conflict affects women and men differently and although these effects vary widely across cultures depending upon the role of women in a particular society, it is clear that armed conflict exacerbates inequalities (Gardam & Charlesworth 2000). The purpose of this paper is to propose measurable indicators sensitive to the experiences of women and enhance early warning capacity to account for these gendered elements of conflict. This task will be accomplished by the deconstruction of existing indicators and by the addition of indicators reflecting women's unique life experiences.

Black, Richard. 1998. *Refugees, Environment and Development*. New York: Longman.

Boyce, James K. 2002. *The Political Economy of the Environment*. Edward Elgar: Northampton, MA.

Cannon, Terry. 2002. "Gender and climate hazards in Bangladesh." *Gender and Development* 10 (2): 45-51. Bangladesh has recently experienced a number of high-profile disasters, including devastating cyclones and annual floods. Poverty is both a cause of vulnerability, and a consequence of hazard impacts. Evidence that the impacts of disasters are worse for women is inconclusive or variable. However, since being

female is strongly linked to being poor, unless poverty is reduced, the increase in disasters and extreme climate events linked with climate change is likely to affect women more than men. In addition, there are some specific gender attributes which increase women's vulnerability in some respects. These gendered vulnerabilities may, however, be reduced by social changes.

Center for Science and Environment. 1982. *The State of India's Environment 1982*. New Delhi: Center for Science and Environment.

Cock, Jacklyn. 1992. "Feminism and Militarism: Some Questions Raised by the Gulf War." *Southern African Defence Review*. No. 6.

Collier, Paul. 2000. "Doing Well out of War: An Economic Perspective." In Berdal, Matts and Malone, David M., Eds., *Greed and Grievance: Economic Agendas in Civil Wars*. Boulder, CO: Lynne Rienner.

Community Conservation Coalition. 2003. *Putting Conservation in Context: Social Science Tools for Conservation Practitioners*. CD-ROM.

Crow, Ben; and Farhana Sultana. 2002. "Gender, Class, and Access to Water: Three Cases in a Poor Crowded Delta." *Society and Natural Resources* 15: 709-724. Documents a case of increasing groundwater use leading to arsenic poisoning and the intersection of this with gender and class.

Cutter, Susan. 1995. "The forgotten casualties: women, children, and environmental change." *Global Environmental Change* 5 (3): 181-194.

The effect of environmental contamination on women and children provides an example of gender inequity. Evidence of social inequity is seen in the poverty, population, environmental degradation spiral especially as it compromises the well-being of women and children and their ability to mitigate the consequences of environmental disturbances. Women and children bear and will continue to bear a disproportionate burden of global environmental changes.

in emergencies for mortality and morbidity, specifically for women and children; and finally it addresses certain policies and approaches to disaster rehabilitation which mirror and reinforce inherent inequalities in the affected society.

Dankelman, Irene. 2003. *Gender, Environment and Sustainable Development: Theoretical Trends, Emerging Issues and Challenges*. Review paper. INSTRAW, Santo Domingo.

Dankelman, Irene and Joan Davidson. 1988. *Women and Environment: Alliance for the Future*. Earthscan: London.

De Waal, Alex & Alan Whiteside. 2003. "New Variant Famine": AIDS and Food Crisis in Southern Africa" *The Lancet* 362: 1234-37 (11 Oct 2003).

Debarati, G. Sapir. 1993. "Natural and man-made disasters: the vulnerability of women-headed households and children without families." *World Health Statistic Quarterly* 46: 227-33.

This article reviews the human impact of disasters as a composite of two elements: the catastrophic event itself and the vulnerability of people. It identifies four broad policy areas that affect women and children in disaster situations and discusses them with examples and field evidence. The article identifies rape and sexual violence within the context of armed conflicts; it examines the differential risks

Denton, Fatma. 2002. "Climate Change Vulnerability, Impacts, and Adaptation: why does gender matter?" *Gender and Development* 10 (2): 11-20.

Gender-related inequalities are pervasive in the developing world. Although women account for almost 80 per cent of the agricultural sector in Africa, they remain vulnerable and poor. Seventy per cent of the 1.3 billion people in the developing world living below the threshold of poverty are women. It is important that the consequences of climate change should not lead already marginalized sections of communities into further deprivation. But key development issues have been at best sidetracked, and at worst blatantly omitted, from policy debates on climate change. The threats posed by global warming have failed to impress on policy-makers the importance of placing women at the heart of their vision of sustainable development. This article argues that if climate change policy is about ensuring a sustainable future by combining development and environment issues, it must take into account the interests of all stakeholders. The Global Environment Facility and the Clean Development Mechanism of the Kyoto Protocol can play a role in ensuring sustainable

development, provided they are implemented in a way that does not disadvantage women and the poor.

Dirasse, Laketch. 1999. "Conflict,

Development and Peace in Africa: Gender Perspectives." *Conflict Trends*. No. 1.

Doual, Tassoum. 1993. "The forgotten ones." *UNESCO Courier* May: 40-42.

Women are tasked with the responsibility of foraging for water in the drought, famine and war stricken countries of Africa. Aside from these duties, they are relied upon to provide basic services required by the family. In spite of their great responsibilities, women are not provided with the same opportunities as men in creating development strategies for the continent.

Enarson, Elaine. 1997. *Responding to Domestic Violence in Disaster: Guidelines for Women's Services and Disaster Practitioners*. Vancouver, British Columbia, Canada.

The report summarizes the findings of a study investigating disaster impacts, preparedness and response in US and Canadian domestic violence programs.

Enarson, Elaine. 1998. "Through Women's Eyes: A gendered research agenda for disaster social science." *Disasters* 22 (2): 157-173.

Gender is a central organizing principle in social life and hence in disaster-affected communities, yet gender issues are rarely examined by disaster scholars or practitioners. Building on findings from emerging and industrial nations, three key research

directions are identified: How is gendered vulnerability to disaster constructed? How do gender relations shape the practice of disaster planning and response in households and organizations? How are gender relations affected over time by the social experience of disaster? The discussion suggests how analysis of the gendered terrain of disaster both develops disaster theory and fosters more equitable and effective disaster practice.

Enarson, Elaine. 2002. *Working with women at risk: practical guidelines for assessing local disaster risk*. Miami, Florida, Florida International University: 79.

Enloe, Cynthia. 2000. *Maneuvers: The International Politics of Militarizing Women's Lives*. Berkeley: University of California Press.

Fairhead, James. 2001. "International Dimensions of Conflict over Natural and Environmental Resources." In Peluso, Nancy and Watts, Michael, Eds. *Violent Environments*. Ithaca: Cornell University Press.

Fairhead, James and Leach, Melissa. 1998. *Reframing Deforestation: Global Analyses and Local Realities, Studies in West Africa*. London: Routledge.

FAO/ SEAGA. 2002. *Passport to Mainstreaming a Gender Perspective in Emergency Programmes*. FAO.

Feldstein, Hilary Sims and Janice Jiggins (eds.). *Tools for the Field: Methodologies Handbook for Gender Analysis in Agriculture*. West Hartford, Connecticut: Kumarian Press, pp.80-88.

Flintan, F. 2003. *Engendering' Eden: Women, Gender and ICDPs: Lessons Learnt*

and Ways Forward. Summary Document. Wildlife and Development Series No.16, International Institute for Environment and Development, London.

Fong, Monica, Wendy Wakeman and Anjana Bhushan. 1996. *Toolkit on Gender in Water and Sanitation.* Washington DC: World Bank.

This toolkit shows why attention to gender is important and how such attention can be ensured. The toolkit starts in chapter 2 by presenting the rationale for considering gender issues in water and sanitation. Chapter 3 brings together ten salient lessons learned from experience in the sector around the world and illustrates these lessons with concrete examples. The chapter discusses what has and has not worked as well as problems encountered and solutions found. Chapter 4 then illustrates good practice in more detail in country case studies of Bank projects in the sector that have utilized effective gender strategies.

Fordham, M. 1998. "Making Women Visible in Disasters: Problematizing the Private Domain." *Disasters* 22 (2): 126-143.

Gender awareness and sensitivity in disaster research and management remains uncommon and tends to focus on the developing rather than the developed world. This paper uses a feminist oral geography to present some findings about women's experiences in two floods in Scotland. It is conceptualized around public and private space, problematizing the private domain and presenting it as a legitimate object of research. It shows that the

ordinary and everyday to be more opaque and complex than usually imagined and makes recommendations for their recognition and incorporation into disaster management. It concludes that disaster research generally has yet to advance much beyond the earliest stages of feminist studies which merely sought to make women visible in society.

Fordham, M. 2001. *Challenging Boundaries: A gender perspective on early warning in disaster and environmental management.*

Environmental management and the mitigation of natural disasters: a gender perspective, Ankara, Turkey: United Nations.

A gender perspective on early warning in disaster and environmental management requires that many boundaries be challenged. Amongst these (and this is not an exhaustive list) are boundaries set by gender relations themselves; by diverse (and sometimes competing) academic and institutional domains (hazards, disasters, development, resource management, North-South, etc.); by models of disaster management which incorporate apparently discreet stages; and by formal and informal structures and systems. This paper refers to examples from developed and developing areas to address some of the challenges faced by taking an holistic and sustainable approach to environmental management. It argues that the relative scarcity of studies incorporating a gender analysis points to a real need in both research and practice. This paper examines

the prevention/mitigation phase for which the stated objective is to assess and analyze capacities of women and girls in natural disaster prevention/mitigation, including information networks and interactive information systems (early warning systems, disaster preparedness, community involvement); women's representation in the decision-making process at all levels: capacity and vulnerability assessment and capacity-building.

- Fordham Maureen. 2003. "Gender, disaster and development: the necessity of integration" in Pelling, Mark, Ed. *Natural Disasters and Development in a Globalizing World*. London: Routledge, 64-66.
- Fothergill, A. 1999. "Women's Roles in a Disaster." *Applied Behavioral Science Review* 7(2): 125.
A study of women's roles in the 1997 Grand Forks (US) flood. Based on field research and sixty in-depth interviews. The author explores women's community, family, and work roles before, during, and after the disaster. The women experienced an expansion of both their roles and their sense of self and women often discovered a new sense of confidence, self-worth, and competence.
- Gender and Water Alliance (GAW). 2003. *The Gender and Water Development Report, 2003: Gender Perspectives on Policies in the Water Sector*. GWA, Delft.
- Gladwin, Christina H., Thomas, A.M., Anderson, A.S., and Peterson, J.S. 2001. "Addressing Food Security in Africa via Multiple Livelihood Strategies of Women Farmers." *Food Policy* 26 (2):177-207.
- Graham, Angus. 2001. *Gender Mainstreaming Guidelines for Disaster Management Programmes*. Environmental management and the mitigation of natural disasters: a gender perspective, Ankara, Turkey.
This paper outlines the role of socio-economic and gender analysis in addressing the need to tackle root causes of vulnerability to natural disasters. It is observed that natural disasters have had an ever-increasing impact on the lives and assets of human beings all over the world. The paper recognizes that the implementation of disaster reduction measures constitutes a central aspect of any sustainable development policy.
- Grover, Shalini, Minu Hemmati & Clare Flenley. 1999. *Gender and sustainable consumption: Bridging policy gaps in the context of Chapter 4, Agenda 21*. Report submitted to CSD-7.
- Guijt, Irene. 1997. *Gender and the Environment in Development Cooperation: An Assessment of Agenda 21 and the Platform for Action*.
- Hannan, Carolyn. 2002. *Mainstreaming gender perspectives in environmental management and mitigation of natural disasters. Disproportionate impact of natural disasters on women*. Roundtable Panel and Discussion organized by the UN Division for the Advancement of Women, UN, New York.
Overview of a gendered perspective on disaster and vulnerability to disaster. Must recognize gendered relationship to the environment

in order to ascertain how men and women have different needs in disaster relief.

- Hannan-Adersson, C. 1990. *Consultancy on the Women and Natural Resources Management (WNRM) Programme in IUCN*. Stockholm: IUCN
- Hannan-Andersson, Carolyn. 1995. *Gender Perspectives on Water Resources Management*. UNICEF/ INSTRAW.
- Hartmann, Betsy. 1999. Population, Environment and Security: A new trinity. *Dangerous Intersections: Feminist Perspectives on Population, Environment, and Development*. J. Silliman and Y. King, Eds. Cambridge, MA: South End Press.
- Hartmann, Betsy. 2001. "Will the Circle be Unbroken? A Critique of the Project on Environment, Population, and Security." In Peluso, Nancy and Watts, Michael Eds., *Violent Environments*. Ithaca: Cornell University Press.
- Hartmann, Betsy. 2002. "Degradation Narratives: Over-Simplifying the Link Between Population, Poverty and the Environment." *IHDP Update*, No. 4:6-8.
- Hudson, Heidi. 2000. "Mainstreaming Gender in Peacekeeping Operations: Can Africa Learn From International Experience?" *African Security Review*. 9 (4).
- Hynes, Patricia. 1999. "Consumption: North American Perspectives." *Dangerous Intersections: Feminist Perspectives on Population, Environment, and Development*. J. Silliman and Y. King, Eds. Cambridge, MA: South End Press.
- Joeke, Susan; Cathy Green & Melissa Leach. 1996. *Integrating Gender into Environmental Research and Policy*. IDS Working Paper No. 27.
- Johal, Ramina and McKenna, Megan. 2003. "Partnering for the Protection of Refugee Women." *Conflict Trends*, No. 3:53-55.
- Kabeer, Naila. 1994. *Reversed Realities: Gender Hierarchies in Development Thought*. London: Verso.
- Kabeer, Naila. 1997. "Tactics and Trade-Offs: Revisiting the Links Between Gender and Poverty." *IDS Bulletin* 28 (3): 1-13.
- Kabeer, Naila and Subrahmanian, Ramya, Eds. 1999. *Institutions, Relations and Outcomes: A Framework and Tools for Gender-aware Planning*. New Delhi: Kali for Women (Zed Books, 2000).
- Khasiani, Shanyisa A. 1992. "Women in Soil and Water Conservation Projects: An Assessment." (In) Khasiani, Shanyisa A., Ed.. *Groundwork: African Women as Environmental Managers*. Nairobi: ACTS. pp. 27-39.
- Khonder, Habibul Haque. Women and Floods in Bangladesh. *International Journal of Mass Emergencies and Disasters*, 14 (3): 281-292.
- This article examines the consequences of a flood disaster on rural women in northern Bangladesh and its differential gender aspects. The larger implications of the flood here revolve around a set of basic issues common to Third World disasters: the fragility and vulnerability of women's economic activities, especially in rural areas; women's response, recovery and coping mechanisms; and unequal access to assistance and the social and cultural norms which perpetuate and may even deepen that inequality.
- Leach, Melissa. 1994. *Rainforest Relations: Gender and Resource Use among*

- the Mende of Gola, Sierra Leone.* Washington, D.C., Smithsonian Institution Press.
- Leach, Melissa. 2003. "Women as Natural Environmental Carers: Earth Mother Myths and other Ecofeminist Fables or How a Strategic Notion Rose and Fell." Paper prepared for the workshop on 'Feminist Fables and Gender Myths,' IDS/University of Sussex, July 2003.
- Leach, Melissa and Fairhead, James. 2000. "Challenging Neo-Malthusian Deforestation Analyses in West Africa." *Population and Development Review* 26 (1):17-43.
- Leach, Melissa, Susan Joeekes and Cathy Green (eds.) 1995. *IDS Bulletin* 26 (1): 1-8.
- Makhabane, Tieho. 2002. "Promoting the Role of Women in Sustainable Energy Development in Africa: Networking and Capacity-Building." *Gender and Development*. 10 (2) July: 84-91.
- Mehta, Lyla. 2002. The Double Bind: A gender analysis of forced displacement and resettlement.
- Mehta, L. and B. Srinivasan. 2000. *Gender and Dams. A Perspective Paper.* Report for the World Commission on Dams.
- Mehta, L., Leach, M., Newell, P., Scoones, I. et al 1999. "Exploring Understandings of Institutions and Uncertainty: New Directions in Natural Resources Management," IDS Discussion Paper 372: Brighton.
- Mehta, Manjari. 1996. "Our Lives are no Different than that of our Buffaloes: Agricultural Change and Gendered Space in a Central Himalayan Valley." In Rocheleau, Thomas-Slayter and Wangari, Eds., *Feminist Political Ecology*. New York, Routledge.
- Morrow, B. H. and E. Enarson. 1996. Hurricane Andrew through Women's Eyes: Issues and Recommendations. *International Journal of Mass Emergencies and Disasters* 14 (1): 5-22.
- The authors focus on the implications of gender and the roles of women in preparation, relief, and recovery efforts at both the household and community levels. Their purpose is to better understand the circumstances surrounding the daily lives of women victims and providers, also to use their voices to inform ongoing rebuilding efforts, as well as future disaster responses. The objectives of the authors are: To address some gender-related issues of women's experiences in the most heavily impacted areas of Dade County, Florida after Hurricane Andrew; to document the ways in which the private and public caregiving responsibilities of women expanded, often under very difficult and stressful circumstances; to give a series of recommendations to disaster planners to increase the involvement of women at every level of disaster response;
- Morrow, Betty Hearn. 1999. Identifying and Mapping Community Vulnerability. *Disasters*, 23 (1):1-18.
- Moser, Carolyn O.N. and Fiona Clark. 2001. "Gender, Conflict and Building Sustainable Peace: recent lessons from Latin America." *Gender and Development* 9 (3): 29-38.
- Latin American experiences of conflict and building sustainable peace have tended to show a clear neglect of a gender analysis of the impacts of conflict and the peace negotiations that end it,

much to the detriment of many women and men affected by and involved in the civil conflicts that have ravaged the region during the last thirty years. What do Colombian women and men have to learn from these experiences? In May 2000, a workshop entitled 'Latin American Experiences of Gender, Conflict, and Building Sustainable Peace' was held in Bogota, Colombia with representatives from several Latin American countries. This paper briefly highlights some of the issues raised at the workshop and aims to provide lessons and recommendations for others working in the fields of conflict analysis and resolution, humanitarian assistance, and interventions for peace and development.

Nelson, Valerie, Kate Meadows, et al. 2001. "Uncertain predictions, invisible impacts, and the need to mainstream gender in climate change adaptations." *Gender and Development* 10 (2): 51-59.

Vulnerability to environmental degradation and natural hazards is articulated along social, poverty, and gender lines. Just as gender is not sufficiently mainstreamed in many areas of development policy and practice, so the potential impacts of climate change on gender relations have not been studied, and remain invisible. In this article the authors outline climate change predictions, and explore the effects of long-term climate change on agriculture, ecological systems, and gender relations, since these could be significant. The authors

highlight the urgent need to integrate gender analyses into public policy-making, and in adaptation responses to climate change.

OECD. September 2002. "Water Supply and Sanitation," *Gender Tipsheets*.

Oelofse, Catherine. 2003. "A Critical Realist Perspective on Urban Environmental Risk: a case study of an informal settlement in South Africa." *Local Environment* 8 (3): 261-275.

The research suggests that the key causal mechanisms that shape risk events in informal settlements are globalization and urbanization, poverty and vulnerability, the social construction of environmental problems, gender relations, the rise of civil society organizations, political governance and the spatial distribution of risk.

Oglethorpe, Judy, Nancy Gelman. 2002. *Women, Natural Resources and HIV/AIDS*. WWF.

Ogunsanya, Kemi and Mngqibisa, Kwezi. 2001. "Women of Peace: Gender Approaches to Peacekeeping and Reconstruction in Africa." *Conflict Trends*. #1.

Panin, A. and Brummer, B. 2000. "Gender Differentials in Resources Ownership and Crop Productivity of Smallholder Farmers in Africa: A Case Study." *Quarterly Journal of International Agriculture*. 39:1:93-107.

Paolisso, Michael; and Amanda Ritchie. 2002. "The Significance of the Gender Division of Labor in Assessing Disaster Impacts: A Case Study of Hurricane Mitch and Hillside Farmers in Honduras." *International Journal of Mass Emergencies and Disasters* 20 (2): 171-195.

Women and men reported similar physical impacts of the hurricane but evaluated these impacts differently depending on where the impact fell within the gender division of labor.

- Picard, Mary. 1996. "A Selected Bibliography on Gender in Environment and Natural Resources, With an Emphasis on Africa." Washington, D.C.: U.S. Agency for International Development (USAID), Bureau for Africa. SD Publication Series, Technical Paper No. 31.
- "Poverty-Gender-Environment Linkages." 2001. *DAC Journal (OECD)*. 2:4.
- Rainforest Foundation. 2004. "New Threats to the Forests and Forest Peoples of the Democratic Republic of the Congo." Briefing Paper. London, Rainforest Foundation. rainforestuk@rainforestuk.com.
- Rathgeber, Eva. March 2003. *Dry Taps: Gender and Poverty in Water Resource Management*. FAO.
- Rathgeber, Eva M. 1995. "Integrating Gender into Environmental Education in Africa." *Canadian Journal of Development Studies*. Volume 16, Special Issue. pp. 89-103.
- Rathgeber, Eva M. 1996. "Women, Men, and Water-Resource Management in Africa." (In) Rached, Eglal and Rathgeber, Eva M. and Brooks, David, Eds. *Water Management in Africa and the Middle East: Challenges and Opportunities*. Ottawa, Canada: International Development Research Centre. pp. 49-72.
- Rehn, Elisabeth & Ellen Johnson Sirleaf. 2002. *Women War and Peace: progress of the World's Women 2002 Volume One*. NY: UNDP/ UNIFEM.
- Reyes, Rosa Rivero. 2001. "Gendering responses to El Niño in rural Peru." *Gender and Development* 10 (2): 60-69.
- Climatic disasters are a recurrent problem in Peru. The impacts of disasters differ between and within regions and communities. Rural upland communities, largely dependent on small-scale agriculture and natural resources for survival, are particularly vulnerable to the negative effects of extreme climate events. Government policies have not only failed to mitigate this vulnerability, but have served to exacerbate it. Women face particular vulnerabilities in the context of extreme climate events. Traditional analysis and government policy approaches have served to obscure these. This article reflects on the gender-specific lessons learned by the Centre for Andean Advancement and Development, CEPRODA MINGA, during its work with poor rural communities in the Piura region of Peru in the aftermath of the 1997-8 El Niño phenomenon.
- Richey, Lisa Ann. 1999. "Development," *Gender and Family Planning: Population Politics and the Tanzanian Population Policy*. PhD Thesis, Department of Political Science, University of North Carolina, Chapel Hill.
- Rocheleau, Dianne, Barbara Thomas-Slayter and Esther Wangari, Eds. 1996. *Feminist Political Ecology, Global Issues and Local Experience*. London and New York: Routledge.
- Rocheleau, D. E. 1991. *Gender, Ecology and the Science of Survival: Stories and*

Lessons from Kenya. *Agriculture and Human Values*, 8 (1).

Rocheleau, Dianne; Barbara Thomas-Slayter & David Edmunds. 1995. "Gendered Resource Mapping: Focusing on Women's Spaces in the Landscape." *Cultural Survival Quarterly*, 18 (4) 62-68.

Rocheleau, Dianne, Ross, Laurie, and Morrobel, Julio. 1996. "From Forest Gardens to Tree Farms: Women, Men and Timber in Zambrana-Chacuey, Dominican Republic." In Rocheleau, Dianne, Thomas-Slayter, Barbara and Wangari, Esther, Eds., *Feminist Political Ecology*. New York: Routledge.

Rocheleau, Dianne and Edmunds, David . 1997. "Women, Men and Trees: Gender, Power and Property in Forest and Agrarian Landscapes." *World Development* 25 (8):1351-1371.

Roehr, Ulrike. 2001. *Gender and Energy in the North*. Background Paper for the Expert Workshop, "Gender Perspectives for Earth Summit 2002: Energy, Transport, Information for Decision-Making, Berlin, January 2001.

Rojas, Mary Hill. 2000. *Working with Community-Based Conservation with a Gender Focus*. WIDTECH/ USAID: Washington, D.C.

Rojas, M. A Community Conservation Program Position Paper on Gender and Biodiversity Conservation.

Roy, Marlene; and Henry David Venema. 2001. "Reducing risk and vulnerability to climate change in India: the capabilities approach." *Gender and Development* 10 (2): 78-83.

This paper argues that the ability of women to adapt to climate change pressures will

be enhanced by using the 'capabilities approach' to direct development efforts. By using this approach, women will improve their well-being, and act more readily as agents of change within their communities. This argument is supported by previous research on gender and livelihoods, and a study conducted in rural India.

Saad, Samia Galal. 2001. *Environmental Management and Natural Disasters Mitigation: Middle Eastern Gender Perspective*. Environmental management and the mitigation of natural disasters: a gender perspective, Ankara, Turkey.

Sapir, Debarati. 1993. "Natural and man-made disasters: the vulnerability of women-headed households and children without families." *World Health Statistics Quarterly* 46 (4): 227-234.

Schoepf, Brooke, and Claude Schoepf. 1989. *Gender, Land and Hunger in Eastern Zaire. African Food Systems in Crises: Part Two, Contending with Change*. R. Huss-Ashmore and S. Katz, Eds. Amsterdam: Gordon and Breach Science Publishers: 75-106.

Schroeder, Richard. 1999. *Shady Practices. Agroforestry and Gender Politics in the Gambia*. University of California Press: Berkeley.

Seager, Joni. 1993. *Earth Follies: Coming to feminist terms with the global environmental crisis*. NY: Routledge; London: Earthscan.

Seager, Joni. 1995. *The New State of the Earth Atlas*. NY: Simon & Schuster; London: Penguin.

Seager, Joni. 1999. "Patriarchal Vandalism: Militaries and the Environment." in

Dangerous Intersections: Feminist Perspectives on Population, Environment, and Development. J. Silliman and Y. King. Cambridge, MA, South End Press.

Shambaug, James, Judy Oglethorpe, Rebecca Ham. 2001. *The Trampled Grass: Mitigating the impacts of armed conflict on the environment.* World Wildlife Fund.

Skutsch, Margaret. 2002. "Protocols, treaties, and action: the 'climate change process' viewed through gender spectacles." *Gender and Development* 10(2): 30-39.

This paper starts by assessing the extent to which gender considerations have been taken into account in the international processes concerning the development of climate change policy. Finding that there has been very little attention to gender issues, neither in the protocols and treaties nor in the debates around them, the paper goes on to consider whether there are in fact any meaningful gender considerations as regards (a) emissions of greenhouse gases, (b) vulnerability to climate change, and (c) participation in projects under climate funding. It concludes by suggesting some areas where attention to gender could improve the effectiveness of climate interventions and also benefit women.

Stehlik, Daniela, Geoffrey; Lawrence, et al. 2000. "Gender and Drought: Experiences of Australian Women in the Drought of the 1990s." *Disasters* 24 (1): 38-53.

Steward, Macol M. "Something Old, Something New: Putting Climate

Information, Communications Technology, and Development in the Hands of Rural African Women." Paper Presented at the 45th Annual Meeting of the African Studies Association (ASA), December 5-8, 2002, Washington, D.C. New Brunswick, New Jersey: ASA.

Strickland, Richard; and Nata Duwury. 2003. *Gender Equity and Peacebuilding From Rhetoric to Reality: Finding the Way.* Washington DC, International Center for Research on Women (ICRW): 32.

Sundar, Nandini. 2001. "Beyond the Bounds? Violence at the Margins of New Legal Geographies." In Peluso and Watts, Eds., *Violent Environments.* Ithaca: Cornell University Press.

Sweetman C., Ed. 1997. *Men and Masculinity.* Oxford: Oxfam.

Syme, Hilary. 1992. *Women, Water & Sanitation.* Ottawa: CIDA.

Thomas-Slayter, Barbara and Sodikoff, Genese. 2001. "Sustainable Investments: Women's Contributions to Natural Resource Management Projects in Africa." *Development in Practice.* 11 (1) February: 45-61.

Thomas-Slayter, Barbara, Andrea Lee Esser, and M. Dale Shields. 1993 *Tools of Gender Analysis: A Guide to Field Methods for Bringing Gender into Sustainable Resource Management,* Ecology, Community Organization and Gender (ECOGEN) Research Project, Clark University.

This document includes eleven chapters covering: problem identification; in-depth household interviews; focus group discussions; participant observation; improving project design and implementation; surveys; gender-disaggregated seasonal activities calendar;

activities, resources and benefits analyses; improving project management; and gender-sensitive monitoring of project progress (GMPP).

- United Nations Secretariat. 1990. *Promotion of Women's Participation in Water Resources Development*. Report of the Seminar. Bamako, Mali, November 14-18, 1988. New York: United Nations. Natural Resources/Water Series.
- UNDAW (Division for the Advancement of Women). 2001. *Environmental Management and the Mitigation of Natural Disasters: A gender perspective*. Ankara, Turkey, UNDAW: 33.
- When disasters strike, the poor and socially disadvantaged suffer the most, and are least equipped to cope with the impact. There is a direct link between environmental management and risk reduction, disaster preparedness, mitigation and recovery, as natural disasters have a long lasting adverse impact on the environment. Little work has been undertaken so far to explore the gender dimensions of natural disasters. It is known that due to women's proactive behavior in the protection of well-being of their households, their involvement in community activities, neighborhood and school education, and disaster preparedness programmes, they are key actors in environmental management and natural disaster mitigation. However, they are still not fully involved in planning and decision making processes in these areas.
- UNDP. 2002. *Mainstreaming Gender in Water Management. A Practical Journey to Sustainability: A Resource Guide*. New York: UNDP.
- UNDP. 2001a. *Generating Opportunities: Case Studies on Energy and Women*. New York: UNDP.
- UNDP. 2001b. *Gender in Development Programme. Gender Mainstreaming Programme and Project Entry Points*. New York: UNDP.
- UNEP. 2002. *Global Environment Outlook 3*: Nairobi: UNEP.
- UNEP. 2002. *Africa Environment Outlook: Past, Present and Future Perspectives*, Nairobi, UNEP.
- UNIFEM. 2003. *Progress of the World's Women 2000*. UN: NY.
- UNIFEM. 2003. *Progress of the World's Women 2002, Volume Two: Gender Equality and the Millennium Development Goals*. UN: NY.
- UN Habitat. 2000. *Sustainable Cities Program. Integrating Gender Responsiveness in Environmental Planning and Management*.
- UNISDR. 2002. *Women, Disaster Reduction and Sustainable Development, UN International Strategy for Disaster Reduction*.
- Men and women do not have the same rights, education and options to manage resources, neither in 'normal' times, nor when a disaster strikes. Examples from Central America, India and the Pacific illustrate how women's action shows a way forward. Several studies confirm that women are usually much more badly affected than men when a disaster strikes, and when recovery begins. We therefore

need to address the specific concerns of women already in the initial stages of designing disaster-reduction policies and measures.

Van Koppen, B. 1999. "Sharing the Last Drop: Water Scarcity, Irrigation and Gendered Poverty Eradication," *Gatekeeper*.

Vedeld, Trond and Larsen, Kjersti . 1998. *Small Farmers, Gender and Access to Land and Natural Resources in Africa: A NORAD Funded Study*. Norway: Agricultural University of Norway, Centre for International Environment and Development Studies. September.

Vinas, Carolina Serrat. 1998. Women's Disaster Vulnerability and Response to the Colima Earthquake. *The Gendered Terrain of Disaster Through Women's Eyes*. E. Enarson and B. Morrow. Westport: Praeger Publishers. The chapter analyzes the impact, responses and strategies of women in two communities in the municipality of Manzanillo in Colima, one of the smallest states of the Mexican Republic, after the 1995 earthquake.

Vincent, Louise. 2001. "Engendering Peace in Africa: A Critical Inquiry Into Some Current Thinking on the Role of African Women in Peace-Building," *African Journal in Conflict Resolution*. No. 1.

Waite, Louise. 2000. "How is Household Vulnerability Gendered? Female-headed Households in the Collectives of Luleimaniyah, Iraq Kurdistan." *Disasters* 24 (2): 153-172. Trying to improve the understanding of the specific gendered forms of disadvantage faced by female-headed households

rather than assuming the universal poverty of this group. The main conclusion to emerge from this research is a refuting of the stereotype that households headed by women are at a disadvantage in all dimensions of vulnerability in comparison with households headed by men. The research also establishes the methodological necessity of examining intra-household distributive mechanisms that determine individuals' well being.

Wakeman, Wendy. 1995. *Gender Issues Sourcebook for the Water and Sanitation Sector*. UNDP-World Bank Water & Sanitation Program.

Wamukonya, Njeri and Margaret Skutsch. 2002. "Gender Angle to the Climate Change Negotiations." *Energy and Environment* 13 (1): 115-124.

The South is likely to suffer more from climate change than the North due to its already vulnerable situation and lack of resources to adapt to change. But do the interests of men and of women differ as regards climate change and does this have a South-North dimension? This paper attempts to establish whether gender issues need to be addressed in the climate change debate. Towards this goal, a number of different issues within the climate change debate, in particular the instruments proposed, are analysed. These include responsibility for emission of greenhouse gases (GHGs), studies on vulnerability to the effects of climate change, mitigation of emissions, capacity building for participation in flexible mechanisms and adaptation to climate change.

- WEDO. 2002. *A Small World After All: Women Assess the State of the Environment in the US and Beyond*. NY: WEDO.
- WEDO. 2003a. *Untapped Connections: Gender, Water and Poverty*. WEDO, New York.
- WEDO. 2003b. *Draft Report, "Women and Environment"; Report on Nairobi meetings November 2003*.
- WEDO. 2003c. *Diverting the Flow: A Resource Guide to Gender, Rights, and Water Privatization*. NY: WEDO.
- WEDO and UNEP. 2004. *Women and the Environment*. Nairobi: UNEP.
- White S. C. 2000. "Did the earth move? The hazards of bringing men and masculinities into gender and development." *IDS Bulletin* 31 (2):33-41.
- "Women and Marine Protected Areas: How gender affects roles in planning and management," November 2002. *MPA News*. 4 (5):1-6.
- World Bank. 2001. *Engendering Development Through Gender Equality in Rights, Resources, and Voice*. Washington, DC: World Bank.
- World Commission on Dams. 2000. *Dams and Development: a New Framework for Decision-Making*. London: Earthscan.
- World Wildlife Fund. 2002. *Social Dimensions in a Biological World*. Washington, DC: WWF.
- Woroniuk, B. & J. Schalkwyk. 1998. *Energy Policy and Equality between Women and Men*. SIDA Equality Prompt No. 9. Stockholm: SIDA.
- Yngstrom, Ingrid. 1994. "Gender and the Social and Political Context of Environmental Change in Africa." (In) Yngstrom, Ingrid. Ed. *Gender and Environment in Africa: Perspectives on the Politics of Environmental Sustainability*. Edinburgh: University of Edinburgh, Centre of African Studies. pp. 5-28.



Mark Edwards / Still Pictures

Appendix

Individuals Interviewed/Consulted in the Course of Developing this Report

We thank the following individuals for their time and generosity in contributing their views and expertise to our analysis.

Our very special thanks to the entire DEWA staff in Nairobi. We met extensively with almost all members of the professional staff and several key members of the general staff. We do not identify these individuals by name here to protect the confidentiality of our conversations.

Judy Barrows, Director, Implementation
Division, U.S. Environmental
Protection Agency, USA.

Kent Benjamin, U.S. Environmental Protection
Agency, USA

Carol Cohn, Director, Boston Consortium on
Gender, Security & Human Rights

Sarah Fairchild, Conservation Organizer,
Global Population & Environment
Program, Sierra Club, USA

Maureen Fordham, University of Northumbria,
Newcastle upon Tyne, UK



TopFoto/The Image Works

Hilary French, Worldwatch Institute & Consultant/Special Advisor, UNEP Regional Office for North America, USA

Anne Marie Goetz, Institute of Development Studies, Brighton, UK

Felicity Hill, UNDP, NY

Aina Iliyambo, UNIFEM, NY

Lucia Kiwala, UN-HABITAT, Nairobi, Kenya

Melissa Leach, Institute of Development Studies, Brighton, UK

Mia MacDonald, Gender & Environment Consultant, New York, USA

Karen Mason, Director, Gender and Development, The World Bank

Wanjiru Mburu, Programme Officer Secretariat for Governing Bodies, UNEP, Nairobi, Kenya

Lyla Mehta, Institute of Development Studies, Brighton, UK

Beverly Miller, Secretary, Governing Bodies Focal Point Gender Mainstreaming UNEP, Nairobi, Kenya

A. Waafas Ofosu-Amaah, Gender Specialist, Gender and Development, The World Bank

Judy Oglethorpe, Director, Conservation Strategies Unit, World Wildlife Federation

Maggie Opondo, Department of Geography, University of Nairobi, Kenya

Rebecca Pearl, Women's Environment & Development Organization, New York

Hannah Reid, International Institute of Environment and Development, London, UK

Mary Hill Rojas, Women in Development Project Supervisor, Chemonics (USAID)

Purna Sen, London School of Economics, UK

Jael Silliman, Ford Foundation, USA

Annette Souder, Senior Representative, Global Population & Environment Program, Sierra Club (Washington DC), USA

Hilary Standing, Institute of Development Studies, Brighton, UK

Valerie Traore, Oxfam, USA

Caryn Whitaker, National Wildlife Federation, USA

Suzanne Williams, Independent Consultant, Oxford, UK (former OXFAM, UK)

June Zeitlin, Executive Director, Women's Environment & Development Organization, USA

