



*Empowered lives.
Resilient nations.*

POWERFUL SYNERGIES

Gender Equality, Economic Development
and Environmental Sustainability



United Nations Development Programme

EDITORS

BLERTA CELA

IRENE DANKELMAN

JEFFREY STERN

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ACRONYMS

CDM	Clean Development Mechanism
CEDAW	Convention on the Elimination of All Forms of Discrimination against Women
COP	Conference of the Parties
GDP	Gross Domestic Product
GEF	Global Environment Facility
MDG	Millennium Development Goals
OECD	Organisation for Economic Co-operation and Development
OECD-DAC	OECD Development Assistance Committee
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNICEF	United Nations Children's Fund
WEDO	Women's Environment and Development Organization
ZEIS	Special Zones of Social Interest (Brazil)

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SUSTAINABLE DEVELOPMENT REQUIRES PURSUING ECONOMIC, SOCIAL AND ENVIRONMENTAL OBJECTIVES AS INTERCONNECTED DEVELOPMENT GOALS. IT IS CRITICAL THAT GENDER EQUALITY—A HUMAN RIGHT AS WELL AS A CATALYTIC FORCE FOR ACHIEVING ALL DEVELOPMENT GOALS—IS CENTRAL TO THIS PURSUIT.

FOREWORD

Since the Earth Summit 20 years ago, the international community has made historic achievements in advancing human development, including gender equality. However, the world continues to face considerable social, economic and environmental challenges, and progress continues to be threatened by persistent gender-based inequalities.

At the recent United Nations Conference on Sustainable Development (Rio+20), the international community acknowledged that sustainable development requires pursuing economic, social and environmental objectives as interconnected development goals. It is critical that gender equality—a human right and a catalytic force for achieving all development goals—is central to this pursuit.

This publication, *Powerful Synergies: Gender Equality, Economic Development and Environmental Sustainability*, is a collection of evidence-based papers by scholars and practitioners that explore the interconnections between gender equality and sustainable development across a range of sectors and issues, such as energy, health, education, food security, climate change, human rights, consumption and production patterns, and urbanization. The publication provides evidence from various sectors and regions on how women's equal access to and control over resources not only improve the lives of individuals, families and nations, but also help ensure environmental sustainability.

The papers in this publication make detailed recommendations for policy makers and practitioners to ensure that policies and programmes effectively integrate gender equality and that women participate fully and meaningfully. By acting on these recommendations and working collectively across sectors, we will not only drive forward towards the future we want, but also provide the foundations for present and future generations of women and men, and boys and girls, to thrive.



OLAV KJØRVEN

DIRECTOR, BUREAU FOR DEVELOPMENT POLICY
UNITED NATIONS DEVELOPMENT PROGRAMME

“

THIS VOLUME IS A COLLECTION OF CONTRIBUTIONS BY GENDER AND SUSTAINABLE DEVELOPMENT EXPERTS WHO EXPLORE THE INTERCONNECTIONS BETWEEN GENDER EQUALITY, ECONOMIC DEVELOPMENT AND ENVIRONMENTAL SUSTAINABILITY.

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INTRODUCTION

The globally shared vision for sustainable development has a strong gender dimension that highlights the need to continue identifying gender equality and women's empowerment as a core development goal in itself and as a catalyst for reaching all other goals and objectives. As the 2015 deadline for the Millennium Development Goals (MDGs) approaches, the United Nations is leading preparations for a post-2015 sustainable development agenda, both to accelerate achieving the MDGs and to create a framework that will build on the achievements of the past 15 years. The central challenge for the post-2015 sustainable development agenda is to move away from unsustainable policy frameworks, towards policies that encourage sustainable production and consumption, protect the most vulnerable and build resilience of countries and communities to climate and other environmental and socio-economic risks.¹ Building on the lessons learned from the MDGs, the processes underway to advance the post-2015 sustainable development agenda will be underpinned by the principles of inclusiveness, equality, human rights and sustainability, as well as by addressing the unequal measures of development progress.

In June 2012, the United Nations Conference on Sustainable Development (Rio+20) marked the twentieth anniversary of the United Nations Conference on Environment and Development (the Earth Summit). Launching a process for formulating new sustainable development goals towards 'The Future we Want', Rio+20 reflected the need for a renewed vision for sustainable development—a vision of increased livelihood security, equality and prosperity for all. United Nations Member States defined sustainable development broadly, emphasizing that reducing poverty and eliminating inequalities are as central as protecting the environment.

Despite many of the achievements of the MDGs, the framework has been criticized for inadequately addressing important issues embodied in the Millennium Declaration, particularly issues related to equality and environmental sustainability. While substantial progress has been made on many MDGs—for example, on education, poverty reduction and decreases of infant and child mortality—persistent inequalities, including gender-based inequality, economic crises and widespread environmental degradation are holding back progress on many development goals. Progress has also been unequally distributed across and within regions and countries, further reflecting the interconnected nature of gender, age, class, ethnicity, education and rural-urban issues. People who have not benefitted or

fallen deeper into poverty are the hardest to reach and include, in particular, women and children in remote and rural areas and in the poorest households. Often, their livelihoods are dependent on degrading natural resources; women still lack access to good quality land, property and inheritance rights; and gender-based violence and discrimination persist in many areas, hindering women's civic and political representation. Therefore, it is crucial that the forthcoming sustainable development goals mirror a broad vision of sustainable development and appropriately reflect the linkages among different goals and targets.

Across regions and countries, evidence suggests that development strategies that do not promote gender equality and the full participation and empowerment of women and girls will not succeed. This volume is a collection of contributions by gender and sustainable development experts who explore the interconnections among gender equality, economic development and environmental sustainability. These specialists offer insights, critiques, lessons learned and concrete proposals for promoting gender equality and women's empowerment in international and national sustainable development efforts. The authors address development challenges across a range of sectors and issues, such as energy, health, education, food security, climate change, human rights, consumption and production patterns, and urbanization.

The papers address gender issues within and across the social, economic and environmental dimensions of sustainable development, emphasizing the need to draw on both women's and men's perspectives to inform the green economy. Some papers demonstrate how women and their communities could benefit from gender-responsive climate change adaptation and mitigation policies. In exploring multiple facets of economic development, the papers discuss how sustainable forms of economic development and consumption patterns could strengthen women's resilience against natural disasters.

The authors advocate that investing in women and girls—in both rural and urban contexts—will enhance gender equality, achieve more sustainable development and accelerate progress towards achieving the MDGs and the sustainable development framework that follows them. The authors stress the necessity and highlight the benefits of securing women's active participation in all stages of decision-making, ensuring their legal and political empowerment and including them in devising strong gender-responsive legal frameworks. The experts argue for supporting the specific needs of women as workers, entrepreneurs, home-based producers and consumers, and drivers of low-emission, climate-resilient economies.

This publication aims to inspire policy makers and practitioners in the fields of environment, sustainable development and gender studies to support gender-responsive policy planning and implementation. The papers also provide evidence and recommendations for integrating gender equality into the post-2015 sustainable development discourse. *Powerful Synergies* underscores that, by acknowledging and acting on the critical, mutually reinforcing linkages between gender equality and sustainable development, we can create a society that maintains and regenerates the environment, respects human rights and provides women and men, girls and boys with the lives and future they deserve.

OVERVIEW OF PAPERS

This section presents a brief overview of each chapter's key findings and themes on the nexus of gender equality, economic development and environmental sustainability.

GENDER EQUALITY AND SUSTAINABLE DEVELOPMENT

Gender equality and sustainable development are intrinsically linked. Major international environment and development processes and legal frameworks since the 1990s have varied in addressing the gender dimensions of sustainable development. The following two papers give an overview of the outcomes of those processes and analyse the resulting legal structures and mechanisms.

In **"ON THE ROAD TO SUSTAINABLE DEVELOPMENT: PROMOTING GENDER EQUALITY AND ADDRESSING CLIMATE CHANGE"**, **IRENE DANKELMAN** elaborates on the nexus between environment, gender equality and sustainable development, with a focus on climate change challenges and policies. The paper starts with a short analysis of the awareness about this nexus before, during and after the 1992 Earth Summit. It then unpacks—from a gender-perspective—the concept, manifestations of, and policies on climate change, using as reference points Women's Action Agenda 21, the Rio Principles and the inputs of the Women's Major Group in the Rio+20 discussions. The author stresses that policies and projects that neglect gender aspects not only obstruct the potential of reaching adaptation and mitigation goals, but also threaten to enlarge existing inequalities and hinder progress towards gender justice and gender equality.

The discussion in the paper looks specifically at the theme of the 'Green Economy', and includes a critical reflection on the 'green growth' phenomenon. Equating sustainable development solely with green growth fundamentally overlooks the social aspects of development and makes striving for sustainability a purely technological exercise. The author supports the Women's Major Group for Rio+20 in focusing on achieving a "sustainable and equitable" economy instead of just a "green" economy, and basing such an economy on a set of specific principles. These principles could be important anchor-points for sustainable development, and for transforming the economic system into not just a green economy, but a sustainable system as well.

In **"MISSING IN ACTION: GENDER IN INTERNATIONAL ENVIRONMENTAL LAW"**, **PAOLO GALIZZI AND ALENA HERKLOTZ** describe the nature and evolution of global efforts to address and incorporate gender in the international environmental law regime. They focus on both binding foundational treaties (e.g. the Rio Conventions), and related 'soft law' processes, conferences, declarations and commitments. In general, international environmental legal instruments have paid insufficient attention to the role that

WOMEN'S MAJOR GROUP CONTRIBUTES TO 'THE FUTURE WE WANT'

In contributing to the Rio+20 Outcome Document, 'The Future We Want', the Women's Major Group provided input that began with a clear vision for an equitable and sustainable world: "Social equity, gender equality and environmental justice must form the heart of sustainable development and the outcomes of the Rio+20 conference." The position paper identifies measures that should promote: gender equality in all spheres of our societies; respect for human rights and social justice; and environmental conservation and protection of human health.

The Women's Major Group is "critical about the use of the term 'green economy'. We are concerned it is too often separated from the context of sustainable development and poverty eradication. We are concerned it will be used and misused to green-wash existing unsustainable economic practices that lead to inequities and infringe on the rights of affected peoples and future generations, because it does not fundamentally and adequately question and transform the current economic paradigm." In a further critique of the dominant economic system,

the Women's Major Group argues that it harms women and the environment, is inequitable and unsustainable, and uses indicators that are socially and environmentally blind.

The Group recommends using the term 'sustainable and equitable economy' instead of 'green economy', and identifies its principles, objectives and indicators for success. The principles include:

- Promotion of social equity, gender equality and intergenerational equity;
- Democracy, transparency and justice;
- Application of the precautionary principle;
- Ethical values, such as respect for nature, for spirituality and culture, and harmony, solidarity, community, caring and sharing;
- Global responsibility for the global common goods;
- Environmental sustainability; and
- Common but differentiated responsibilities.



Source: Women's Major Group, 2011. 'Women's Major Group Summary Input to Zero Draft Outcome Document'. 1 November. UN Conference on Sustainable Development.

women play in environmental and sustainable development. When references are made, they tend to be very broad and therefore of little practical use or impact. The separation of gender equality and environment persists in the various summits—and even in the MDGs. The international climate change regime in particular has been slow to integrate gender into its policies and programmes. Still, progress has been made with at least nominal inclusion of gender, and some promising models exist for gender integration, such as the Convention on Biological Diversity. Laudable legal provisions, however, do not translate automatically into tangible results, and much work remains to be done to deliver on promises made.

Gender mainstreaming in environmental processes faces various obstacles, and existing policy promises have yet to be fully translated into concrete actions. International environmental law suffers from a lack of implementation in general, and a lack of gender mainstreaming in particular. While law alone cannot provide all the answers to addressing gender discrimination in environmental management and sustainable development, the exclusion of legal rules considering gender issues makes the realization of these goals harder, if not impossible, to achieve.

GENDER EQUALITY, SUSTAINABLE CONSUMPTION AND THE 'GREEN ECONOMY'

Promoting a green economy was central to the debates at Rio+20; it was presented as a strategic way to move beyond economies that deplete natural resources and pollute the environment. However, there is no universal agreement on what a green economy should be, and there are competing ideas regarding the optimal pathways towards sustainable development. Scholars and practitioners urge critical reflection on how to define the green economy and economic growth. They warn that patterns of growth with incongruent benefits could exacerbate inequalities and vulnerabilities in society, including those defined by gender-based roles, and advocate for real sustainable and equitable economies and societies.

In **"GENDER, GROWTH AND ADAPTATION TO CLIMATE CHANGE"**, **STEPHAN KLASEN** argues that increasing broad-based economic development by promoting female education, employment and economic and political empowerment is among the most promising strategies for climate change adaptation, with women as key agents. Empirical literature on economic growth has documented that women's economic roles are central to broad-based economic growth. Countries with low rates of gender inequalities in education and employment access have grown substantially faster than those in which inequality rates were high. In countries such as Bangladesh and Tunisia, growth has included women to a much greater extent than in other countries in their regions, and has benefited women as well as overall development.

A broad-based development approach requires gender-sensitive growth strategies that invest in women and empower them to more effectively contribute to economic development. Eliminating gender inequalities in education and employment in particular has been associated with substantial growth and structural transformations. All regions will require greater recognition that women need to be supported in their dual roles as care-givers and active economic agents. This will involve lightening their care burden through access to improved household technologies, extended public social protection systems, and through strategies that increase women's bargaining power.

The author argues that promoting women's economic opportunities provides an excellent chance to further the sustainability and inclusiveness of the growth agenda. Promoting women's agency not only boosts economic growth, but also promotes broader development with synergistic benefits to resilience, climate change, and opportunities to adapt. While the paper takes a rather instrumental view of gender equality, the authors also conclude that there are strong equity and justice arguments for promoting women's agency.

Sustainable consumption—to which household consumption can (and in many countries does) contribute considerably—is key to sustainable development, and women are key to household consumption. In **“WOMEN, CONSUMPTION AND SUSTAINABLE DEVELOPMENT”**, **DIANE MACEACHERN** provides evidence that women in rich and poor countries alike are more inclined than men to be sustainable consumers, and are central to transforming existing household consumption patterns. Despite their consumer clout and increasing gains in the workforce, women’s contributions to sustainability are undervalued, and they face several obstacles to becoming full sustainable consumers. Obstacles include gender discrimination that limits access to financing, land, training and education; the absence of accurate eco-labelling for informed decision-making; the higher costs of sustainable products, which often lack the subsidy that non-sustainable products receive; concerns over quality; and cultural norms, where the desire to be ‘trendy’ can work both for and against sustainable consumption products.

These obstacles must be addressed in order to realize women’s full potential in promoting and achieving sustainable consumption goals. Women’s education and empowerment (e.g. through training, establishing consumer groups and improving their access to product information) and their increased role in decision-making are prerequisites for promoting sustainable consumption. The author warns that it should not be the responsibility of women alone to resolve the challenges that unsustainable consumption creates; men and institutions have this duty as well.

Sharp controversies with important gender implications become visible in almost every environment and sustainable development debate. In **“POPULATION, ENVIRONMENT AND HUMAN RIGHTS: A PARADIGM IN THE MAKING”**, **GITA SEN AND ANITA NAYAR** trace current controversies about population, environment and human rights to the United Nations conferences of the early 1990s. The authors build a critique of the Malthusian population model, which they note saw causal linkages between population, affluence, technology and environmental degradation, but neglected differences between groups of citizens. The paper argues that a focus on population growth rates should not mask the continued importance of consumption levels and the highly unequal distribution of affluence and associated inequalities. The authors note that social scientists have argued that the Malthusian paradigm is largely based on macro-level data and relationships without reference to the micro-level context of poor people’s lives that would explain the observed behaviour of individuals or groups—behaviour that is differentiated by economics, gender, age and other markers. The authors draw on this analysis to conclude that women’s sexual and reproductive health and rights should be at the heart of sustainable development, and that a focus on growth rates should not mask the consumption levels and the huge inequalities therein.

GENDER EQUALITY, ENERGY AND CLIMATE CHANGE

In “**LINKS BETWEEN GENDER EQUALITY, ACCESS TO SUSTAINABLE ENERGY AND CLIMATE CHANGE MITIGATION MEASURES**”, **GAIL KARLSSON AND ROSE MENSAB-KUTIN** highlight the linkages between gender, energy access and climate change actions within sustainable development. Women’s access to cleaner, more efficient energy sources and technologies for household use and productive activities is critical, since women bear a disproportionate share of the burdens of providing energy. Women need training, financing and support for business activities—including designing, producing, marketing and managing new energy products and services. Furthermore, women’s valuable experience, knowledge and ideas about climate change adaptation, mitigation, resilience and disaster risk management need to be incorporated by ensuring their decision-making and participation in climate change policies, mechanisms and funding. For the International Year of Sustainable Energy for All 2012, the UN Secretary-General has emphasized the importance of energy access for women in a global campaign. The 2011 UNDP report, *Towards an ‘Energy Plus’ Approach for the Poor*, highlights that combining energy service delivery with efforts to support income generation, with a focus on women, can help lift communities out of poverty.

Climate change concerns have been dominant in recent energy policies, sometimes overshadowing development needs. Gender-sensitive climate funds and investments could help transform women’s current fuel-collection work into sustainable energy enterprises that would simultaneously promote women’s economic and social development, reduce emissions and help build community resilience to climate change. They could also help provide sustainable energy to improve social development services such as health care and education. However, the types of projects that women’s groups have developed have generally been too small and the transaction costs too high to benefit from the Clean Development Mechanism or other climate mechanisms and funds.

Climate change has been cited by the World Health Organization as the biggest global



UN Photo/Robaton

health threat of the 21st century. In **“GENDER-SENSITIVE STRATEGIES TO ADDRESS THE CHALLENGES OF CLIMATE CHANGE ON HEALTH AND NUTRITION SECURITY”**, **CRISTINA TIRADO** describes the gender dimensions of the health risks and vulnerability to impacts of climate change. In many societies, women are particularly vulnerable to the effects of climate change, and also face social, economic and political barriers that limit their coping and adaptation capacities. At the same time, women are powerful agents of change, often playing key roles in all aspects of health care, food production and the provision of household nutrition. Although women should be at the forefront of addressing the health effects of climate change, at all levels they are insufficiently included in climate change initiatives, planning and decision-making processes.

The author advances a framework that advocates promoting gender equality in the development of climate change and health strategies. Empowering and strengthening women’s leadership and participation are central to such an approach. The author advocates

for improving health access and clean technologies; ensuring universal health care coverage and gender-sensitive health care systems; promoting gender-sensitive adaptation and mitigation strategies that generate co-benefits by improving health while reducing greenhouse gas emissions; increasing access to maternal and child health care practices and nutrition services; encouraging healthy lifestyles; and promoting improved environmental health through improvements in areas such as water, sanitation and hygiene

services. The potential co-benefits and synergies between gender, health, nutrition security and environmental objectives should be addressed, and efforts to promote ‘health in the green economy’ should be seen in the context of poverty eradication.

In **“DEMOCRATIZING FINANCING FOR SUSTAINABLE DEVELOPMENT: GENDER EQUALITY IS THE KEY”**, **LIANE SCHALATEK** argues that making development and climate financing instruments and processes more gender-responsive and equitable will help to highlight and address existing accountability and transparency gaps in global governance. The extent to which gender aspects are incorporated could be considered a litmus



UN Photo/John Isaac

KEY ACTIONS NECESSARY TO COMPREHENSIVELY MAKE CLIMATE CHANGE FUNDS MORE GENDER-RESPONSIVE

- Integrating gender equality as a guiding principle and goal into funds' design and operation;
- Developing gender-responsive funding guidelines and criteria for each thematic funding window or instrument;
- Achieving a gender-balance on all decision-making governing bodies and secretariats;
- Ensuring funds' staff has sufficient gender-expertise; stipulating the inclusion and use of gender indicators within a fund's operational and allocation guidelines;
- Requiring a mandatory gender analysis and gender budget for all project and programme proposals; integrating regular gender audits of all funding allocations;
- Establishing internal and external accountability structures, such as reporting requirements and periodic evaluations;
- Guaranteeing women's input and participation as stakeholders and beneficiaries during all stages of implementation;
- Securing funding support to enable the engagement of women's and other community and civil society groups;
- Developing best practices with robust social, gender and environmental safeguards that comply with existing human and women's rights conventions, labour standards and environmental laws; and
- Acknowledging respect for country-ownership of funding plans and proposals.



Source: L. Schalatek, 2012. "Democratizing Financing for Sustainable Development: Gender Equality is Key". In: United Nations Development Programme, Powerful Synergies: Gender Equality, Economic Development and Environmental Sustainability [this volume].

test for the success or failure of efforts to democratize post-2015 sustainable development processes. The inclusion of women and more democratic gender-responsive financing for sustainable development is not only the right thing to do, but also the most effective.

Like climate change and other environmental externalities, the care economy—predominantly women's unpaid work to support families—remains largely excluded, hidden and undervalued in the current global economic paradigm. A double mainstreaming approach to the green economy would address social and political rights and gender discrimination, compliance with existing international environmental law, and human rights principles as part of a global green investment and job creation programme for low-emission, pro-poor development. The paper emphasizes that providing adequate and predictable financing resources for gender equality is crucial to achieving existing goals and political commitments on sustainable development, including addressing climate change. In turn, regular and mandatory gender audits, gender tracking of climate funding, and more participatory decision-making within budget processes are required for a gender accounting of how climate funds are spent and whom they benefit. Gender data and data-collection capacities are needed to ensure that government promises for gender-equity action translate into practical policies and programmes. Such efforts are particularly necessary with regard to climate funding. The structure, composition and operations of climate funds also will need improvements in order to make climate financing more gender-responsive.

GENDER EQUALITY AND SUSTAINABLE DEVELOPMENT: SELECT PRIORITY AREAS

More than half of the world's population lives in urban environments, and that percentage is increasing. Migration to urban areas is no longer mainly male, and the time is long overdue for a poverty analysis to inform how urban centres are planned, managed and governed.

In **"OUR URBAN FUTURE: GENDER-INCLUSIVE, PRO-POOR AND ENVIRONMENTALLY SUSTAINABLE?"**, **PRABHA KHOSLA** calls for reflection on and assessment of gender aspects of urbanization. Such a reflection would take into account the daily context of women and men in global South cities, with large-scale informal employment and often illegal settlements without official services. Women's and girls' unpaid care work and waged labour are essential to the urban economy, yet women face limited access to assets, discrimination and safety issues, lack of employment, restricted decision-making and insufficient health services. The author introduces feminist propositions on urban planning: informing the urban planning paradigm with "the infrastructure of everyday life," including gender-sensitive planning and development, job creation and local initiatives, gender-sensitive construction and models of involvement. The author proposes an intermediate level between households and the public and commercial worlds, using neighbourhoods as a focus of people-centred planning.

Although local governments and communities have been involved in numerous environmental sustainability initiatives, they have often failed to engage low-income women and men as decision makers. Governments should support the work of non-governmental and community-based organizations for a gender-inclusive, pro-poor, environmentally sustainable future that includes implementing the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) at the municipal level. An inclusive green economy would need to be anchored in a gender-inclusive pro-poor city strategy that focuses on the livelihoods of low income women and men, and on upgrading and climate-proofing their living and working environment. Specific actions are needed on access to land and security of tenure and housing, access to infrastructure and services, secure livelihoods, safety and security, regeneration of urban environments, and enhanced political voice. Two case studies from Brazil and Bangladesh illustrate what is possible with a commitment to gender equality and poverty reduction in urban environments.

Quality education, and particularly education of girls, is critical to enhance gender equality, women's empowerment and sustainable development. In **"ADOLESCENT GIRLS AT THE TIPPING POINT OF SUSTAINABLE DEVELOPMENT"**, **DONNA GOODMAN** makes the case for gender-responsive, life-skill-based empowering education for adolescent girls in developing countries. The paper examines the links between children's rights to a

healthy environment, and quality education with women's empowerment as a whole (or more broadly). The author argues that improving adolescent girls' lives is a prerequisite for poverty eradication and sustainable development. Also, the education of boys and young men is vital to long term systemic change in gender relations. A mother's education is strongly linked to her children's health and education prospects; women are more likely to be agents of change if they have post-primary education. Therefore, investments in the education of adolescent girls, including life-skills and career training, lead to solid economic returns and may yield greater returns than any other development spending.

Girls and young women lack equitable access to public vocational training, apprenticeship and job training programmes, and are being denied crucial opportunities to participate in emerging markets and value-added activities. In 2007, the World Bank 'Youth Employment Inventory' examined 291 interventions from 84 countries. The study found that only 15 percent of youth employment programmes actively promoted inclusion of young women by targeting them as principle beneficiaries or incorporating specific measures to ensure their participation. Efforts are needed to expand training opportunities to prepare young women as well as men for inclusion in the global green economy.

Education should be recognized as a social strategy to reduce risk and mitigate climate change. The author recommends investing in girls' education, ensuring long-term funding arrangements, developing gender-specific indicators for core competencies and improving sex-disaggregated data collection and analysis on adolescent girls and their school environments. ■



UN Photo/Staton Wintter

Endnotes

- 1 United Nations, 2012. *Realizing the Future We Want for All: Report to the Secretary-General*. UN System Task Team on the Post-2015 UN Development Agenda. June. Available at: <http://www.undp.org/content/undp/en/home/librarypage/poverty-reduction/realizing-the-future-we-want/>.

GENDER EQUALITY AND SUSTAINABLE DEVELOPMENT

Charlotte West/World Bank







BECAUSE CLIMATE CHANGE IMPACTS WILL MIRROR—AND EXACERBATE—UNDERLYING GENDER INEQUALITIES, IT IS ESSENTIAL THAT POLICY MAKERS, PLANNERS AND SCIENTISTS TAKE GENDER DIFFERENTIATIONS INTO ACCOUNT IN THEIR CLIMATE CHANGE, ENERGY AND LAND-USE PLANNING, DECISIONS AND ACTIVITIES.



1

ON THE ROAD TO SUSTAINABLE DEVELOPMENT: PROMOTING GENDER EQUALITY AND ADDRESSING CLIMATE CHANGE

IRENE DANKELMAN

INTRODUCTION

Long-term awareness of humanity's dependence on the environment has been reflected in professionals' and philosophers' calls for sustainable natural resource use; these appeals date back as far as Plato (430-373 BC), Plinius (23-73 AD) and Von Carlowitz (1645-1714) (Van Zon 2002). However, for a long time interactions between human society and the physical environment were generally neglected.

More recent public and policy maker attention to the relationships between the socio-sphere and the biosphere was drawn by Rachel Carson (1962), Barbara Ward and René Dubos (1972), Dennis and Donella Meadows (1972), Gro Harlem Brundtland (1987), Wangari Maathai (2006) and millions of unnamed natural resources users and managers. Organizations such as the International Union for Conservation of Nature, the World Wildlife Fund and many other international, national and local non-governmental organizations and the scientific community played an important role in raising this awareness. These efforts increased the visibility of our dependence on limited, exhaustible and renewable natural resources, and highlighted the importance of a clean

and well-functioning environment to people's and the ecosystem's health.

Most studies, publications, presentations and related activities have not clearly differentiated between the interactions with the natural environment of diverse social groupings (such as women and men, urban and rural populations), except for some basic understanding that impoverished and marginalized groups have a much more challenging point of departure than those living in affluence. This notion was reflected in the policy discussions at the first Stockholm Conference on the Human Environment in 1972, where rich and poor countries—with their diverse interests—took very diverse positions, for example on who should bear the burden of addressing environmental degradation.

In the 1970s, some scholars started to underline that women and men play distinct roles and are affected differently by interactions between humans and the environment. Gender-specific roles, rights and responsibilities in the physical environment were first highlighted by scholars such as Esther Boserup (1970, 1989) and organizations like the Food and Agriculture Organization (regarding agriculture and forestry) and the International Union for Conservation of Nature (regarding biodiversity conservation) (Dankelman 2010). The science historian Carolyn Merchant argued that there is a major parallel between environmental degradation and the oppression of women (1980). She posits that one of the main causes of environmental degradation lies in societies' changing valuation of nature during the Enlightenment, when societies began seeing nature as something to be used, explored and exploited. At the same time, women were perceived as having inferior and serving positions in communities and households.

Women's and men's differentiated roles, rights and responsibilities in using, managing and maintaining the environment became more and more visible—although there were clear warnings by some authors to avoid biological determinism (such as women being closer to nature than men because of their biology). Since the mid-1980s, scholars, activists and development workers have been exploring this nexus between gender, environment and sustainable development (ELC 1985, CSE 1985, Cecelski 1986, Dankelman and Davidson 1988, Shiva 1988).

Although the 1987 report of the UN World Commission on Environment and Development (the Brundtland Commission), *Our Common Future*, discusses topics such as equity, growth-redistribution, poverty, essential human needs and conserving and enhancing the resource base, it pays little attention to women's rights and gender equality. Its discussion of gender issues mostly focuses on lowering fertility rates, although it occasionally demonstrates a broader awareness (e.g. noting that family planning is a basic human right of self-determination, that women and men should have equal educational opportunities and that housing projects often misunderstand women's needs) (Dankelman and Davidson 1988).

The notions about women's and men's specific relationships to the environment fed into the efforts to incorporate gender perspectives into the international environmental and sustainable development deliberations and agendas of the 1990s, including the 1992

United Nations Conference on Environment and Development (the Earth Summit). While the Convention on the Elimination of all forms of Discrimination against Women, adopted by the UN in 1979 and commonly known as the first international bill of women's rights, obliges parties to take necessary measures to ensure that women are involved in all aspects of planning for development, the environmental agenda rarely included references to gender, and women's participation in developing and implementing these was very limited. Although the Fourth International Women's Conference in Nairobi, in 1985, recognized women's contributions to environmental conservation and management, the conference could not directly influence the global environmental agenda. The Women's Conference did, however, encourage the United Nations Environment Programme and the Environment Liaison Centre (which was headquartered in Nairobi) to become engaged in the UN deliberations in Nairobi and in several regional women and environmental initiatives. In 1988, Dankelman and Davidson published *Women and Environment in the Third World: Alliance for the Future*, which—at the global level—described for the first time the diverse roles and responsibilities of women and men in environmental use and management.

The first broadly supported efforts to build a gender perspective into the sustainable development agenda started with the preparations for the 1992 Rio Conference. A broad coalition of non-governmental organizations, including the Women's Environment and Development Organization (WEDO), Development Alternatives with Women for a New Era and Worldwide, and Brazilian women's organizations such as Rede de Desenvolvimento Humano, started a broadly supported discussion on the main themes for Rio, and undertook an extensive advocacy process to mainstream gender and reshape that agenda. These efforts were reflected in the Women's Action Agenda 21, which was developed and adopted by participants from 83 countries during the WEDO-organized 1991 Miami World Women's Congress for a Healthy Planet.

The Women's Action Agenda 21 exceeded the existing scope of the women and environment agenda and criticized ongoing economic thinking and existing models and practices of development. It formed the basis for women's efforts to profoundly influence the Earth Summit negotiations. In that sense, it left the Women in Development approach and developed into a Gender and Development approach.¹

Although women's groups were disappointed with the Earth Summit's overall outcomes, from a gender perspective the results were notable. Rio Principle 20 acknowledges women's "vital role in environmental management and development. Their full participation is therefore essential to achieve sustainable development" (UNCED 1992). Women were recognized as an important major group and ally for sustainable development, and in addition to many references throughout the text, a specific chapter on women's roles was adopted in Agenda 21. The Convention to Combat Desertification and the Convention on Biodiversity referred to the importance of gender aspects in environmental conservation and management efforts. Further, the contents of the overall

THE WOMEN'S ACTION AGENDA 21

Following a visionary Preamble, the 1991 Women's Action Agenda 21 identified eleven critical areas that needed action urgently. Specific recommendations were presented for each area. The areas included:

- Democratic rights, diversity and solidarity;
- A code of environmental ethics and accountability;
- Women, militarism and environment;
- Foreign debt and trade;
- Women, poverty, land rights, food security and credit;
- Women's rights, population policies and health;
- Biodiversity and biotechnology;
- Nuclear power and alternative energy;
- Science and technology transfer;
- Women's consumer power; and
- Information and education.

actively in environmental decision-making at all levels; integrating gender concerns and perspectives into policies and programmes for sustainable development; and strengthening or establishing mechanisms at national, regional and international levels to assess the impact of development and environmental policies on women.

GROWING UNDERSTANDING OF THE NEXUS BETWEEN GENDER AND CLIMATE CHANGE

Climatic changes have always been around us, and people and ecosystems have adapted to these over millennia. It has only recently become accepted that natural fluctuations and trends are influenced by human activities. The physical effects of climate change (e.g. rising mean temperatures, variations in rainfall patterns, increased likelihood of extreme

Rio outcomes changed because of a strong women's lobby: "women do not want to be mainstreamed into a polluted stream: they want the stream to be clean and healthy" (Bella Abzug, 1920-1998, US congresswoman and co-founder of WEDO).

Given these positive results at the Earth Summit, it is remarkable that the 1992 United Nations Framework Convention on Climate Change (UNFCCC) lacks any reference to gendered aspects or the differentiated roles and positions of women and men in climate change.

During the 1995 Fourth World Conference on Women, the Beijing Declaration and Platform for Action reflected the importance of the interface between gender equality and sustainable development. It recognized that "women remain largely absent at all levels of policy formulation and decision-making in natural resource and environmental management, conservation, protection and rehabilitation, and their experience and skills in advocacy for and monitoring of proper natural resources management too often remain marginalized in policy-making and decision-making bodies, as well as educational institutions and environment-related agencies at the managerial level" (UN 1995). Three strategic objectives were identified to overcome these shortcomings: involving women

weather events) will directly and indirectly impact on peoples' and environmental health and security. In addition to being natural incidents, climatic changes also comprise manifestations of the failing arrangements and priorities of human societies.

Disasters tend to impact more heavily on those living in poverty, and other disadvantaged groups. Not only do these groups lack the assets and capacities to resiliently cope with the consequences of disasters, they also tend to live in more vulnerable situations (e.g. in disaster-prone areas or with ecologically insecure livelihoods and a great dependency on natural resources). This results in poorer health and lack of resources to avoid or escape these insecurities.

Climatic change will impact on all aspects of human security: on people's security of life, their security of livelihood (including food, water, energy and shelter, economic and ecological security), and on people's dignity—including meeting basic human rights, development of capacities and societal participation (Dankelman 2010). By impairing these securities, climatic changes will increase existing social inequalities.

Gender inequalities are among the most pervasive inequalities in the world. Although women are crucial actors in managing households, bearing and raising children, in food production and managing land, forest and water resources, their roles and responsibilities are often taken for granted. Women do not receive equal rights, opportunities or decision-making opportunities as men do. Even though in many countries remarkable progress has been made over the past decades, gender inequalities are still reflected in women's poverty, lack of resources, and the violence they meet in many societies. Because climate change impacts will mirror—and exacerbate—these disparities, it is essential that policy makers, planners and scientists take gender differentiations into account in their climate change and related energy and land-use planning, decisions and activities.

Within the context of climate change, not all women are the same. There are major differences among women of different ages, socio-economic status, race, caste, ethnic and educational backgrounds. For example, a recent study by Plan International showed that not only adult women but adolescent girls, in Ethiopia and Bangladesh in particular, were vulnerable to climatic changes (Plan 2011). When poor women lose their livelihoods, they slip deeper into poverty, and the inequality and marginalization they suffer from increases. Therefore, in debates on sustainable development and climate change, the subject of intersectionality (between factors such as gender, welfare, ethnicity, age and education) needs specific attention.

Women living in poverty are more likely to become direct victims of climate-related disasters. In this context important lessons can be learned from gender dimensions of natural disasters. Neumayer and Plümper (2007) studied natural disasters in 141 countries from 1981 to 2002 and found that poor women were more likely than men and richer women to be direct victims through mortalities and injuries. During hurricane Katrina in the US Gulf Coast in 2005, women from African-American descent (often in poorer, female-headed households), were particularly affected. In that case apart from

gender, ethnicity and poverty played an important role (Harris 2010). In Thailand, after the 2004 tsunami, landless women workers from Burma who had been working informally in the tourist industry lost their complete livelihoods as they did not have any (land and labour) rights, governmental support and social network to fall back on after the disaster (APWLD 2006). The socially constructed gender-specific vulnerabilities of women lead to the relatively higher female disaster mortality rates compared to those of men, and the lower their socio-economic status, the greater this effect. For example, in Banda Aceh in Indonesia, women made up to 70 percent of the 2004 tsunami death toll (UNIFEM 2005, Oxfam 2005).

FROM COPING TO ADAPTATION AND MITIGATION STRATEGIES

Strategies to cope with climate variations include changing cropping patterns, crops or livestock; changing diets and food preparation; adjusting energy and water use and management; adapting infrastructure (e.g. building high safe places or stronger houses); enhancing disaster preparedness, warning systems and rescue efforts; diversifying income; and migrating to less-impacted areas. When coping strategies add to communities' resilience, they contribute to climate change adaptation. With their livelihood expertise, knowledge, roles and responsibilities, women play important roles in promoting and implementing local coping and adaptive strategies. For example, women in areas of northern India in which traditional agriculture is practiced, are adopting sustainable agriculture strategies and practices such as conserving local seed varieties that add to resistance to weather fluctuations. Isravati Devi from Uttar Pradesh said, "We small landholder farmers are no longer depending on single crop farming. In a situation of drought, we also cultivate maize and groundnut, but if there is a flood situation, we erect a platform on which we spread out vegetable vines. So at least harvest is not lost entirely." Addressing climatic changes means seeing them in the totality of environmental degradation and social disintegration, and countervailing those developments by strengthened, more diverse livelihood systems, and women's and men's own agency (Negi et al. 2010).

In the semi-arid north eastern area of Bahia, Brazil, women (many in female-headed households) faced limited access to technology and technical assistance to irrigate their crops, a lack of low-cost agricultural inputs and a lack of access to capital. More than two decades ago, women took the lead in social mobilization for land rights in Pintadas. With the support of national non-governmental organizations, Rede de Desenvolvimento Humano and the Communication, Education and Information on Gender organization and the SouthSouthNorth network, women implemented the Pintadas Solar Project, an adaptation strategy focusing on solar-energy irrigation for small-scale sustainable agriculture and commercialization practices. They won the 2008 Seed Awards and became

WOMEN AND GENDER AT COP-17 IN DURBAN, SOUTH AFRICA, 2011

Particularly since the 2007 COP-13 in Bali, women from different constituencies and women's organizations have become visible at UNFCCC climate negotiations, where they organized in order to advocate for gender-responsive and positive outcomes. At the 2011 COP-17 in Durban, women's involvement had some success, securing references to women and gender across several areas: in countries' guidelines for National Adaptation Plans; in the Nairobi Work Programme that assesses impacts, vulnerability and adaptation to climate change; in information systems on Reducing Emissions from Deforestation and Forest Degradation; and in the operationalization of the 2010 Cancún Agreements, including the Green Climate Fund, the Adaptation Committee, the Standing Committee on Finance, and the Technology Mechanism, including the Climate Technology Centre and Network.

Coordinated activism organizations in the Women and Gender Constituency, supported by ally governments and UN organizations, made this advancement towards gender equality a positive outcome of Durban. Two days after the talks were scheduled to conclude, two countries agreed upon a process from 2012 to 2015 to "develop a protocol, another legal instrument or an agreed outcome with legal force under the UNFCCC applicable to all Parties," which would come into effect after 2020. There remains a question of whether or not the outcome of COP-17, this "Durban Package," is a success. The legally binding agreement that many had hoped to achieve has now been pushed to 2015. Success will be difficult if none of the efforts of this process improve the lives of the billions of women, men and children most severely impacted by climate change or protect the environment.



Source: WEDO 2011.

known as a promising model to adapt local populations to climatic changes in semi-arid regions (Corral 2010).

In Viet Nam, women play a crucial role in replanting mangrove forests in coastal areas; for example, in its Xuan Thai National Park, women became central actors in promoting ecotourism (UNDP Viet Nam 2011). Women in Nigeria's Niger Delta became extensively involved in mobilizing for social justice and for protecting their environment from wasteful oil exploration and exploitation (Odigie-Emmanuel 2010). In El Salvador, women planned to organize a hearing before the 2011 UNFCCC COP-17 in Durban, but at that time the country was hit by a severe tropical storm, so the meeting was postponed. Only women presented at that meeting, and according to Vidalina Morales, a 43-year-old woman with five children, it is self-evident that "if there is a shortage of food or lack of clean drinking water, we are the ones that need to look for solutions." The Salvadorian women asked for climate change measures that take women into account, along with recognition of their water rights and the halting of large-scale projects that negatively affect rural communities (Ayolo 2011).

Women play crucial roles in raising their voices for climate change adaptation and mitigation, but they are not fully heard or engaged yet and climate justice is still failing. Policies and projects that neglect the gender aspects of such realities not only obstruct the full potential of a gender-specific and a women's empowerment approach in reaching their adaptation and mitigation goals, but they also threaten to enlarge existing

inequalities, thereby opposing gender justice and gender equality. Another risk is that such an approach does not benefit women the way it could or should; this is obvious, for example, in the problems local women and their organizations have in accessing climate mitigation or adaptation resources or insurances, such as the financing mechanisms that stem from UNFCCC processes.

GREEN GROWTH OR SOMETHING ELSE?

Although it was developed in 1991, the Women’s Action Agenda 21 can help to identify the impending climate change crisis and other related environmental concerns (biodiversity, water, energy) as manifestations of a non-sustainable development model, one based on enlarging financial profits and wealth for a few, while increasing claims over and exploitation of an ever-decreasing pool of limited resources. Such a model increases inequality, environmental pollution and degradation and is economically unsustainable. In a critique of the dominant economic system, the Women’s Major Group argued that the current system harms women and the environment, is inequitable and unsustainable, and uses indicators that are socially and environmentally blind (Women’s Major Group 2011).

In order to countervail these developments, mitigate and adapt to climate change and enhance social equality, a fundamental transformation of economic paradigms, power and practices is needed that also advances women’s rights and global justice. Such a transformation needs strong and inspirational global, regional and local governance.

The main themes of the Rio+20 Conference—‘the green economy’ and ‘the institutional structure for sustainable development’—suggested that important progress was made in understanding the determining role that economy and governance play in shaping present-day global and local sustainable development challenges. However, the outcomes of the Rio+20 process left the strong feeling that the global community will soon return to a ‘business as usual’ approach.

In their contributions towards the Rio+20 process, members of the Women’s Major Group shared their positions on many occasions (Women’s Major Group 2012, 2011). Their input to the Zero Draft Outcome Document contribution starts with a clear vision for an equitable and sustainable world: “Social equity, gender equality and environmental justice must form the heart of sustainable development, and the outcomes of the Rio+20 UN conference in 2012.”

The Group identified measures that should promote:

- Gender equality in all spheres of our societies;
- Respect for human rights and social justice; and
- Environmental conservation and protection of human health.

The major group was “critical about the use of the term ‘green economy’. We are concerned it is too often separated from the context of sustainable development and poverty eradication. We are concerned it will be used and misused to green-wash existing unsustainable economic practices that lead to inequities and infringe on the rights of affected peoples and future generations, because it does not fundamentally and adequately question and transform the current economic paradigm.”

The Group recommended using the term ‘sustainable and equitable economy’ instead of ‘green economy’, and identified principles, objectives and indicators for its success. Principles they suggested included:

- Promotion of social equity, gender equality and intergenerational equity;
- Democracy, transparency and justice;
- Application of the precautionary principle;
- Ethical values, such as respect for nature, for spirituality and culture, and harmony, solidarity, community, caring and sharing;
- Global responsibility for global common goods;
- Environmental sustainability; and
- Common but differentiated responsibilities.

It is a positive development that the Rio+20 Outcome Document regularly mentions the green economy in the context of sustainable development and poverty eradication. Enhancing social inclusion and human welfare—particularly of women, children, poor and other vulnerable groups—is mentioned as an important aspect of such a green economy, as is maintaining the healthy functioning of the earth’s ecosystems, promoting sustained and inclusive economic growth, respecting all human rights, and benefiting and empowering all. According to the Rio+20 Outcome Document, a green economy in the context of sustainable development and poverty eradication should address concerns about inequalities and promote social inclusion (including establishing social protection floors), mobilize the full potential and ensure the equal contribution of both women and men, and continue to strive for inclusive and equitable development approaches to overcome poverty and inequality. Also in line with the concerns of many women’s groups, the Outcome Document states that governments should “reaffirm that social policies are vital to promoting sustainable development.”

In an analysis of the Rio+20 outcomes, women expressed disappointment that the Outcome Document does not clearly ensure free, prior and informed consent for all communities impacted by so-called ‘green economy’ investments. They are concerned that “a ‘green economy’ will be no more than ‘green washing’ if it is not firmly planted in a legally binding implementation of the precautionary principle” (Women’s Major

Group 2012). Also, the document lacks a clear roadmap for promoting green economies in the context of sustainable development and poverty eradication.

At a high-level event at the Rio+20 conference, women heads of state and government signed a Call to Action with concrete policy recommendations on integrating gender equality and women's empowerment in all sustainable development frameworks. Further, they pledged to use their leadership positions to advance gender equality and women's empowerment in the context of sustainable development, carrying this vision forward at Rio+20 and beyond (UN Women 2012).

Such efforts and the principles identified by the Women's Major Group could be important anchor-points for transforming dominant economic systems into a much more comprehensive and sustainable system, compared to a 'green economy'. These principles could also become important guidelines for climate change deliberations and actions. Adopting these principles would avoid failures in climate change mitigation and garner widespread support for adaptation measures that enhance women's empowerment, human rights and equality. ■

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Endnotes

- 1 The Women in Development approach evolved in the 1970s, calling for the treatment of women in development projects and targeting women, thereby seeing women's issues in isolation. The Gender and Development approach (which emerged later) is more integral and focuses on the relationship between women and men, their differences, inequalities and similarities, and tries to provide solutions for the creation of a more equitable society (IFAD 2012).

BOX 1

CREATING A DEVELOPMENT FRAMEWORK FOR THE POST-2015 AGENDA

Graça Machel

Trying to achieve sustainable development without addressing the stark impositions of inequality and discrimination on girls and women is like trying to farm without water.



UN Photo/Martine Perret

As we begin working to create a sustainable development framework for the post-2015 Millennium Development Goals period, we must take whatever steps possible to create a world where all people—women and men alike—freely enjoy their fundamental human rights. No matter their age, income or ethnic background, women and men must have the freedoms and opportunities to pursue their own paths in a world defined by equality, social responsibility and environmental integrity.

Trying to achieve sustainable development without addressing the stark impositions of inequality and discrimination on girls and women is like trying to farm without water. Without water, crops cannot thrive; without equality, development will falter and fail. Sustainable development requires integrating gender perspectives into all development sectors. Women and girls must be at the heart of a post-2015 development agenda, and specifically in the following key areas:

- **WOMEN'S PROPERTY RIGHTS.**

Barriers that block women from owning, inheriting or managing land, block progress on achieving sustainable development goals. Without equal land rights, many women will remain unnecessarily dependent on men and will lack a voice in decision-making processes. Women's land security has been linked to family health and nutrition, increased education and better access to micro-finance opportunities. Women with vested interests in land are less vulnerable to disasters—they are able to appeal for relief in their own right. Women with land rights report better participation in household decision-making and suffer fewer incidences of domestic violence.

- **GIRLS' EDUCATION.** Good quality education is the bedrock of progress, enabling ideas and livelihoods to flourish. Yet millions of girls are prevented from attaining even primary education. When we undervalue girls' education, we take away girls' right to self-determination and we rob society of the equal contributions of girls.

- **CHILD MARRIAGE.** Sustainable development cannot be achieved when young girls' opportunities are stripped from them through forced early marriage, which has a devastating impact on an estimated 10 million girls every year. This harmful practice, perpetuated by poverty and archaic social norms, places value on a girl's virtue and fertility at the expense

of her individual potential, personal development and education. We need to advocate for youth, facilitate their voices and prioritize the empowerment of girls.

- **WOMEN'S PARTICIPATION IN CONFLICT RESOLUTION PROCESSES.**

Women must be able to contribute to reconciliation, reconstruction and conflict prevention. Women's voices and active participation are crucial to achieving successful conflict resolution processes and sustainable peace. Conflict resolution processes that overlook their contributions forgo the benefits of their wisdom and insight. Women also must be protected from sexual and gender-based violence, which is often used as a form of torture or a weapon of war. Sexual and gender-based violence has a devastating impact on the lives of girls and women and undermines the recovery efforts of communities and nations. Women must be protected from this violence.

Addressing deep-rooted barriers to sustainable development requires investing in young women and girls. We must embrace and act on the knowledge that concrete social change can take place only when all members of society have equal opportunities and rights. If the post-2015 development agenda can promote the empowerment of women and girls, the scope for achievement of its goals will be unprecedented. ■

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ONE OF THE MOST FUNDAMENTAL CHALLENGES FOR THE MAINSTREAMING OF GENDER INTO THE INTERNATIONAL CLIMATE CHANGE REGIME IS THAT THE GENDER REFERENCES ARE ONLY AS STRONG AS THE TEXTS IN WHICH THEY ARE FOUND. A SECOND CHALLENGE IS THAT MAKING IT INTO THE DOCUMENTS IS JUST THE BEGINNING: MASSIVE EFFORTS ARE STILL REQUIRED TO IMPLEMENT AND ENFORCE THOSE PROVISIONS, IF ANY TRUE CHANGE IS TO OCCUR.

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2

MISSING IN ACTION: GENDER IN INTERNATIONAL ENVIRONMENTAL LAW

**PAOLO GALIZZI
ALENA HERKLOTZ**

INTRODUCTION

As the foundation for all life on earth and human endeavours, the natural world plays an integral role in human growth and well-being. Unfortunately, while the environment has supported remarkable increases in human population and living standards, many of the services the planet provides are under threat from environmental degradation and pollution, jeopardizing the development of the billions of people who still live in poverty worldwide, future generations and the very existence of our planet.¹

The impacts of this decline are not evenly spread: poor countries and vulnerable populations are disproportionately affected by environmental degradation.² Further, within those countries and groups, women bear a disproportionate burden, suffering most from lack of adequate food, water, education and access to health care.³ In the face of these challenges, women overcome obstacles and innovate on a constant basis, making them critical resources and change agents for a more sustainable world.⁴ Given that women make up half of the world's population and possess invaluable knowledge and expertise, it is imperative that women's full and equal participation and leadership be upheld in all areas of international environmental law and practice. Over the years,

specialized international rules have been adopted to contribute to protecting the environment and promoting sustainable development.⁵ This body of law has not, however, been very attentive to the role that women and gender play in achieving those goals.

This paper briefly explores the nature and evolution of global efforts to address and incorporate gender in the international environmental law regime.⁶ The paper does so by tracing the evolution of the international environmental agenda from the early 1970s to the most recent agreements. To follow this progression, the paper focuses on a selection of legal documents, including both foundational treaties—binding legal agreements that create rights and compulsory obligations between state parties—and soft law sources chosen for their prominence and significance in this field.⁷ These instruments establish the rules and boundaries for activities in the field of the environment—or, in the case of soft laws, the likely rules and boundaries to come—affording the most complete picture of where the international community stands on a given issue and may intend to head in the future.

The paper provides a short examination of selected documents adopted at the major global gatherings on the environment—the 1992 Conference on Environment and Development,⁸ the 2000 Millennium Summit,⁹ the 2002 World Summit on Sustainable Development¹⁰ and the 2005 World Summit+5¹¹—before turning to a more detailed examination of two specific treaty regimes: climate change and biodiversity. Both frameworks are reviewed in terms of their substantive gender commitments (or lack thereof). These key documents amply demonstrate the often negligible role accorded to gender concerns and highlight the need to strengthen the focus and role of gender in international environmental law. Furthermore, integrating a gender perspective into international legal instruments is merely a first step. Without meaningful implementation and enforcement, such provisions have no practical impact.¹²

GENDER IN SELECTED DOCUMENTS ADOPTED AT MAJOR INTERNATIONAL CONFERENCES ON THE ENVIRONMENT: FROM EXCLUSION TO NOMINAL INCLUSION

International environmental law is a relatively new field. In its modern understanding, it traces its origin to the 1972 Stockholm Conference on the Human Environment.¹³ While Stockholm was critical for linking society and the environment, it did not recognize the unique needs or contributions of women: The many documents it produced are decidedly gender-neutral, featuring no mention of gender or women.¹⁴ Stockholm was followed by a flurry of activity in international environmental law-making, including several landmark gatherings where, at regular intervals, the international community met to take stock of the progress (or lack thereof) in implementing its environmental

agenda. This section briefly examines the evolution of the gender/environment debate in selected legal documents adopted at key global environmental conferences from the 1992 Earth Summit to the 2005 World Summit.

THE 1992 EARTH SUMMIT

After Stockholm, the cause of women's empowerment and equality took off.¹⁵ The 1992 Earth Summit arguably marked the first recognition of gender in international environmental law, as evidenced by the references found in the primary documents adopted at the Summit. In particular, the Rio Declaration¹⁶ included new language specifying that “women have a vital role in environmental management and development. Their full participation is therefore essential to achieving sustainable development.”¹⁷ Agenda 21,¹⁸ with an entire chapter dedicated to ‘Global Action for Women Towards Sustainable Development’,¹⁹ likewise included women among nine “major groups” whose commitment and genuine involvement were deemed critical to the effective implementation of its objectives, policies and mechanisms.

The changes the Earth Summit had called for would require time. Meanwhile, pressures on the environment continued to increase. By the 1997 Earth Summit+5, the state of the global environment had deteriorated further: While “[s]ome progress has been made in terms of institutional development, international consensus-building, public participation and private sector actions... Overall... trends are worsening.”²⁰ In the parallel international track on gender, similar conclusions were being reached: The Beijing Plan for Action that was adopted at the Fourth World Conference on Women in 1995²¹ details how the impact of this ongoing decline was especially felt by women;²² and that efforts to integrate gender into the environmental field had fallen far short.²³ In an attempt to address these shortcomings, the international community pledged to redouble efforts to reverse harmful trends and promote sustainable development, including activities to address and incorporate gender. The Earth Summit+5 Outcome Document²⁴ contains 15 references to women, reiterating the need and commitment to promote women's involvement, empowerment, equality and equity in sustainable development policy and practice.²⁵ The momentum from this recommitment, in turn, fed into the negotiations of the international agenda for the 21st century at the 2000 Millennium Summit.

THE 2000 MILLENNIUM SUMMIT AND THE MILLENNIUM DEVELOPMENT GOALS

Both gender equality and the environment figured prominently at the Millennium Summit. The Millennium Declaration²⁶ includes ‘respect for nature’ as one of six fundamental values deemed essential to international relations in the twenty-first century.²⁷ Gender, meanwhile, features in two of the other values enumerated: freedom

and equality.²⁸ Unfortunately, however, the explicit inclusion of women observed in Rio and Rio+5 is not found in the environmental paragraphs here.

The separation of gender and environment persists in the Millennium Development Goals (MDGs), the set of concrete targets and timetables that were developed to enable the international community to measure the progress made in implementing the Millennium Declaration.²⁹ While the environment and women are both featured in the MDGs, they are treated as separate rather than linked priorities.³⁰ Significant shortfalls were also noted³¹ in the lead up to the 2002 World Summit on Sustainable Development, at which the international community would gather again to assess the progress made on the Rio principles and plan of action 10 years after the Earth Summit. Consequently, it is unsurprising that the World Summit on Sustainable Development rang with calls to make good on the laudable Rio goals for gender integration.

THE 2002 WORLD SUMMIT ON SUSTAINABLE DEVELOPMENT

The World Summit on Sustainable Development produced the Johannesburg Declaration³² and Plan of Implementation,³³ and gender figures prominently in both, thanks to the tireless efforts of women's rights advocates. Principle 20 of the Johannesburg Declaration proclaims a commitment to "ensuring that women's empowerment, emancipation and gender equality are integrated in all the activities encompassed within Agenda 21, the Millennium Development Goals and the Plan of Implementation of the Summit."³⁴ The Plan of Implementation also presents a reasonably engendered strategy, particularly in the chapter on poverty alleviation.³⁵ The document contains more than 45 references to women and gender across a variety of subjects, ranging from eliminating violence and discrimination, to agriculture, biodiversity, education and access to health services, land and other resources.

The mention of gender considerations would appear to reflect a growing commitment and consensus on the need to recognize and involve women. Further evidence can be found in the Commission on Sustainable Development's 2003 decision to make gender a cross-cutting issue in all its work through 2015.³⁶ Following a successful push from women's organizations and advocates, the United Nations Development Programme (UNEP) soon followed suit, adopting a decision that called upon governments and UNEP itself to mainstream gender into all environmental policies and programmes, assess the effects of environmental policies on women, and integrate gender equality and environmental considerations into their work, at the 23rd session of its Governing Council in 2005.³⁷ A few months later, in July 2005, the United Nations Economic and Social Council (ECOSOC) passed a similar resolution calling upon all UN entities to mainstream a gender perspective in all the policies and programmes of the UN system.³⁸ That same year, the international community convened in New York to assess the implementation of the Millennium Declaration five years on.

THE 2005 WORLD SUMMIT

The 2005 World Summit continued to champion the integration of gender. An entire subpart under the development agenda is entitled ‘Gender equality and empowerment of women’³⁹ and emphasizes the importance of gender mainstreaming.⁴⁰ Critically, however, this subpart makes no mention of the environment. The provisions on the environment mirror this omission: Although gendered terms appear more than 40 times across a range of topics—including education, employment, human rights, rule of law, and prevention and resolution of conflicts, for which gender receives another dedicated subpart⁴¹—they are conspicuously absent from the nine paragraphs under the subpart ‘Sustainable development: managing and protecting our common environment’, which contains no reference to women or gender.⁴² At the 2005 World Summit, the international community largely turned its back on the vital roles and needs of women in the field of the environment. Sadly, this prevailing trend is also observable in the law surrounding one of the global environmental problems that receives the greatest attention in international law and policy circles: climate change.

A LAGGING REGIME FOR GENDER AND THE ENVIRONMENT: THE FRAMEWORK CONVENTION ON CLIMATE CHANGE⁴³

The United Nations Framework Convention on Climate Change (UNFCCC) was adopted at the 1992 Earth Summit. Notwithstanding the considerable attention paid to women’s issues at the summit, the UNFCCC makes no reference to women or gender equality, nor does the only protocol to the Convention to date, the 1997 Kyoto Protocol.⁴⁴ These omissions are all the more disturbing in light of the reality that the effects of climate change are “superimposed on existing vulnerabilities,”⁴⁵ including gender disparities, and that women have a critical contribution to make as leaders and innovators in the fight against climate change.⁴⁶

Across the globe, women suffer enduring inequalities with regard to income, education, and access to information and resources.⁴⁷ The very same disparities in wealth and opportunity that constrain women’s lives and livelihoods on a daily basis also make it harder for them to respond to climate change. Women constitute the majority of the world’s poor and depend most on natural resources.⁴⁸ They may be further constrained by socio-cultural norms that limit their labor, mobility and input in family and community decision-making, thereby affecting women’s capacity to address and adapt to climate change.⁴⁹ At the same time, straining constantly to overcome the myriad economic, political and social barriers they face makes women some of the most effective agents and architects of change.⁵⁰ It is crucial, therefore, that women not be treated as passive victims but, rather, as critical participants in the development of gender-sensitive strategies for climate change mitigation and adaptation.

The international climate change regime has been slow in integrating gender into its policies and processes. Without any systematic incorporation of a gender dimension in the UNFCCC or Kyoto Protocol, women have long been an afterthought in this system, their needs addressed only in bits and pieces. A coalition of women's organizations created a 'Solidarity in the Greenhouse' forum at the first meeting of the Conference of the Parties to the UNFCCC (COP1) in Berlin in 1995, but little came of the initiative after the conclusion of the meeting.⁵¹

Six years later, COP7 adopted a decision on improving the participation of women in the representation of the parties, but its scope was limited to monitoring and increasing the election of women to convention posts and bodies.⁵² The Intergovernmental Panel on Climate Change (IPCC), the scientific intergovernmental body tasked with assessing the current state of climate change science, published its third assessment report that same year, acknowledging the role of gender in shaping people's vulnerability and adaptation to climate change.⁵³ The first official side event on gender was held the following year (2002) at COP8 in New Delhi.⁵⁴

Nonetheless, while a dedicated lobby of women's organizations has worked tirelessly to coordinate exhibition booths, workshops and meetings at all the major international climate change gatherings held since, the regime has been slow to respond. Some scholars have attributed this lack of attention to a perceived need on the part of negotiators to focus on more 'universal' issues.⁵⁵ Fortunately, thanks to the tireless efforts of expert advocates, gender is finally beginning to receive greater attention and treatment in this important regime.

COP13 in Bali in 2007 featured five formal side events dedicated to gender issues, including one on 'Levers of Global Security: Examining How a Changing Climate Impacts Women', at which the United Nations Development Programme (UNDP) and UNEP joined leading environmental and women's organizations, the International Union for Conservation of Nature (IUCN) and the Women's Environment and Development Organization (WEDO), to launch the joint Global Gender and Climate Alliance.⁵⁶ COP13 also saw the launch of GenderCC – Women for Climate Justice, a global network of women and gender activists and experts that has played an important role in coordinating messages and efforts.⁵⁷ In 2009, gendered language finally appeared in the outcome documents of COP15 in Copenhagen,⁵⁸ attesting that "the effects of climate change will be felt most acutely by those parts of the population that are already vulnerable owing to youth, gender, age or disability."⁵⁹ Furthermore, the Parties acknowledged the need for "gender equality and the effective participation of women,"⁶⁰ and called for gender sensitivity and consideration in efforts on adaptation,⁶¹ capacity building⁶² and deforestation.⁶³ While critics protested a persistent view of women as more 'victims' than 'stakeholders', as well as their conspicuous exclusion from the critical documents on mitigation and financing,⁶⁴ Copenhagen was nonetheless a milestone that marked the first official mention of women and gender in the climate change regime.

Gender held its place the following year in Cancún, with at least 10 references in the conference's outcome documents, albeit in the same general areas as before.⁶⁵ At

the most recent COP17, held in Durban in 2011, outcome documents featured even more gendered terms and provisions, and also referenced the need for greater gender equality under UNFCCC in general.⁶⁶ Most critically, gender appears in the decision text on the Green Climate Fund, finally breaking into the financing arrangements under UNFCCC.⁶⁷ Looking forward, gender sensitivity and participation also made their way into the decision on national adaptation plans, a relatively new mechanism in the international climate change regime.⁶⁸ In spite of these advances, gender still needs to be addressed and incorporated more systematically as a cross-cutting issue.

One of the most fundamental challenges for the mainstreaming of gender into the international climate change regime is that the gender references are only as strong as the texts in which they are found. Climate change, by its very nature, threatens both the ecological and economic systems on which our very livelihoods depend, and arriving at a true consensus on how to address it has, so far, proven impossible. A second challenge, made clear in the preceding discussion of the greater international environmental law system, is that gender issues making it into documents is just the beginning. Massive efforts are still required to implement and enforce those provisions, if any true change is to occur. The challenge of turning great words into concrete actions can be observed under the UNFCCC sister convention, the 1992 Convention on Biological Diversity.

A PROMISING REGIME FOR WOMEN AND THE ENVIRONMENT: THE CONVENTION ON BIOLOGICAL DIVERSITY⁶⁹

Biological diversity refers to the variety of all forms of life, within and between species and ecosystems.⁷⁰ Biodiversity is a critical issue for all life on earth; however, biodiversity loss is skyrocketing worldwide, requiring the contribution of all for its preservation.⁷¹ For women, in particular, biodiversity is a source of survival, well-being and empowerment, and requires their knowledge and participation to preserve it.⁷² Right from the start, the international regime for biodiversity conservation has recognized the role of women. The preamble to the 1992 Convention on Biodiversity (CBD) affirms “the vital role that women play in the conservation and sustainable use of biological diversity,” and “the need for the full participation of women at all levels of policy-making and implementation for biological diversity conservation.”⁷³ The CBD system is among the most nominally engendered regimes in international environmental law.

A full decade ahead of the UNFCCC bodies, the Conference of the Parties to the CBD’s Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) introduced an early reference to women at its second meeting in Montreal in 1996, in a provision on biodiversity in agriculture.⁷⁴ At COP3 the following year, the parties adopted two engendered decisions: one on conservation and the sustainable use of agricultural biological diversity, recognizing that many farmers are women and called

on parties to mobilize farming communities with specific reference to gender roles;⁷⁵ and the second on CBD article 8(j), addressing traditional knowledge, innovations and practices and calling for gender representation in the selection of funded workshop participants.⁷⁶ A few years later, in 1999, the fourth SBSTTA meeting produced another recommendation that referenced gender—this time, in the context of sustainable biological resource use and tourism, including the recognition that tourism may affect gender relationships by offering different employment opportunities to women and men.⁷⁷ At its fifth meeting in Montreal in 2000, the SBSTTA included gender balance among the considerations it recommended that parties review in composing *ad hoc* technical expert groups, subsidiary bodies, and the roster of experts.⁷⁸ Later that same year, the Parties gathered in Nairobi for COP5, adopting the SBSTTA tourism assessment,⁷⁹ along with two other decisions that spoke to the need for gender balance in the expert roster,⁸⁰ and the increased participation of women in the Article 8(j) programme of work.⁸¹ In 2002 and 2004, the Parties adopted decisions that included gender among the social factors that may affect traditional knowledge;⁸² nonetheless, the Parties and other participants recognized that still not enough was being done to integrate women’s practices, knowledge and interests. In March 2006, the Executive Secretary of the Convention appointed a Gender Focal Point,⁸³ in line with gender mainstreaming directives adopted by ECOSOC and the UNEP Governing Council in 2005.⁸⁴ The following July, the Ad Hoc Open-ended Working Group on the Review of Implementation on the Convention met for the second time in Paris, and adopted a report that, in part, urged the Parties to, *inter alia*, promote the mainstreaming of gender considerations in developing, implementing and revising their national and regional biodiversity strategies and action plans.⁸⁵

In response to this mounting pressure for greater integration of gender in the CBD system, the CBD Secretariat adopted a dedicated plan to stimulate and facilitate efforts to overcome constraints and take advantages of opportunities to promote gender equality.⁸⁶ The Gender Plan of Action recognizes gender mainstreaming as “the primary methodology for integrating a gender approach into any development or environmental effort” and sets forth an ambitious programme to truly mainstream gender in CBD work. The plan identifies four strategic objectives:

1. To mainstream a gender perspective into CBD implementation and the CBD Secretariat work;
2. To promote gender equality in achieving the objectives of CBD and later instruments;
3. To demonstrate the benefits of gender mainstreaming in biodiversity conservation, sustainable use and benefit sharing; and
4. To increase the effectiveness of the CBD Secretariat work.⁸⁷

The plan then outlines four spheres of activities—policy, organizational, delivery and constituency, each with its own subsets of targets, actions/steps and indicators⁸⁸—to address gender concerns over the period from 2008 through 2012.⁸⁹

Since the plan’s 2008 adoption, the CBD Secretariat has developed technical

guidelines for mainstreaming gender into National Biodiversity Strategies and Action Plans.⁹⁰ Building on the CBA Secretariat dedication to gender efforts, COP10 adopted a decision in 2010, urging the parties to take heed of these guidelines, requesting that the Secretary cooperate in efforts to develop clear indicators to monitor progress within the broader international community; and calling for gender mainstreaming in all CBD programmes of work.⁹¹

On paper, some positive steps have already been recorded. Namely, the preamble of the 2010 Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization⁹² recognizes “the vital role that women play in access and benefit-sharing and affirming the need for the full participation of women at all levels of policy-making,” while the body of the protocol contains several references to women in the context of traditional knowledge, capacity building, and financing. Laudable provisions, however, do not automatically translate into tangible results, and much work remains to be done to deliver on these promises.

CONCLUSION

In general, international environmental legal instruments have paid insufficient attention to the role that women and gender play in protecting the environment and promoting sustainable development. In most cases, international environmental documents barely mention women or gender. When references are made, they tend to be very broad and, therefore, of little practical use or impact. A few international environmental instruments have, however, made some progress in incorporating provisions on women and gender in a meaningful way and should serve as models for future law-making in this field.

The latest major global gathering on the environment, the United Nations Conference on Sustainable Development (UNCSD) held in Rio de Janeiro in June 2012, recognized gender equality and women’s empowerment as a cross-cutting issue in sustainable development.⁹³ Marking the respective 10th and 20th anniversaries of the World Summit on Sustainable Development and the United Nations Conference on Environment and Development, Rio+20 gathered the international community together to recommit to the sustainable development agenda.⁹⁴ The conference outcome document, ‘The Future We Want’,⁹⁵ incorporates women’s critical roles and requirements in greater depth and breadth than any predecessor and positions gender equality to receive the dedicated effort and attention it so strongly deserves.⁹⁶

‘The Future We Want’ contains close to 100 gendered terms, naming women among the major groups and other stakeholders whose role and importance is recognized early on,⁹⁷ and including Gender Equality and Women’s Empowerment as a thematic area and a cross-sectoral issue under its Framework for Action and Follow-up.⁹⁸ The international community pledges to, *inter alia*, accelerate the implementation of past agreements, including the Convention on the Elimination of Discrimination against Women and the

Beijing Platform, and support the prioritization of measures to promote women's equality and empowerment across all sectors.⁹⁹ References to mainstreaming gender equality and women's empowerment are also found across several other thematic areas, such as: the green economy; food security and nutrition and sustainable agriculture; water and sanitation; energy; oceans and seas; disaster risk reduction; and desertification, land degradation and drought.¹⁰⁰ The professed commitment to promote women's equality and empowerment throughout the document and across so many environmental issues is positive and encouraging, and represents a significant victory for women and gender equality.

Like many of the instruments it follows, however, the Rio+20 outcome document is non-binding. Reaching a consensus on these issues is as challenging, if not more so,¹⁰¹ than ever and has once again led to the adoption of softer legal rules than one might desire. Nonetheless, the usefulness of such soft law instruments should not be dismissed, as they can be a first step towards adopting stronger legal provisions in the future.

Women and gender considerations ought to be central in the drafting of international environmental law, with the inclusion of specific provisions and matching commitments for their practical implementation. While law alone cannot provide all the answers to addressing the complex role that women and gender aspects play in promoting environmental protection and sustainable development, the exclusion of legal rules considering women and gender roles and contributions make the realization of these goals harder, if not impossible, to achieve. ■

Endnotes

- 1 One of the most comprehensive assessments of the health of planet is the 2005 'Millennium Ecosystem Assessment', which drew on over 1,300 experts from ninety-five countries in concluding that human activities are endangering the earth's capacity to sustain current and future generations. The complete set of reports can be accessed at <http://www.millenniumassessment.org>.
- 2 The 'Millennium Ecosystem Assessment' also documents how ecosystem decline harms human well-being and is a principal factor causing poverty. See Millennium Ecosystem Assessment, *Ecosystems and Human Well-Being, Synthesis*, pp. 49-63 (2005), available at: <http://www.millenniumassessment.org/documents/document.356.aspx.pdf>. See also, UNDP, UNEP, World Bank and World Resources Institute, *World Resources 2005 -- The Wealth of the Poor: Managing Ecosystems to Fight Poverty*, (2005), available at: http://pdf.wri.org/wrr05_full_hires.pdf.
- 3 United Nations Environment Programme, *Women and the Environment*, p. 11-15 (2004). An in-depth analysis of the critical links between gender and environment is beyond the scope of this article; however, see OECD, *Gender and Sustainable Development: Maximising the Economic, Social and Environmental Role of Women* (2008); United Nations Environment Programme, *Women and the Environment* (2004); Braidotti, Rosi, Ewa Charkiewicz, Sabine Häusler and Saskia Wieringa, *Women the Environment and Sustainable Development: Towards a Theoretical Synthesis*, London: Zed Books (1994); Dankelman, Irene and Joan Davidson, *Women and the Environment: Alliance for the Future*, London: Earthscan (1988).
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- 5 For an overview of the history of international environmental law, see Birnie P., Boyle A. & Redgwell C., *International Law and the Environment*, New York, NY, USA: Oxford (2009); Bodansky D., Brunnee J. & Hey E., *The Oxford Handbook of International Environmental Law*, New York, NY, USA: Oxford (2008); Brown Weiss E.B. et al. *International Environmental Law and Policy*, New York, NY, USA: Aspen Publishers (2006); Guha, R. *Environmentalism: A Global History*, New York, NY, USA: Longman (2000); Hunter D., Salzman J. & Zaelke D., *International Environmental Law and Policy*, New York, NY, USA: Foundation Press (2006); Kuokkanen, T. *International Law and the Environment: Variations on a Theme*, The Hague, NL: Kluwer Law International (2002); Sands P., *Principles of International Environmental Law*, Cambridge, UK: Cambridge (2003).
- 6 The focus of this article is exclusively the role of "gender" in international environmental law; however, gender has clearly featured prominently in other fields of international law, for example international human rights law, which are outside the scope of this piece.
- 7 For further discussion of the definition and impact of hard vs. soft law see Abbott, Kenneth W., and Duncan Snidal, *Hard and Soft Law in International Governance*, 54 *International Organization* 421(2000); and COMMITMENT AND COMPLIANCE: THE ROLE OF NON-BINDING NORMS IN THE INTERNATIONAL LEGAL SYSTEM (Dinah Shelton ed., Oxford 2000).
- 8 See United Nations Conference on Environment and Development, June 3-14, 1992, Report of the United Nations Conference on Environment and Development, Vols. I-III, U.N. Doc. A/Conf.151.26.Rev.1 (June 25, 1993), available at http://www.un.org/esa/dsd/resources/res_docukeyconf_eartsumm.shtml.

- 9 See United Nations Millennium Declaration, G.A. Res. 55/2, U.N. Doc. A/RES/55/2 Millennium (Sept. 18, 2000), available at <http://www.un.org/millennium/declaration/ares552e.htm>.
- 10 See World Summit on Sustainable Development, Aug. 26-Sept. 4, 2002, Report of the World Summit on Sustainable Development, U.N. Doc. A/ Conf.199/20, available at <http://daccess-dds-ny.un.org/doc/UNDOC/GEN/N02/636/93/PDF/N0263693.pdf?OpenElement>.
- 11 See 2005 World Summit Outcome, G.A. Res. 60/1, U.N. Doc. A/RES/60/1 (Oct. 24, 2005), available at <http://www.un.org/summit2005/documents.html>.
- 12 A thorough discussion of the implementation and enforcement challenges surrounding international environmental laws is beyond the scope of this article; however, for further discussion, see: Philippe Sands, *Principles of International Environmental Law*, ch. 5 (2d ed. 2003); Patricia Birnie & Alan Boyle, *International Law and the Environment*, ch. 4 (2d ed. 2002); Oran R. Young (Ed.), *The Effectiveness of International Environmental Regimes: Causal Connections and Behavioral Mechanisms* (MIT, 1999); James Cameron, Jacob Werksman and Peter Roderick, *Improving Compliance with International Environmental Law* (Earthscan, 1996).
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- 14 United Nations Conference on the Human Environment, Report of the UN Conference on the Human Environment, UN Doc. A/ CONF.48/14 (1972).
- 15 1975 saw the first United Nations World Conference on Women in Mexico City (United Nations World Conference on the International Women's Year, Report of the World Conference on the International Women's Year UN Doc. E/CONF.66/34 (1975)), and the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) was adopted in 1979 (Convention on the Elimination of all Forms of Discrimination Against Women, G.A. Res. 34/180, 34 U.N. GAOR Supp. (No. 46), U.N. Doc. A/34/46, art. 2(a-b, f-g) (1980).
- 16 United Nations Conference on Environment and Development, Rio de Janeiro, Braz., June 3-14, 1992, Rio Declaration on Environment and Development, Annex I, U.N. Doc. A/Conf.151/26 (Vol. I) (Aug. 12, 1992), [hereinafter Rio Declaration] available at <http://www.un.org/documents/ga/conf151/aconf15126-1annex1.htm>.
- 17 Rio Declaration, Principle 20.
- 18 United Nations Conference on Environment and Development, Rio de Janeiro, Braz., June 3-14, 1992, Agenda 21, [hereinafter Agenda 21] available at <http://www.un.org/esa/sustdev/documents/agenda21/english/Agenda21.pdf>.
- 19 Id. at Chapters 23 and 24.
- 20 Programme for the Further Implementation of Agenda 21, Para 9. G.A. Res. 19/2, U.N. GAOR, 19th Spec. Sess., 11th plen. Mtg., U.N. Doc. A/Res/S-19/2 (Sept. 19, 1997), available at <http://www.un.org/documents/ga/res/spec/ares19-2.htm>.
- 21 Beijing Platform for Action, Report of the Fourth World Conference on Women (Beijing, 4-15 September 1995) A/CONF.177/20, [hereinafter Beijing Platform] available at <http://www.un.org/esa/gopher-data/conf/fwcw/off/a-20.en>.
- 22 Beijing Platform, Para. 34. For a discussion of efforts to integrate women and gender equality in international environmental law after Rio, see Minu Hemmati, *Women and Sustainable Development: From 2000 to 2002*, in *EARTH SUMMIT 2002: A NEW DEAL* 65, 68-70 (Felix Dodds ed., 2000); Annie Rochette, *Transcending the Conquest of Nature and Women: A Feminist Perspective on International Environmental Law*, in *INTERNATIONAL LAW: MODERN FEMINIST APPROACHES* 203, 216-220 (Doris Buss and Ambreena Manji eds., 2005).
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BOX 2

CONVENTION ON THE ELIMINATION OF ALL FORMS OF DISCRIMINATION AGAINST WOMEN COUNTRY REPORT ANALYSIS OF ENVIRONMENTAL-SUSTAINABLE DEVELOPMENT LINKAGES

Itzá Castañeda and Piedad Martin

This table represents an analytical exercise on ten Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) country reports. To contextualize each country in terms of human development and gender equality, it references the indices presented in UNDP's Human Development Report 2011. The ten CEDAW reports selected for inclusion in this analysis were limited to those submitted to CEDAW after 2007, the year in which the 13th Conference of the Parties on Climate Change took place in Bali, Indonesia.¹

COUNTRY	YEAR REPORT	HUMAN* DEVELOPMENT	HUMAN DEVELOPMENT INDEX* RANK	GENDER INEQUALITY INDEX* RANK	OBSERVATIONS
Norway	2010	Very High	1	6	No mention of energy, climate change, the environment, sustainable development, natural resources, water, food or land tenure. Recognizes the distinct development contexts of rural and urban women.
Australia	2009	Very High	2	18	No mention of energy. The report acknowledges climate change as a global challenge but only links rural women to environmental challenges. Sustainability is linked to health and exports, but very little in relation to the environment. Based on Article 14 of CEDAW, the report properly contextualizes rural-urban differences.
Singapore	2009	Very High	26	8	No mention of energy, climate change or sustainable development. The report presented issues related to water supply, agrarian reform and land resettlement schemes. No mention to differences between rural and urban contexts.
Mexico	2010	High	57	79	No mention of energy or climate change. Mentions programmes, projects and activities related to sustainable development, particularly with regard to indigenous groups. Actions by the government in formulating gender-based programmes remain disconnected among sectors and are not measured or evaluated. Women are listed as beneficiaries, not as agents of change. The report thoroughly documents programmes and projects targeted for rural women including fisheries, natural protected areas, land tenure and food security among others. These are mainly linked to the indigenous population. The urban context is less documented.

COUNTRY	YEAR REPORT	HUMAN* DEVELOPMENT	HUMAN DEVELOPMENT INDEX* RANK	GENDER INEQUALITY INDEX* RANK	OBSERVATIONS
Russian Federation	2009	High	66	59	No mention of climate change, sustainable development, environment or natural resources. The report presents some statistics in relation to water and energy services. Land is mentioned in relation to land property and the Russian Land Code. It strongly documents programmes and projects targeted for rural women. Their main objective is poverty alleviation. The urban context is less documented. Problems are not related to environmental issues.
Costa Rica	2010	High	69	64	The report is critical of the closure of the Gender Unit of the Ministry of the Environment and Energy. ² Sustainability is rarely linked to the environment. The report is critical of steps taken to advance women's progress but does not measure or evaluate the impact of the gender-based programmes it lists. It distinguishes the rural and urban contexts and highlights an Urban Sustainable Development programme.
Jordan	2010	Medium	95	83	No mention of energy or climate change. It mentions issues relating to waste, water supply, drinking water, land registration, land ownership and forested lands. The report properly contextualizes the rural-urban differences and acknowledges women's development in different ecosystems.
South Africa	2009	Medium	123	94	Energy is not presented as a key input for development. The report does integrate sustainable development with environmental challenges. It lists gender-based programmes in relation to water supply and sanitation, waste management, land ownership, landless people and resettlement schemes. It does not measure or evaluate their impact. The report mentions progress made in capacity building work sessions with regard to the Integrated Sustainable Rural Development Plan and Urban Renewal Plan.
Kenya	2010	Low	143	130	No mention of energy or climate change. Programmes related to water management, sanitation and supply, land titles, land property and land distribution are listed vaguely and are not measured or evaluated. Given that 80 percent of the population lives in rural areas, the report emphasizes this context.
Côte d'Ivoire	2010	Low	170	136	No mention of energy, climate change or natural resources. The report links sustainable development to water supply and management. It recognizes water as a critical issue for development. It properly contextualizes urban and rural differences despite the fact that the majority of their population lives in rural areas.

Source: Authors' elaboration.

Endnotes

- 1 It is important to note that at its 55th session (2011), the Commission on the Status of Women encouraged governments to integrate a gender component into their periodic reporting to the United Nations Framework Convention on Climate Change.
- 2 The Gender Unit of the Ministry of the Environment and Energy was in operation for eight years and issued an official gender policy for the sector, but the unit's position began to weaken during the last administration, which ultimately led to its closure. The closure of the unit leaves a gap that reduces capacity for providing assistance to organizations formed by poor, rural women who are fighting for an environment that will ensure quality of life for present and future generations.

BOX 3

WHAT ARE WE MEASURING?

Itzá Castañeda and Piedad Martin

Recent efforts to develop gender indicators related to the environment, sustainability and climate change policy have helped shed light on women's vital role as agricultural producers and as agents of food and nutritional security. The indicators, primarily focused on rural issues, provide insight into how women's lower access to productive assets (e.g. disparities in land ownership, financial services and training) limits their ability to participate in collective actions or to ensure household security (FAO 2009). The large majority of these indicators continue to emphasize issues at the rural level. Advancements on gender equality and sustainable development indicators in urban spheres are less documented.

International organizations have observed the importance of improving measurement techniques in order to provide sex-disaggregated and gender-sensitive data. For example, a UNDP review of gender considerations in national Millennium Development Goal reports concluded that in order to strengthen reporting on MDG Goal 7 (related to the environment), efforts should be made to provide "sex-disaggregated data and information on access to water, sanitation and housing ... and identifying and using alternative data sources such as reports on urban conditions by UN agencies, civil society organizations and citizen's groups" (UNDP 2005).

In its preparations for Rio+20, the Women's Major Group recognized that "gender equality, environmental impact and social indicators should be added to GDP as a basis for economic policy decisions. Indicators to show gender impacts should be added and countries should commit to using them and reporting on them" (Women's Major Group 2011). Not only should such indicators be developed, but it is also necessary to reconsider how economic development is defined and measured in general. Traditional measurements of economic development, such as GDP, tend to overemphasize activities that have monetary value. Planning, implementing and assessing economic development would benefit from including measurements such as environmental quality, the value of social services and other non-economic aspects.

When analysing forms of measurement and the availability of data and statistics, the *World's Women 2010: Trends and Statistics* identified several issues (UNDESA 2010). Data to assess the capability of women and men to protect local natural resources are not available. For example, there is little information on access to environment-related practical knowledge, and there is a dearth of sex-disaggregated or gender-sensitive data on rates of participation in natural resource management.

The lack of data on unpaid work and services constrains accurate measurement of women's participation in the economy. Time-use surveys can be used to create monetary measures of unpaid work, and then facilitate its integration into conventional economic measures.

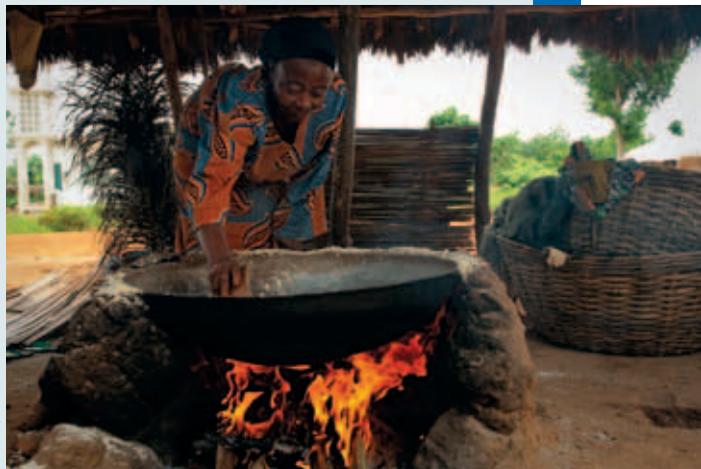
The lack of data on unpaid work and services constrains accurate measurement of women's participation in the economy. Time-use surveys can be used to create monetary measures of unpaid work, and then facilitate its integration into conventional economic measures. These tools still need further development—in most cases, time-use data related to environmental issues is limited to measuring the time that men and women spend collecting non-timber forest products and fetching water and firewood for the home. Time-use surveys are inadequate to account for the complex realities of paid and unpaid work and services, including those related to environmental activities (e.g. forest management, land restoration or selection or seed storage).

Improving forms of measurement will aid governments in gauging how gender and environmental policies are implemented and related, and how these add to economic growth and sustainable development.¹ ■

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Endnotes

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GENDER EQUALITY, SUSTAINABLE CONSUMPTION AND THE 'GREEN ECONOMY'

Joydeep Mukherjee/UNDP Picture This





“THE COMBINATION OF CLIMATE CHANGE’S DISPROPORTIONATE IMPACTS ON THE POOR AND THE CONTEXT OF WOMEN’S ROLES IN THE POOREST COUNTRIES WILL RESULT IN WOMEN BEARING A SUBSTANTIAL ADAPTATION BURDEN.”

3

GENDER, GROWTH AND ADAPTATION TO CLIMATE CHANGE

STEPHAN KLASSEN

CLIMATE CHANGE IMPACTS ON THE POOR

Climate change science is conclusive that, without a dramatic change to the volume of greenhouse gas emissions, the world will experience higher mean temperatures (upwards of 3 degrees Celsius by 2100), with attendant increases in sea levels, changes in regional climates and increases in the severity of extreme weather event (IPCC 2012, IPCC 2007a). The extremely slow progress in negotiating a global agreement to achieve such a dramatic decrease in emissions and the very modest progress in changing emission pathways means that climate change adaptation is an urgent priority. While there remains a substantial amount of uncertainty regarding the extent of impacts on different parts of the world, it is likely that the poorest regions of the world—and the poorest people within those regions—will be the most affected by climate change (IPCC 2007b, World Bank 2010, UNDP 2008).

Four factors play a role in these vulnerabilities. First, the poor are concentrated in tropical and subtropical regions, where increases in average temperatures and the frequency of extreme weather events (droughts and floods in particular) will be the largest (IPCC 2012). Many lands that are only marginally suitable for agricultural production will be made wholly unsuitable by increasing temperatures and drought frequencies; Saharan and sub-Saharan are likely to be particularly affected.

Second, regions most affected by rising temperatures and precipitation patterns will have to contend with a growing incidence and severity of tropical diseases, malaria in particular. As has been shown by Gallup and Sachs (2001), the economic costs of malaria

are substantial and are one of the most important factors explaining Africa's poor growth in past decades; in addition, of course, the human costs of malaria are devastating, as it remains the largest killer in sub-Saharan Africa and is particularly more responsible than any other disease for child mortality (and associated low life expectancies) there. Based partly on this research, substantial national and international efforts were made to reduce the impact of malaria by pursuing eradication, prevention of infections, and treatment. With climate change, these efforts will become substantially more difficult as the areas that are suitable for malaria vectors will expand, potentially reversing the effects of eradication in several tropical and sub-tropical regions in Africa, Asia, Latin America, and even the Mediterranean. In countries that are already affected by malaria today, eradication will become substantially harder (IPCC 2007b).

Third, in the regions most affected by climate change, the poor base most of their economic existence on rain-fed agriculture. As a result, they are therefore particularly likely to suffer when climate change brings increases in the temperature and changes in precipitation and water access.

Fourth, their impoverished state severely limits their ability to adapt to climate change. As research on the determinants of migration, on the drivers of technology adoption, and on the ability to absorb income shocks has demonstrated, the poor are least able to cope with shocks and risks by migrating, investing in more resilient technologies or dealing with income shocks via savings or social networks (Dercon 2004, Rosenzweig 1988, UNDP 2009, World Bank 2007, World Bank 2000). The reason is directly related to their poverty: they often lack the resources to finance the fixed costs of migration or to implement new technologies, and they are often shut out from social networks that provide information and resources. As a result, the poor rely on *ex ante* risk mitigation strategies (i.e. diversifying their portfolio of income-earning opportunities) to prevent life-threatening losses. As has been demonstrated, such risk mitigation strategies can become poverty traps as the poor are forced to rely on low-return (but more stable) activities, including managing a diversified portfolio of activities or choosing low risk- low-return crops and production strategies (Dercon 2004, Elbers et al. 2007). As climate change progresses, more people will fall into such traps, and the traps will become more difficult to escape.

CLIMATE CHANGE AND GENDER

The combination of climate change's disproportionate impacts on the poor and the context of women's roles in the poorest countries will result in women bearing a substantial adaptation burden. While there is substantial diversity in women's roles and experiences (Klasen 2006), they typically make up the majority of the population of rural areas in the

poorest countries (with males more likely to have migrated to cities and abroad). This has several negative consequences. Women's food production, often limited to marginal soils in rain-fed agricultural systems, will bear the brunt of climate change impacts. As the principal caregivers in most households, women will have to contend with a worsening disease environment. As the poorest segment of the population, women's low access to new technologies, credit and assets limits their inherent ability to adapt (Blackden and Bhanu 1999, Udry 1995). Moreover, as women's incomes and access to resources also affects their bargaining power within households, which in turn affects their ability to ensure that their children will receive adequate nutrition and care, drops in female production and earnings opportunities will have negative repercussions for the next generation (Thomas 1997, World Bank 2001).

A plausible and urgent policy agenda that follows from this context would focus on a range of initiatives, such as enhancing current efforts to combat malaria by promoting eradication, assisting households to prevent infection and improving access to treatment. Such an agenda would also improve health systems to combat diseases more generally, improve women's access to technologies and credit, invest in more climate-resilient crops and sustainable irrigation systems, and improve social protection systems (e.g. cash transfer programmes or public works programmes) focused on transferring resources to women and children (European Commission 2011).

Though such a policy agenda must be part of an overall package of climate change adaptation efforts, focusing analysis and action in this way would present a rather limited way of framing the issue and developing lasting solutions. Further, it would focus too much on the role of women as victims of climate change rather than promoting their roles as resilient actors.

BROAD-BASED ECONOMIC DEVELOPMENT AS ADAPTATION STRATEGY

An appropriate approach to the issue of gender and adaptation to climate change should also focus on women as key agents of sustainable economic development, based on the premise that rapid broad-based economic development is the best way to increase a societies' resilience to climate change. Greater resilience will mean that countries will be less affected by climate change, for example because their dependence on rain-fed agriculture will lessen. Economic development will also improve the ability to adapt to climate change by increasing the resource, knowledge, and capital case to undertake specific adaptation measures.

Economic growth based on exploiting a narrow range of natural resources or accompanied by sharply rising inequalities will not equitably address climate change adaptation. In contrast, broad-based rapid economic growth and development lessens the dependence on traditional rain-fed agriculture, promotes urbanization and industrialization, typically reduces fertility and population pressure, and expands the resource and infrastructure base of households and states to combat tropical diseases and promote new, adapted and sustainable technologies (Grimm et al. 2007).

East Asian economies' growth over the past three to four decades serves as an example of this view of broad-based economic development. Such growth involved a structural transformation from agriculture to industry, was broad-based in the sense that it was labour-intensive, promoted mass education, led to sharply reduced fertility and was based on relatively low (though in some cases rising) income inequality. What Drèze and Sen called "growth-mediated security" (Drèze and Sen 1989) when referring to food security has also promoted the resilience of societies to climate change.

The adaptation challenge of rapidly developing countries such as Malaysia, Singapore, South Korea or Thailand will be easier to meet than those faced by tropical African countries. In the East Asian countries, dependence on rain-fed agriculture is low, tropical diseases are held in check, poverty is lower, the poor have greater means to deal with shocks, and states are much better able to provide social protection and promote appropriate technological change to adapt to climate change impacts.

As a sizable theoretical and empirical literature on economic growth has documented, women's economic roles are central to broad-based economic growth. In particular, countries with low rates of gender inequalities in education and employment access have grown substantially faster than those in which inequality rates were high (Klasen 2002, Klasen and Lamanna 2011, Ray and Riezman 2012, World Bank 2011b, World Bank 2001). In countries with low rates of gender inequalities in education and employment (such as those concentrated in East and South-East Asia and parts of Latin America), growth has been more sustainable in terms of longer-term structural transformation, industrialization and export-oriented economies (Seguino 2000, Klasen and Lamanna 2009). While in some of these countries, particularly in East Asia, gender gaps in earnings were substantial, they have slowly been reduced over time (Oostendorp 2010). Some argue that these large earnings gaps were an important factor promoting high economic growth, by providing a competitive advantage in female-dominated export industries (Seguino 2000), although others question this claim (Schober and Winter-Ebmer 2011).

Conversely, in places where gender inequalities in education and/or employment have been very high (such as South Asia, sub-Saharan Africa, the Middle East and North Africa), growth has typically either been much lower or much more narrowly based on

natural resources. Growth in these regions has often not led to broad-based economic development with the required structural transformations. In India, growth has also been based on high-end services but has not generated a broad-based structural transformation, which has had a surprisingly small impact on female employment opportunities (Pieters and Klasen 2012). There is great heterogeneity in the growth experience within these regions. In places such as Tunisia and Bangladesh, growth has included women to a much greater extent than in other countries of the respective regions, which was to the benefit of women as well as overall development there (Klasen 2006). Successful future growth will strongly depend on enabling women to play an active role as agents of development.

Promoting women's agency not only boosts economic growth, it also promotes broader development, and—with important feedback loops—promotes resilience to climate change and to opportunities to adapt. An extensive body of literature, starting with Thomas (1990), has demonstrated that women having greater control of assets results in greater nutrition levels, health standards and the education of their children (e.g. Thomas 1997, Thomas 1990, World Bank 2001). Promoting resilience and the ability to adapt to climate change requires improving nutrition, health and education; promoting women's agency is again critical. Moreover, one of the most robust findings on development economics is the impact of female education on fertility (e.g. Murthi et al. 1995, King et al. 2009). Reducing gender gaps in education and employment will help promote the demographic transition that is required to boost savings, investments and per-capita incomes (Bloom and Williamson 1998).

Lastly, an emerging literature shows that promoting women's economic and political agency improves governance. This helps to promote pro-development policies (e.g. Swamy et al. 2001, Branisa and Ziegler 2010, Chattopadhyay and Duflo 2004, King et al. 2009); in addition, promoting better governance has a direct impact on adaptation, as adaptation policies will depend on functioning governance at all levels. Thus, promoting female economic and political agency will promote broad-based development. In addition to improving economic growth, broad-based development will increase resilience to climate change and improve the ability to adapt to it.

GENDER AND BROAD-BASED DEVELOPMENT

A broad-based development approach requires gender-sensitive growth strategies that invest in women and empower them to more effectively contribute to economic development. Different regions' priorities will vary (Klasen 2006). Key priorities include: overcoming remaining gender gaps in education in South Asia (particularly

in Afghanistan, India and Pakistan) and parts of sub-Saharan Africa (particularly West Africa); reducing gender gaps in access to employment and labour market opportunities in South Asia, the Middle East and to a lesser extent, Latin America (Klasen and Lamanna 2011, Klasen 2006); improving women's access to land, credit, input, technologies, and formal sector employment in much of sub-Saharan Africa (Blackden and Bhanu 1999); improving women's employment and pay conditions in East and South-East Asia; and in all regions, developing growth strategies that promote female economic opportunities, particularly in the labour-intensive export and service sectors.

All regions will require greater recognition that women need to be supported in their dual roles as care-givers and active economic agents. This will involve lightening their care burden through access to improved household technologies and the extended public social protection systems that cover children, the aged and the infirm. Strategies that increase women's bargaining power (e.g. women-focused conditional or unconditional cash transfer programmes, microcredit opportunities and legal and political changes) will simultaneously promote growth and climate resilience (European Commission 2011, World Bank 2011b, King et al. 2009). Promoting women-focused social protection programmes has dual roles for adaptation that are equally important: they not only provide resources for poor women to adapt to the uncertainties associated with climate change, they also empower women more generally, with positive impacts for overall growth and development.

REORIENTATING TOWARDS GROWTH-ORIENTED GENDER STRATEGIES

Most of the developing world has experienced high economic growth in recent years, and many countries have succeeded in reducing gender gaps in education (World Bank 2011a). At the same, growth in many poor developing countries has been heavily dependent on booming commodity prices. As a result, growth has been narrowly based, often bypassing large population segments and leading to high and rising inequality. Further, this growth has not yet greatly contributed to promoting broader structural transformations. Thus, many countries are struggling to ensure that this recent high growth is sustainable in an economic, social, environmental and inclusive sense. Promoting women's economic opportunities provides an excellent opportunity to further the sustainability and inclusiveness of the growth agenda. It builds on the recent successes of narrowing gender gaps in education, it can use the growth momentum to

provide more economic opportunities for women (by investing in female education and employment opportunities) and it can promote a structural transformation that will heavily depend on women's role in industrialization.

Though promoting women's agency for broad-based economic development will increase resilience and thus promote adaptation, increased economic growth could also hinder mitigation efforts. However, long-term success in dealing with climate change will require both mitigation and adaptation policies. Further, promoting a broad-based development agenda in poor countries will have minimal impacts on mitigation efforts for two reasons. First, even rapid economic growth in the poorest regions of the world (including most of sub-Saharan Africa, excluding South Africa, and the poorest countries of South and East Asia) will have a minimal impact on the growth of global greenhouse gas emissions. These countries currently generate negligible per capita emissions and even substantial economic growth will not (for a while) have a sizeable impact on global emissions (IPCC 2007c); only once these countries have grown much richer and overcome their poverty, will it be necessary to tackle the emission implications of this growth.

Moreover, economic growth may actually help to reduce emissions from these countries. In many of these countries, the largest contributor to emissions comes from deforestation and unsustainable agricultural practices linked to poor people being forced to subsist on marginal lands or at the edge of forests. Improving non-farm incomes, enhancing opportunities to migrate to urban areas and lessening the dependence on agriculture could result in lower emissions (Klasen et al. 2009, World Bank 2010). Conversely, the key challenges to tempering climate change impacts in industrialized and emerging countries are reducing the emission-intensity of their production and consumption patterns and moving towards carbon-neutral growth.

Second, the nature of the promoted growth can reduce the trade-off between development and mitigation. There are a variety of greenhouse gas emission patterns that are consistent with the growth required to promote resilience, such as structural transformations away from rain-fed agriculture towards modernized agriculture and industrialization, and increasing the state's investments in education and health. The key drivers of greenhouse gas emissions are the energy sector, the transportation sector and construction (IPCC 2007c); emissions from the transportation and construction sectors closely relate to the extent and type of urbanization patterns. Transformation pathways towards low-emission scenarios can be achieved by moving towards a low to zero-emission energy and transportation sector, an urbanization pattern that minimizes the need for individualized transportation and buildings that require little heating and cooling (IPCC 2007c, IPCC 2011).

Moving towards such a low-emission pathway is, in principle, consistent with higher economic growth; it requires, however, a policy environment that promotes this transformation. The transformation of the energy, transportation and construction sector can become a source of economic growth. For poor countries, such a transformation is feasible if they are provided access to technology and finance to achieve such a transformation of the emission-intensity of their growth processes. Transitioning to low emission pathways is particularly feasible from a technical point of view as poor countries often have comparative advantages in renewable energy and have the opportunity to leapfrog to climate-friendly urbanization and transport strategies.

CONCLUSION

This paper explored the linkages between development, adaptation and gender. It began with the premise that climate change poses the most serious risks for poor countries. It then argued that rapid broad-based development will improve resilience and thus adaptive capacity. Thus, poor countries are currently facing a race against time: the more they can accelerate broad-based development now, the less they will be affected by negative climate change impacts—impacts that will grow in severity over time. Rather than focus on the micro-aspects of adaptation requirements, there is still time to accelerate broad-based development that will increase countries' overall adaptive capacities.

Women play a crucial role in achieving broad-based development; broad-based development is not possible without promoting female agency. Empowering women through education, employment opportunities, cash transfers and decision-making in economic and political affairs will be a key ingredient to accelerating broad-based development and thus resilience to climate change.

This paper has taken a rather instrumental view of female agency, focusing on the ways it promotes broad-based development. There are also strong equity and justice arguments for promoting female agency. Fortunately, the intrinsic and the instrumental cases are intertwined, such that pursuing broad-based development will provide gains to both dimensions. ■

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**PRODUCTION OF INTERNATIONALLY
TRADED GOODS ALONE ACCOUNTS
FOR APPROXIMATELY 30 PERCENT OF
GLOBAL CARBON DIOXIDE EMISSIONS.
GIVEN THE TREMENDOUS IMPACTS OF
CLIMATE CHANGE, REDUCING EMISSIONS
AT BOTH ENDS OF THE CONSUMPTION/
PRODUCTION CONTINUUM MUST BE
AN INTERNATIONAL PRIORITY.**

4

WOMEN, CONSUMPTION, AND SUSTAINABLE DEVELOPMENT

DIANE MACEACHERN

INTRODUCTION

Twenty years after the 1992 Earth Summit, achieving global sustainable development remains frustratingly out of reach. Among other factors, increasing levels of consumption and related pressures on the environment are impeding sustainability. Agenda 21 focused global attention on the issue, noting that “the major cause of the continued deterioration of the global environment are the unsustainable patterns of consumption and production, particularly in industrialized countries” (UNCED 1992). This concern continues to resonate. “Current global consumption levels with 7 billion people already use more resources than one planet Earth can provide,” reported the World Business Council for Sustainable Development in January 2012. “As global population grows to an expected 9 billion people by 2050, with disproportionate growth in the middle class, we will need 2.5 Earths to meet current demand.” Meeting current and future demand requires shifting to sustainable consumption patterns, defined by the Norwegian Ministry of the Environment as “the use of goods and related products which respond to basic needs and bring a better quality of life, while minimizing the use of natural resources and toxic materials as well as the emissions of waste and pollutants over the lifecycle, so as not to jeopardize the needs of future generations.”

A second—yet equally important—factor undermining sustainable development goals is directly linked to ongoing and pervasive gender inequalities. Though Agenda 21

called for women's full and equal participation at all levels of society, women continue to be marginalized. The United Nations Secretary-General's High-Level Panel on Global Sustainability (2012) notes, "the problem is not unsustainable choices, but a lack of choices in the first place. Real choice is only possible once human rights, basic needs, human security and human resilience are assured... Empowering women in particular has the potential to yield tremendous benefits for households, communities and the global economy." The Women's Major Group for Rio+20 concurs. "Social equity, gender equality and environmental justice must form the heart of sustainable development, and of the outcomes of the Rio+20 UN conference in 2012" (Women's Major Group 2012).

This explicit acknowledgement that sustainable development goals cannot be actualized without both transforming consumption patterns and achieving gender equity underlies the emerging philosophy behind the green economy. "A green economy and any institutions devised for it must make their core focus the well-being of people—of all people, everywhere—across present and future generations," concludes a task force convened by the Pardee Center for the Study of the Longer-Range Future at Boston University in the U.S. "That essential idea puts the notion of equity... smack at the centre of the green economy enterprise. It also brings to the fore the centrality of consumption questions, not only among nations but within societies... The proximate goal in the creation of a green economy is the notion of making the economy more ecologically efficient—meeting our economic needs without compromising our ecological integrity. But the ultimate goal is to do so in a way that the needs of all people—today, and in the future—can be met and sustained. That, after all, is the central premise of sustainable development" (Boston University 2011).

Adopting sustainable consumption patterns offers a path towards protecting the environment, improving quality of life for billions of people, and increasing gender equity. This paper discusses entry points for achieving this paradigm shift.

CONSUMPTION, PRODUCTION AND SUSTAINABILITY

The relationship between consumption and sustainability is stark and unremitting. Consumption necessarily stimulates production, often requiring inputs that deplete natural resources and threaten biodiversity. Superficially, production appears to 'only' consume direct inputs (e.g. energy, water, minerals and forests). However, closer scrutiny reveals that depleting these resources imposes externalities on a range of resources (e.g., aquatic species, wildlife, insect pollinators and wild varieties of plants). According to the United Nations Environment Programme, agricultural production accounts for a staggering 70

percent of global freshwater consumption, 38 percent of total land use, and 14 percent of the world's greenhouse gas emissions. The mining sector consumes 7 percent of the world's energy, an amount that will increase as population grows (UNEP 2010).

Any level of consumption and production also generates waste by-products, including physical outputs and air and water pollution. Further, greenhouse gas emissions are intrinsically linked to production and consumption patterns. Production of internationally traded goods alone accounts for approximately 30 percent of global carbon dioxide emissions (UNEP 2010). Given the tremendous impacts of climate change, reducing carbon dioxide emissions at both ends of the consumption/production continuum must be an international priority.

Though it has been widely recognized that consumption patterns need to be addressed, success in devising appropriate and effective ways to do so has remained elusive. Historically, limiting consumption as a strategy for protecting the environment has been met with resistance. In most countries, economic growth is specifically linked to *increasing* consumption over time. Though current levels of consumption bode poorly for the environment, there are concerns that growth restrictions would inhibit developing countries that seek to lift their citizens out of poverty.

WOMEN ARE INCLINED TO BE SUSTAINABLE CONSUMERS

In general, women are more inclined than men to favour sustainability as a lifestyle choice (GenderCC 2012). Research shows that this is true in poor and rich countries and regions alike. In Organisation for Economic Co-operation and Development (OECD) countries such as Finland and Japan, empirical studies on environmental awareness and behaviour show that women tend to be more environmentally aware than men and evidence a higher engagement with environmental issues. Further, women buy more environmentally sound products, eat less meat, and use public transport more often than men (*ibid.*). This is true even when women are the beneficiaries of less sustainable lifestyle choices, such as the use of fossil fuels, or the purchase of food and consumer goods that come packaged in plastic or other unrecyclable materials.

Although their choices are influenced by income levels, social conditions and other biases, women are also motivated by their reproductive role and the impact their purchases could have on their families' long-term well-being (Johnsson-Latham 2007). Where men are more likely to turn to technological solutions, women demonstrate a greater willingness to change lifestyle behaviours and to consider the 'precautionary principle' in their day-to-day choices. Several Swedish studies report that women spend

more time than men seeking information on sustainable consumption and lifestyle alternatives (ibid.). Females in Sweden recycle more, eat more organic foods and purchase green goods at higher rates. Men, on the other hand, make fewer but more expensive purchases of electronics and automobiles. In Sweden, women far outnumber men in supporting reductions in vehicle use and increased options for sustainable transportation.

Women are recognizing their need for more information and sustainable options by creating their own institutions to provide them. The organization Women in Europe for a Common Future has launched the 'Nesting' Web site to help women create a healthy environment for their children in utero and once they are born. The Web site, available in seven European languages, offers tips for renovating a toxin-free baby room and offers recommendations on purchasing healthy and environmentally friendly clothes, toys, and baby care items. In North America, the EcoMom Alliance was founded by a mother concerned about environmental health and sustainability. As the organization grew into an international network, it also launched an online marketplace for concerned families seeking healthier and more sustainable products. Women have also banded together to pressure Kimberly Clark, the world's largest producer of tissue paper products, to stop cutting down ancient forests and urged companies like OPI and Johnson & Johnson to remove phthalates, parabens and other potential hormone disrupters from their cosmetics and personal care goods.

Similar to EcoMom Alliance and Women in Europe for a Common Future, women in developing countries have recognized that promoting sustainable consumption must include production considerations. According to the Fair Trade Federation, women eager to live more sustainably and enhance their livelihoods, their communities and local ecosystems, are increasingly organizing cooperatives to produce artisanal goods and sustainable agricultural products. Women now account for 76 percent of the workers engaged in non-agricultural fair trade production, many fabricating crafts from local natural resources.

In Colombia, women coffee growers have increased profits while enhancing the environmental sustainability of production and community living standards by marketing female-produced Fair Trade coffee. In Burkina Faso, a hybrid solar-gas fired bread oven has been designed for baking and roasting. Proponents are now in the process of franchising production and distribution to local women cooperatives. Also in Burkina Faso, a women's environmental organization has developed a process to weave fashion accessories and clothing out of plastic bags, reducing plastic bag trash and litter while creating jobs for women and more environmentally friendly products for consumers. In Kenya, women are being trained to produce handicrafts from recycled metals, which reduces solid waste and the growth of water hyacinth, an invasive plant that negatively affects

Kenyan waterways. Women in Kenya are also partnering with a local non-governmental organization to train youth to manufacture both solar-powered lanterns and environmental products and services that would otherwise be powered by polluting kerosene. In South Africa, the Why Honey enterprise is teaching women bee-keepers how to organize themselves into cooperatives, increase beehive construction, and increase their effectiveness at processing and selling honey. Their efforts will also revitalize the local bee population, strengthening local biodiversity.

SUSTAINABLE CONSUMPTION REQUIRES EDUCATING AND EMPOWERING WOMEN

In most countries, household consumption accounts for more than 60 percent of all consumption impacts, once the entire life cycle of manufacturing and service provision are accounted for (UNEP and International Panel for Sustainable Resource Management 2010). Therefore, a strategy to advance sustainable consumption must begin with transforming existing household consumption patterns, with the aim of reducing unnecessary or excessive consumption and minimizing the environmental and social impact of goods produced and consumed.

Men and women are equally responsible for achieving this transformation: men, because they currently have access to more education, greater wealth and the political and social systems that govern society and commerce; and women, because they are the primary household managers, the world's dominant consumers, and increasingly, the planet's entrepreneurial engines.

In the global North, women traditionally oversee household affairs even after they engage in full-time employment. In the global South, women have more household responsibilities than men, such as raising children, producing food, managing livestock and securing water and fuel. As men increasingly leave rural areas in search of work in urban centres, women assume more household responsibilities. That younger women are also leaving rural areas for cities has not significantly changed the equation; women's participation in the labour market is often less valued than men's.

Despite the inequities and injustices they suffer, women control 65 percent of global consumer spending (Continuum 2010), which amounts to \$20 trillion annually (Silverstein and Sayre 2009). In urban areas, women make the final decision for buying 91 percent of home purchases, 65 percent of new cars, 80 percent of health care choices, and 66 percent of computers (Continuum 2010). In both urban and rural areas, in the global North as well as the global South, women spend more money than men on basic essentials like food, clothing and household articles (OECD 2008).

In developing nations, women's earned income is growing. In Indonesia, for example, 'traditional trade' (the open markets, corner stores, kiosks and street vendors where most people shop for food and household goods) is largely conducted by women. In the US in 2010, 52 percent of positions in management and professions such as architecture, engineering, medicine and teaching were held by women (US Department of Labor 2011), women who choose what products and services their workplaces consume. *The Harvard Business Review* reports that globally, women—at home and at work—represent a larger growth market than China and India combined (Silverstein and Sayre 2009).

Nonetheless, women worldwide remain disempowered. Mean gender differentiations in education, access and ownership, wages and violence continue to oppress women and limit society's potential to advance and improve. Despite their consumer clout and increasing gains in the workforce, in 2011 women in the US held only 16 percent of board seats at *Fortune 500* companies. In both 2010 and 2011, less than one fifth of US companies had 25 percent or more women directors, while about 10 percent had no women serving on their boards. In both 2010 and 2011, women of colour held only 3 percent of all board seats (Catalyst 2011).

In Europe, despite a labour force that is 45 percent female, women only average 12 percent in terms of boards of director memberships. The percentage drops to 7 percent in the Asia-Pacific region, and down to 3 percent in the Middle East and North Africa (Pande and Ford 2011).

Women's lack of empowerment is further reflected in the gender-specific impacts of climate change and natural disasters. On every continent except Antarctica, droughts, floods, storms, heat waves and other natural disasters kill more women than men and tend to kill women at a younger age, particularly in locales where their socio-economic status is particularly low. Women are routinely disproportionately impacted by environmental factors that threaten their security, health and quality of life. In many developing countries, women and girls have to put themselves at great risk for robbery, rape and murder as they walk long distances in search of ever-scarcer caches of firewood and drinking water. Inefficient burning of wood, dung and other biomass in unventilated homes releases dangerous toxins and pollutants (WHO 2010) that cause approximately 2 million deaths a year, mainly of women and children in the poorest communities (Global Alliance for Clean Cookstoves 2012). In China's Gansu province, discharges from a state-run fertilizer factory have been linked to a high number of stillbirths and miscarriages. Water pollution in three Russian rivers has been linked to bladder and kidney disorders in pregnant women. In Sudan, women farmers exposed to pesticides are experiencing higher rates of perinatal mortality (UNFPA 2001).

OBSTACLES THAT IMPEDE PROGRESS

Gender discrimination in developed and developing nations impedes millions of women's access to financing that would enable them to become entrepreneurs. Women-owned firms represent 30 to 37 percent of small and medium-sized businesses in developing countries (IFC 2011), where women are embracing green micro-enterprises, inventing or adopting new sustainable technologies, working to conserve and restore land and devising systems to manage waste. Nevertheless women's contributions to sustainability are routinely undervalued and overlooked.

Likewise, women in the global South have limited rights when it comes to owning land and are often excluded from training that would equip them to improve their land management skills. The OECD reports that worldwide, women own a mere 1 percent of all property though they perform 66 percent of all work (OECD 2011).

Confusion about the advantages and disadvantages of certain purchases also prevents women from making more sustainable choices, though they are often strongly inclined to do so. Eight out of ten European Union citizens told the National Geographic Society and Globescan's Greendex survey that a product's impact on the environment is an important element when deciding which products to buy (49 percent said it was "rather important" to them, while 34 percent said it was "very important"). Yet only 14 percent said they are fully aware of the total impact their shopping cart would have on the environment. Thirty-five percent admitted to knowing little about the environmental impacts of the products they buy and use and 9 percent said they know nothing about such impacts (Greendex 2010).

The almost 400 eco-labels manufacturers have adopted worldwide to position their products as 'low carbon', 'natural', 'earth-friendly' or 'biodegradable' often confuse consumers (Triple Pundit 2011). Labels that have been thoughtfully developed around meaningful standards that can be independently verified help consumers choose the most environmentally friendly products and services available. But in many instances, manufacturers claim sustainable attributes their products don't actually have, making it difficult if not impossible for shoppers to determine whether a product is what it claims to be. These intentional and unintentional inaccuracies at the point of purchase impede progress toward sustainable consumption.

Costs present another major obstacle to achieving a global shift to sustainable consumption patterns. Products and services with minimal environmental impacts can be as much as 50 percent more expensive than their conventional counterparts. In part, this is due to the nature of new product innovation and the basic economics of supply and demand. But it is also due to the historical tax breaks and other government subsidies many conventional—and polluting—products and practices enjoy (The Encyclopedia of Earth 2012). In the absence of a truly free market, it is difficult for new sustainable

products to reach price parity with those that have been sold for decades or longer. In energy, for example, heavily subsidized electrical transmission can obscure the much higher price of electricity in rural areas. As a result, important entry points for alternative energy sources, such as where off-grid renewables like solar and wind cost less than the combined cost of conventional power plus distribution, are lost. In 2009, US farm subsidies topped \$15.4 billion with only \$15 million going to programmes for organic and local foods. Over one thousand times more money went to conventional farming than to organic programmes (Albert's Organics 2011). Until 'green' goods receive subsidy parity with their conventional counterparts and are manufactured in substantial quantities for sizeable markets, they will sell at a premium.

Consumers who are inclined to minimize the impacts of their consumption also face concerns over quality. In most cases, the perception that a product or service is more environmentally friendly is not in and of itself a strong enough selling point. The product must also look, feel, fit, perform and last at least as long as its conventional counterpart—if not more so. For example, twenty-five years after energy-saving compact fluorescent light bulbs entered the household marketplace, many consumers still object to the colour and brightness of the light they cast. The fact that each bulb uses 60 to 70 percent less electricity than a conventional incandescent does not outweigh many shoppers' performance and quality concerns.

Cultural norms work both for and against sustainable consumption. In the US, the desire to be seen as 'trendy' as well as energy conscious continues to drive sales of the innovative Toyota Prius hybrid-electric vehicle. Meeting the challenge of motivating women in Africa to forego traditional cooking methods and lifestyle habits in favour of cleaner burning cookstoves will require involving the women in designing demonstration projects and educational materials to raise awareness of the benefits of transitioning to this new, more sustainable technology option.

THE WORLD TODAY AND TOMORROW

The World Economic Forum projects that over three billion people will have joined the global middle class (in purchasing power parity terms) by 2030, bringing almost 60 percent of the world's population into the middle-income bracket. This growth will increase energy demand by 40 percent (World Economic Forum 2012) over existing levels and increase demand for many products and services that will deplete natural resources, create toxic by-products, pollute air and water, and generate waste.

Sustainable consumption is a promising solution for women and men alike. Despite the confusion created by conflicting labels, unsubstantiated attribute claims, and concerns about quality and higher prices, a 2011 Fairtrade International global survey of 17,000 male and female consumers in 24 countries (Fairtrade Foundation 2011) reported that

59 percent of consumers feel empowered to make a difference through their shopping choices. The survey showed that people are backing their beliefs with concrete action. Shoppers spent \$5.7 billion on fair trade products in 2010, an increase of 28 percent since the study was first conducted in 2008. Consumers tripled their fair trade purchases in Czech Republic (386 percent), South Africa (315 percent) and Australia and New Zealand (258 percent). Shoppers bought an impressive 47 percent more in fair trade's largest market, the United Kingdom, during the same period.

The Greendex 2010 study measuring consumer behaviours that impact the environment is similarly encouraging. In their third annual survey to measure and monitor consumer behaviours, the National Geographic Society and GlobeScan found that environmentally friendly consumer behaviours related to transportation, household energy and resource use, and consumption of food and everyday consumer goods, has increased from 2008 levels in all but one of the 14 countries polled in both 2008 and 2010.¹

These are promising trends, but they will be short-lived unless they can become the norm rather than the exception. In the two decades since the first United Nations Conference on Environment and Development, the connections between production and consumption and their cumulative environmental impacts have been recognized as serious obstacles to sustainable development. Both production and consumption diminish natural resources, endanger biodiversity and significantly contribute to climate change and other environmental threats. Nevertheless, global economic growth remains linked to accelerating both production and consumption, and thus to inherently unsustainable development. The global community has not yet determined how to contain consumption without restricting the ability of many countries to reduce or eliminate poverty.

At the same time, gender inequalities remain a crippling force around the world, preventing women from reaching their true potential and depriving society of the social, economic and environmental benefits that would occur were both men and women allowed to participate equally.

Sustainable consumption offers a solution that can protect the environment and improve quality of life for billions of people, but it cannot be realized without achieving global gender equity.

LESSONS LEARNED AND RECOMMENDATIONS

Writing in 'The Future We Want', delegates to Rio+20 declared: "We consider green economy in the context of sustainable development and poverty eradication as one of the important tools available for achieving sustainable development." They further recognized that "urgent action on unsustainable patterns of production and consumption where they

occur remains fundamental in addressing environmental sustainability, and promoting conservation and sustainable use of biodiversity and ecosystems, regeneration of natural resources, and the promotion of sustained, inclusive and equitable global growth.”

Those conclusions bolster the following lessons learned and recommendations:

LESSON: A truly ‘green’ economy cannot develop in an idealized vacuum.

RECOMMENDATION: Build a green economy on three pillars: gender equity, poverty alleviation and technological and social systems that reduce the environmental impacts of both production and consumption.

LESSON: Women can play a particularly central role in advancing sustainable development and building the green economy, but only if they are educated about their options, encouraged to act and empowered to succeed.

RECOMMENDATION: Make human and women’s rights a cornerstone of all sustainable development agreements.

LESSON: Empowering women to become producers of sustainable products also empowers them to become sustainable consumers.

RECOMMENDATION: Assure women’s and human rights in all new sustainable development goals.

LESSON: The lack of uniform, meaningful product labels creates confusion in the marketplace that undercuts consumer demand for sustainable products and allows unsustainable production practices to continue. Barriers such as premium prices, inadequate quality, inconvenient availability and inadequate performance also inhibit sustainable consumption.

RECOMMENDATION: Governments should establish consistent sustainable production and performance criteria to ensure that product labels reduce consumer confusion and help accelerate the adoption of more sustainable production practices.

LESSON: Without empowering women to act, consumption can neither be contained to minimize its impact nor transformed so it can realize its empowering potential.

RECOMMENDATION: In order to realize aspirations for a ‘green’ economy, leaders of civil society must not only adopt, but also embrace comprehensive strategies that reduce the environmental impacts of production and consumption, advance gender equality and eliminate poverty. ■

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Endnotes

- 1 "Consumer Choice and the Environment—A Worldwide Tracking Survey," see: <http://environment.nationalgeographic.com/environment/greendex/>. The study was carried out in Australia, Austria, Belgium, Canada, the Czech Republic, Denmark, Finland, France, Germany, India, Ireland, Italy, Japan, Netherlands, New Zealand, Norway, Poland, South Africa, South Korea, Spain, Sweden, Switzerland, the UK, and the USA.

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WHEN POPULATION AND ENVIRONMENT, AND THE LINKS BETWEEN THEM, ARE EXAMINED FROM THE PERSPECTIVE OF GENDER EQUALITY, HUMAN RIGHTS AND SOCIAL JUSTICE, NOT ONLY CAN NEW QUESTIONS BE ASKED, BUT NEW APPROACHES CAN BE TAKEN AND NEW POLICY ANSWERS GIVEN.

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5

POPULATION, ENVIRONMENT AND HUMAN RIGHTS: A PARADIGM IN THE MAKING

GITA SEN AND ANITA NAYAR

INTRODUCTION: A TALE OF FOUR CITIES

Current controversies about population, environment and human rights can be traced back to pivotal United Nations Conferences of the early 1990s that occurred in four cities—Rio de Janeiro, Vienna, Cairo and Beijing. In the international policy arena, the early 1990s were flush with optimism engendered by vigorous civil society movements, the growing realization of democracy—particularly in Latin America after a long night of dictatorship—and perceptions that the era of hard structural adjustment programmes was giving way to a greater focus on poverty eradication and human development. The democratic processes of the 1980s strengthened the voice of powerful actors on the global stage—in particular, environmental groups, women’s rights organizations and human rights activists.

The UN conferences of the 1990s were the ground for cross-fertilization of ideas and strategies among these actors, sometimes synergistically and at other times through deep controversies. The 1992 UN Conference on Environment and Development (Earth

Summit) in Rio, and especially its ‘women’s tent’ (*Planeta Femea*) at the Non-governmental Organization Forum, saw day after day of intense debate about the links between population and environment among environmental activists (particularly from the global North) and women’s health groups that had begun to articulate a sexual and reproductive health and rights agenda. The 1993 Vienna World Conference on Human Rights saw the first explicit official recognition of women’s rights as human rights and of violence against women as a violation of those rights (UNWCHR 1993, Bunch and Reilly 1994). The Global Campaign for Women’s Human Rights had mobilized over three years to bring this about, and laid thereby the basis for the recognition of sexual and reproductive health and rights at the International Conference on Population and Development in Cairo the following year and at the Fourth World Conference on Women held in Beijing in 1995 (Sen 2006).

The close and sustained interaction of environmental activists and women’s rights groups (especially those focusing on sexual and reproductive health and rights) began to transform the hitherto Malthusian approach to population/environment linkages towards one based on human rights. This paper discusses the nature of this paradigm change away from a macro-level focus on population growth towards a more bottom-up and gender-sensitive approach based on women’s human rights, buttressed by the work of anthropologists and other social scientists. Understanding the nature of this paradigm change—and the role of women’s organizations in effecting it—is critical in the context of renewed debates within the processes marking the twenty years after both the Earth Summit and the International Conference on Population and Development.

POPULATION/ENVIRONMENT LINKAGES: A MALTHUSIAN REPRISE?

The three critical elements of a paradigm are its world view (as shaped by the values that guide the questions it asks), its internal consistency or logic, and its robustness with respect to evidence from both within and outside. Kuhn (1962) defined a scientific paradigm as the acceptance by a community of researchers of a common set of questions, a common basis of evidence, and a common approach to interpretation and analysis. Handa (1986) broadened Kuhn’s original frame to recognize the importance of world views (*weltanschauung*)—coherent systems of values and ideas—in shaping paradigms in both social and natural sciences. Not acknowledging the role of values in the making of paradigms imbues the latter with a false objectivity. Indeed it is the evolution of values, shaped by social movements and historical shifts, that quite often determines the change from existing to new paradigms. Furthermore, the robustness and durability of

a paradigm depends on its ability to explain other evidence that ‘intrudes’ so to speak from outside itself to pose a challenge. We will examine the paradigmatic challenges that have been posed to analysis of population/environment links, from this perspective.

The Malthusian approach to population/environment linkages was a dominant paradigm until it was transformed through the UN processes of the 1990s. In between, the field of technical demography and population studies grew and fuelled more sophisticated understanding of the demographic transition from high to low birth and death rates. There has been extensive debate on the factors that have fuelled this transition. These include the role of rising affluence and urbanization, cultural change, contraceptive availability and family planning programmes, as well as the role of women’s autonomy, literacy and education. Whether the predicted steady state global population of 9 to 10 billion is environmentally sustainable is really not known. Although Malthus’ 19th century thesis of population growth outstripping food supply was not stated in terms of its impact on the environment—a concept and terminology that evolved some hundred years later—its substance bears a striking resemblance to modern day concerns about the impact of population growth on food security. These were stated in the clearest terms in the ‘IPAT’ equation proposed four decades ago by scientists John Holdren and Paul Ehrlich (1971, 1974). Driven by the rising concerns of ecological scientists, they argued “the most elementary relation between population and environmental deterioration is that population size acts as a multiplier of the activities, consumption, and attendant environmental damages associated with each individual in the population. The contributing factors in at least some kinds of environmental problems can be usefully studied by expressing the population/environment relation as an equation: environmental disruption = population x consumption per person x damage per unit of consumption....” (1974).

This can be written as: $I = (P) (A) (T)$, where I = environmental impact; P = population; A = affluence measured as gross domestic product (GDP) divided by population; and T = technology measured as environmental impact per unit of GDP. Actually, IPAT is not strictly speaking an equation but a mathematical identity that is always true, which can be seen by re-writing it as: $I = (P)(GDP/P)(I/GDP)$.

Written in terms of growth rates, the relative rate of growth of I = the sum of the relative growth rates of P , A and T . Strictly speaking, while the growth rate of I can thus be decomposed into the growth rates of the other three variables, it is invalid to attribute causality to the terms in an identity.¹ The choice of variables to include in an identity can be made *a priori*, and in fact any variables can be chosen without ever invalidating the identity. This is a classic paradigm issue where the choice of questions asked and variables chosen depends on one’s world view.

The IPAT identity has been criticized because it treats all population subgroups as the same and ignores the role of distribution. It also assumes implicitly that environmental vulnerability is a constant. For instance the fact that high water consumption may be less problematic in a swamp than in a desert is not reflected in the identity. In a world where evidence exists supporting the existence of an environmental Kuznets curve, and also strongly linking affluence to environmental problems, and where affluence is itself highly unequally distributed (across and within countries), privileging aggregate population as the variable of choice is deeply problematic. The world view that attributes causality to population growth without attention to distribution is a typically Malthusian one, and has been problematic since the time of Malthus himself.² IPAT was also problematic in its day because it focused on growth rates rather than levels, an approach that has since been challenged by fast-growing developing countries and reflected in agreement about ‘common but differentiated responsibilities’ at the Rio Conference in 1992. This agreed principle is now under attack by the global North.

Despite the criticism it has received, IPAT has continued to influence thinking for over forty years. More recent approaches to the links between population, environment and consumption have used more sophisticated modelling and data sets and have gone beyond IPAT to address the challenge of distribution explicitly. O’Neill et al. (2010) use a computable general equilibrium model—the so-called PET (population-environment-technology) model—to compute the energy use and climate change impacts of population growth, ageing and urbanization. The PET model assumes that households affect energy use directly through their consumption patterns, and indirectly through their impact on labour supply and economic growth. The model uses household survey data on composition and consumption to assess the impact of population dynamics. Another model (Chakravarty et al. 2009), takes explicit account of distribution by distinguishing high-CO₂ lifestyles in *all* countries, and uses this to allocate differentiated responsibility for emissions reductions on an individual rather than a country basis.³

The sophistication of these models and the data they build on makes them more attractive and plausible than the simplistic ones that preceded them. Nonetheless, it must be remembered that these models are not truly dynamic in that they assume that existing consumption relationships will also hold in future, although different scenarios for the relationships may be spelled out. For example, are historical patterns of urban energy consumption necessarily a good predictor of the future? What if the pressures of urbanization itself resulted in lowered consumption patterns (i.e. there are downward shifts in the urban consumption function over time)? What if the current deep global economic crisis or the triple crises of finance, food and fuel dampens economic growth prospects in both high and low-income countries over the medium term?

Another limitation of computable general equilibrium models like PET is in their assumptions about the causal links between population dynamics, labour productivity and economic growth, in which the former drive the latter. The models do not recognize that economic growth may well be driven by macroeconomic forces unleashed by global financial or other markets that have little to do with population age structure, labour force availability or other aspects of population dynamics, either globally or for any particular country or region. These may render irrelevant any past observations about such relationships and make them unstable and unreliable.

A great deal also depends on whether the sharp increases in economic inequality that have been recently observed in some of the fastest growing economies are only relative or, at least in some instances, may indicate a rise in absolute levels of poverty for some. Undoubtedly, growth of population will always result in greater resource use (except if it is counter-weighted by a corresponding and opposite reduction in per capita consumption). But a focus on growth rates should not mask the continued importance of levels of consumption and the history of huge inequalities therein. This history matters and continues to matter for large numbers of people despite the rise in affluence in some hitherto poor large countries.

Over the past century, developed countries (home to only 20 percent of the world's population) have been responsible for over two thirds of the net carbon emissions from fossil fuel burning and land use changes (Baumert et al. 2002). Breaking this down further, of the top 20 historical emitters, only four (namely China, India, Mexico and South Africa) are developing countries. China and India, home to 40 percent of the world's people and among the countries with recent experiences of fast economic growth, have contributed only 7 and 2 percent respectively since 1900 (see Figure 1).

FIGURE 1. CARBON EMISSIONS FROM INDUSTRIAL SOURCES AND LAND-USE CHANGES, 1990-1999

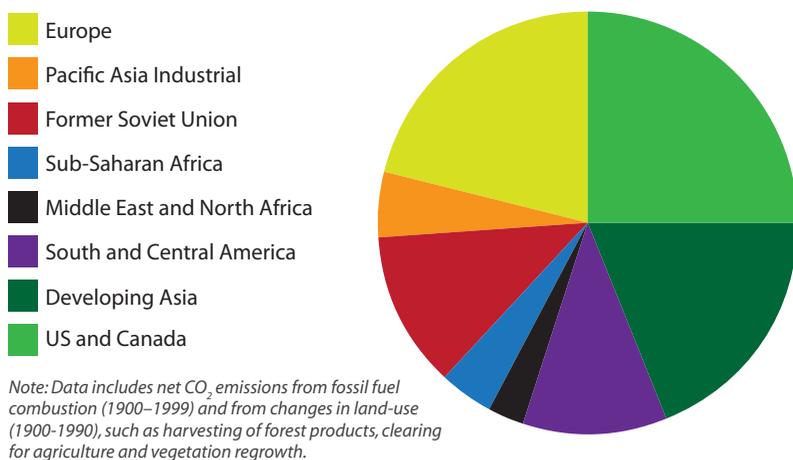


FIGURE 2. CUMULATIVE EMISSIONS OF GREENHOUSE GASES, TO 2002



Source: Patz et al. 2007.

FIGURE 3. ESTIMATED PER-CAPITA MORTALITY FROM CLIMATE CHANGE, 2000



Source: Patz et al. 2007.

The South Centre, an intergovernmental think tank of developing countries, has calculated the total global carbon ‘space’ as a measure of the inequitable share that industrialized countries have used up and is no longer available to developing countries (South Centre 2009). Estimates of carbon space usage suggest that a maximum of 2,000 to 2,100 gigatonnes of carbon dioxide is the allowable total of all emissions that would keep the rise in global temperature below the tipping point of 2 degrees Celsius. Between 1880 and 2010, about 1,300 gigatonnes of CO₂ were emitted almost entirely by industrialization in the North. This leaves only around 750 gigatonnes, which at the current rate of a 40 gigatonne rise in emissions per year in both North and South combined will use up the carbon space in the atmosphere within two decades. At the heart of the UN climate change negotiations is a struggle over how much carbon space developed countries have consumed, and their historical responsibility for having contributed most of the emissions. To pay back their emissions debt, developed countries would have to both cut emissions by 100 percent and compensate developing countries through, for example, contributions to adaptation.

Two maps illustrate the inequities in terms of the proportion of carbon emissions by country and the likely impacts of climate change on per capita mortality (see Figures 2 and 3).

While climate negotiations remain deadlocked over reducing emissions and financing commitments, the harsh reality is that the bulk of the effects of climate change will be felt in the poorest countries. The poorest people—disproportionately women—will suffer most and first from droughts, floods, sea rise, famines, water shortages and disease exposures, as well as related conflicts that will likely ensue (see Figure 4).

Meanwhile, some demographers, environmentalists and development analysts have related world population projections to environmental ones, and are predicting a bleak future. Citing factors such as climate change projections, chronic water scarcity and less land under cultivation, they have questioned the capacity of planetary resources to meet peoples’ needs, including whether food production can keep pace with rising populations

(Engelman 2011). They argue that, despite significant reductions in the total fertility rate to near replacement levels in many low- and middle-income countries, population growth will still continue because of the impact of young age structures—the so-called ‘momentum effect’ (Bongaarts 1994)—and there are some parts of the world (mainly sub-Saharan Africa) where fertility rates continue to be high. However the extent of the decline in fertility rates can be seen in Figure 5, and account must be taken of continuing disparities in resource distribution and consumption rates between and within countries, and the impact of economic crises (unrelated to population growth) on the volatility of global commodity markets causing unpredictable spikes in food and fuel prices.

Should the concern today be about the effects of population on the environment or should we focus on the impact of climate change (caused by unsustainable and historically unequal patterns of production and consumption) on people, including large-scale displacement, new infectious diseases, poverty and the destruction of ecological commons? What effects will these have on standard population variables such as life expectancy, fertility and migration?

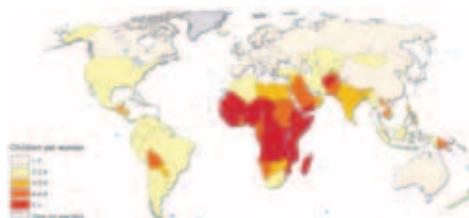
The latest and most elaborate attempt to gather the evidence on population’s macro-links to the environment is the recent report by the Royal Society, *People and the Planet* (2012), in the lead up to the Rio+20 processes, intended to generate renewed global commitment to addressing environmental challenges. The report moves significantly forward in its recognition of inequitable consumption, and in drawing on the most sophisticated of recent modelling on environmental change. It is also useful in that it recognizes the need both to increase per capita consumption for those living in extreme poverty, and to reduce the consumption of those in high-income countries.⁴ But in some fundamental ways the report is flawed: its authors include very few social scientists (excluding neoclassical economists) and, possibly as a result, it misses the opportunity to provide an analysis of the political economy of either environmental or demographic change, or to take a micro- approach that would explain the actual behaviour of individuals or groups differentiated by economics, gender, age or other markers.

FIGURE 4. CLIMATE CHANGE VULNERABILITY INDEX



Note: Light green represents low risk; dark blue represents extreme risk. Source: Maplecroft 2011. Source: Patz et al. 2007.

FIGURE 5. TOTAL FERTILITY RATE, 2000-2004



Source: WHO 2005.

Most crucially, the report is distinctly ‘pre-Cairo’ in its approach to such issues as gender equality, health or women’s human rights. Its main recommendation in this context is to stress the importance of girls’ education as instrumental to fertility reduction. As we argue below, the population field has moved a long way from this in the last two decades.

CHALLENGES TO THE PARADIGM: A WORM’S EYE VIEW ON POPULATION AND SUSTAINABILITY

Challenges to the dominant Malthusian paradigm on the relationship between population, economic growth and the environment have critiqued both the logic of its arguments, and also put forward uncomfortable evidence about its purported connections, as is clear from the previous section. Social scientists have offered a third strand of critique, questioning the paradigm’s approach to population, which is largely based on macro-level data and relationships without reference to the micro-level reality of the lives of poor people. In the lead up to the Cairo conference of 1994, the South feminist network, Development Alternatives with Women for a New Era initiated a collaborative research project with the International Social Science Council and the Social Science Research Council that brought together researchers and activists with the explicit objective of rethinking the population-environment debate by “identifying and examining the micro-level linkages between population and environment and relating these to macro-level considerations” (Arizpe et al. 1994). The effort resulted in a book, *Population and Environment—Rethinking the Debate*.

The editors argued for moving beyond a “polarized debate which ultimately poses an impossible choice for policy makers—a choice between people’s needs and wants, and the conservation of the environment” (Arizpe et al. 1994). They went on to say:

The debate has failed to benefit from the wealth of data generated at the micro level—data which provide rich information on the social and economic factors that mediate the relation between population and the environment...the population problem does not just involve absolute numbers of people nor even just population densities or overall rates of increase, but also, in important ways, social, political, and institutional factors. Complex patterns of human relationships overlay, alter and distort the relation of people to the land and to the cities... The cultural, social and political filters through which the environment is interpreted and viewed (for example the concept of ‘desertification’) are also crucial to the social science understanding of ecology and environment.

Different papers in the volume focus on the way in which the researcher's world view and approach affect the questions asked and the evidence gathered, and how social, political or economic factors shape how a person uses and manages natural resources. This is true *a fortiori* for women who, because of the gendered division of labour that assigns to them the main responsibilities for the care economy (domestic work, care of human beings and social reproduction), are often the stewards of local ecologies, including food production, and therefore most severely affected by environmental damage and resource loss. A number of the papers were on deforestation, and together they showed:

The links between environmental problems, human activities and issues of population are rarely direct. It is clear that social scientists must carefully re-examine social, economic and political processes from the point of view of their potential environmental impacts. Models that accomplish this would include mechanisms that govern the use, access and control of resources, as well as the allocation of costs and benefits of human activities exploiting those resources.

Since the period when the book was published, there has been a wealth of research, mostly but not only based on developing countries, which starts from the micro-basis of how people actually live, produce and consume for their livelihoods, use resources, and conserve or abuse local ecologies. The work of Agarwal, Leach, Ostrom, Peluso and Watts, Ribot, Rocheleau among others provides some important examples (Agarwal 2010, Leach et al. 1999, Ostrom 2000, Peluso and Watts 2001, Ribot and Peluso 2003, Rocheleau 1996). While some of this research has influenced the 'people versus planet' debate, a critical element—the place of gender relations in population dynamics and human ecology—is not always recognized in the resurgence of Malthusian approaches.

ENTER HUMAN RIGHTS: WOMEN TRANSFORM THE PARADIGM

The previous section has argued that the more micro-level approaches and complex behavioural interactions studied by social scientists bring in new and varied evidence, which is not easy to take account of in large-scale macro-level models of the links between environment and population. An even greater paradigmatic change has been brought about by the work of feminist researchers and women's organizations.

Sen (2006) argues that women's struggle for control over their bodies is currently in its second phase. The first phase occurred during the birth-control movement of the late nineteenth and early twentieth centuries. This movement was interwoven with the suffragist struggle for the recognition of women as citizens in Europe and North America, and to some extent the anti-colonial movements of that time, although the

relationship was by no means straightforward. The period between the first phase and the second phase that began about 30 years ago saw the population policy field and the discipline of demography grow substantially.

Population policy, as it evolved in the period after the Second World War, was largely Malthusian. Talk of a ‘population bomb’ fed concerns in the policy establishment of the global North about the growing numbers of non-white people. Population growth was portrayed as the single most serious threat to economic development, and population control was put forward as the policy answer (Ehrlich 1971). Despite the South-versus-North skirmishes over the relative importance of ‘development’ versus family planning in controlling population growth,⁵ there was very little real challenge to this consensus about population policy.

Though anthropologists and other social scientists have had some influence, demography developed as a largely technical discipline concerned with the calculus of birth, death and migration, with much less interest in social and behavioural issues. Perhaps for this reason, the field as a whole was largely able to close itself off from attention to the causes and consequences of sexual and reproductive behaviour, and the social institutions, practices and norms within which that behaviour is embedded in different cultures and societies. It was not until the rise of the modern women’s movement in the 1960s and 1970s that real change became possible in the field.

The international women’s movement had coined and been using the term ‘reproductive rights’ for about 20 years before the paradigm shift that transformed the population field at the International Call on Population Development in Cairo in 1994. Much of this work was motivated by activist concern to challenge coercion, human rights abuses and unethical practices in population policies and programmes.⁶ A strong focus of this work was to challenge the ways in which new contraceptive technologies were introduced in family planning programmes and the problem of coercion and quality of services, as well as the problem of inadequate access to contraception or safe abortion services. This activism was not matched by significant feminist research effort until the 1990s. During the 1980s, feminist demographers remained concerned with the question of whether and through which pathways women’s education or autonomy can affect fertility and related behaviour (Mason 1988).

POPULATION, ENVIRONMENT AND GENDER

The UN conferences of the 1990s galvanized both research and activism. In the lead up to the Earth Summit, many major North-based environmental groups posited population growth as a major threat to the earth’s carrying capacity. Feminist activists began a

process of consolidation of a counter-position that was articulated in the *Planeta Femea*, the women's tent, through interactions with a large number of women from environmental organizations. In the next two years, women's organizations worked together to develop a consensus position on population policy that would bridge the considerable differences and mistrust that existed among groups from different regions and backgrounds. While some of these differences were the product of mistrust of Northern by Southern civil society groups, there were also tensions among groups within each global pole. A major and conscious effort at bridging gaps and building agreement was critical in allowing the women's movement to turn its attention to two tasks: the first was to negotiate an alliance with the family planning lobbies, and the second was to develop the political capacity to challenge the growing bloc of religious conservatives that was being created by the Vatican. The success of the women's movement in accomplishing these two tasks is the history of the International Conference on Population and Development.

A new framework for population-related policy was created, which affirmed women's right to control their fertility and meet their needs for safe, affordable and accessible contraceptives, while recognizing the social determinants, and health and rights consequences of sexual and reproductive behaviour (Sen et al. 1994, Correa and Reichmann 1994, Dixon-Mueller 1993). New and radical concepts, such as reproductive and sexual health and rights, had to be clarified in a field that had been an "odd mixture of technocratic modelling and doomsday scenarios until then" (Antrobus and Sen 2006). The result of all this effort was the paradigm change of the International Conference on Population and Development, as detailed in its Programme of Action—the shift away from a policy focus on aggregate numbers and population growth towards a focus on sexual and reproductive health and rights (including contraception and family planning) and gender equality.

While there was no intrinsic disagreement between the women's groups and the environmental groups in terms of the importance of and need for high quality, effective contraceptive services, there were other differences. These were about overarching goals: macro-level planetary sustainability versus the health and rights of people, particularly of women and young people. These differences in goals meant that each approach asked different questions and marshalled different evidence. For example, family planning programmes in India had for a long time explained away the poor uptake of intra-uterine contraceptive devices as being due to women's ignorance and unscientific traditional beliefs. This was because they did not actually focus attention on women's reproductive health and rights. It was only after the focus on women's reproductive health generated evidence about high rates of reproductive tract infections among poor rural women (Bang 1989) that their reluctance to use the devices became acknowledged as being rational and sensible.

CONCLUSION: CHALLENGES OF RIO+20 AND CAIRO+20

These differences in approaches and evidence came to a head in the lead up to the Rio and Cairo conferences. Macro-level approaches linking the natural sciences with traditional demography tended to oversimplify the causes and consequences of both demographic and ecological change. More nuanced social science and political economy approaches brought less simplistic analysis but also raised more difficult questions about needed policies and changes. It was here that women's organizations provided the radical shift in approach that led to the change of the population paradigm. Up until Cairo, the main question asked about women's role in population change was whether and the extent to which girls' education would alter fertility behaviour, and thereby population growth. But Cairo moved population thinking from such *instrumentality* to a human rights basis for policies that assigned *intrinsic* value to gender equality and women's sexual and reproductive health and autonomous decision-making. It opened up and made possible a range of new questions about policies, programmes and ethics that demographers had not been asked before.

The engagement between women's and environmental groups dampened the macro approaches to population and environment for well nigh two decades after the Rio and Cairo conferences. More recently, however, in the lead up to the intergovernmental negotiations on climate change and the review of the Kyoto Protocol, such approaches have resurfaced, raising human rights concerns about the implications for global consensus about population policies and programmes. They also appear to have come back in major reports such as that of the Royal Society (2012), albeit in a much more nuanced and sophisticated manner. Some of this may be simply because many environmentalists are natural scientists for whom the complexities of social science approaches may be unsettling. But it may also be the case that, in the difficult context of bitter South-versus-North battles over climate change, common but differentiated responsibilities for current environmental problems, and reaffirmation of the core principles of the Earth Summit, the bogey of population growth may serve to diffuse the call for recognizing historical responsibilities. Caught in the middle of these battles is the continuing struggle for the realization of women's human rights, including their sexual and reproductive rights and gender justice.

Marrying a human rights-based approach to population and environmental change is not easy by any means. But when both population and environment, and the links between them, are examined from the perspective of women, gender equality, human rights and social justice, not only can new questions be asked but new approaches can be taken and new policy and programme answers given. For example, the intergovernmental negotiations during the 45th session of the UN Commission on Population and Development held in April 2012 resulted in a remarkably progressive recognition of the needs, health and human rights of adolescents and young people (UNCPD 2012). This is the direction that the paradigm change of Rio, Vienna, Cairo and Beijing needs to follow for its completion. ■

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Endnotes

- 1 One can always add any number of terms to an identity as long as numerators and denominators cancel out. What this means is that the choice of the terms one includes has to be made *a priori* and their causal connections cannot be derived from the identity itself.
- 2 Contemporary critics of Malthus argued against blaming the victim, which is what Malthus appeared to do.
- 3 Thanks to Deepak Malghan for personal communication on this. Any errors of interpretation are ours alone.
- 4 The report itself only focuses on 'extreme' poverty, and also sidesteps the challenge of 'common but differentiated responsibility' by lumping emerging economies with the 'most developed'.
- 5 "Development is the best contraceptive" was the South's slogan during the international population conference held in Bucharest in 1974.
- 6 The Women's Global Network for Reproductive Rights was the main international organization mobilizing women at this time.

BOX 4

PROMOTING A GENDER-INCLUSIVE GREEN ECONOMY

Bina Agarwal



UN Photo/Logan Abassi

Rapid economic growth in many developing countries, in recent years, has failed to translate into adequate gains in terms of gender inclusion and environmental sustainability. Recent research demonstrates however, that women's inclusion in green governance could prove to be a win-win situation in promoting a green growth.

In my study of community forestry groups in India and Nepal, I examined what difference women's presence makes in these institutions.¹s. How does it affect institutional functioning and outcomes for conservation and subsistence? And how much presence is needed to make a real difference? This approach represented an important departure from most existing research on gender and local forest governance, which had focused almost entirely on women's *absence* from governance and on the implied inequality, and paid little attention to the impact of women's presence.

Based on a sample of 135 community forestry groups, protecting local forests in three districts of Gujarat, India, and three districts of Nepal, I found that groups with a larger proportion of women in their executive committees performed significantly better than those with few or no women, in several important respects.

For example, in mixed-gender executive committees (a typical executive committee has 11 members), women's attendance rate in meetings was significantly higher where they constituted 25 to 33 percent of the members, than if they constituted less than 25 percent. The likelihood of at least some women speaking up was also greater among committees with a third or more women members, as was the likelihood of women holding significant office (e.g. president, vice president, secretary). This empirically supports the popular view that a critical mass of one quarter to one third of women is needed for their presence to make a difference in decision-making bodies, and strengthens the policy argument for promoting at least these proportions in such bodies.

Including landless women makes a particular difference. Contrary to the popular view that the poorest are least likely to participate in public forums, I found that poor women, if present in sufficient numbers on an executive committee, were more likely to attend meetings and speak up than women from well-off households, since they had less to lose in terms of social status by crossing social norms, and much to gain if the decisions went in their favour.

Most importantly, women's presence significantly improved forest conservation outcomes. I compared groups with more than two executive committee women members and those with two women or less

in Gujarat, and groups with all-women committees and other groups in Nepal. By most assessments of forest condition (the forest department's records, villagers' assessment, research team's assessment, and satellite data, where available), groups with more women committee members in Gujarat and those with all-women committees in Nepal substantially outperformed other groups, showing better forest regeneration and improved canopy cover since protection began, after controlling for other factors. This was especially striking in Nepal, where forests with all-women executive committees showed a 51 percent greater likelihood of improved forest condition than other groups, despite receiving much smaller and more degraded forest plots to protect.

These positive conservation effects are attributable to several factors. Women are the main subsistence users of forests for firewood, fodder and supplementary food. Including them in an executive committee enlarges the pool of people committed to resource conservation. It improves information flows about forest closure rules (which restrict entry and regulate extraction from the protected area) among a wider cross-section of users. It increases the numbers keeping watch. And it enables women to better use their knowledge of local ecology and conservation practices on the protected plots. Older women, who tend to have more authority and experience, make a particular difference. Moreover, women's involvement can better raise children's awareness about conservation practices and so enhance long-term institutional sustainability. The forest department's technical support can also bring benefits, if they

reduce the current gender gap in access to training.

In addition, many gender-empowering effects follow. Speaking at meetings, influencing decisions, patrolling, holding office, sometimes even asking forest officials for a forest plot to protect, are all facets of empowerment. Measures that increase women's presence would thus bring both intrinsic benefits, in terms of equitable participation, and instrument advantage by better fulfilling conservation and subsistence objectives.

Scaling up these initiatives is possible by forming federations of forest users, such as the Federation of Community Forest Users Nepal, which is country-wide and mandates that 50 percent of its office-bearers be women. Also, in the long run we need policies to reduce local dependence on forests by promoting alternative cooking fuel, such as biogas; alternatives to wood for agricultural implements and house repair; and alternative means of livelihood. Forest federations with their wide community networks could play an important role in bringing about such shifts.

Forests are carbon sinks and critical sources of biodiversity. These results demonstrate effective ways of promoting green growth and a green economy in a gender-inclusive way. ■

Endnotes

- 1 Agarwal, Bina, 2010. *Gender and Green Governance: The Political Economy of Women's Presence Within and Beyond Community Forestry*. Oxford University Press, Oxford.

Women are the main subsistence users of forests for firewood, fodder and supplementary food. Including them in projects' executive committees enlarges the pool of people committed to resource conservation, improves information flows, increases the numbers keeping watch, and enables women to better use their knowledge of local ecology and conservation practices on protected plots.

BOX 5

CAN ECONOMIC GROWTH SUPPORT GENDER EQUALITY AND ENVIRONMENTAL SUSTAINABILITY?

Diane Elson

Economic growth cannot support gender equality and environmental sustainability if it continues to privilege the demands of a wealthy elite, degrade the commons, deplete public services, make the luxury shopping mall the icon of development, and encourage women to turn themselves into commodities.

However, economic growth can support gender equality and environmental sustainability if what grows, are gender-equitable production systems and products that respect, protect and fulfil human rights (economic, social, cultural, civil and political); that respect, protect and conserve the environment; and that enable people to be self-determining rather than have their sense of self and aspirations shaped by big business.

We need to dethrone GDP, which measures production by a market-oriented money metric, and use new measures that encompass the quality, not just the quantity, of production systems and products, including measures that recognize that the amount of time spent in producing something is not just a cost to be reduced but frequently a contributor to the quality

of the product. This is especially important in service provision, paid and unpaid care services in particular.

Organizations working to realize women's rights and improve their wellbeing need to identify the production systems and products that should expand, and those that should contract. Pursuing these goals requires identifying the economic and social policies that will support these objectives. Though market incentives have some role to play, achieving these objectives cannot be left to the market. Though private sector for-profit entrepreneurs must contribute, support must be given to a range of other providers, such as cooperatives and other forms of collective provision, and democratically organized public-sector services.

In identifying products and policies, we can draw on feminist research regarding how different economic models meet the needs of the world's low-income women in taking care of themselves, their families and their communities.¹ This knowledge is rooted in the everyday realities of women's lives, recognizing the contributions that



Ull Photo/Muse Park

women make through the unpaid work of caring for families and communities, as well as paid work producing for the market or the public sector.

What needs to expand includes access to clean water and sanitation, renewable energy, carbon-neutral housing adapted to local climate conditions, effective public transport, secure and nutritious food supplies, high quality public services for education; access to health and care for children, sick people and frail elderly people; and to information and communication systems—all of which would benefit women. If access is to be affordable and products are to be of high quality, it cannot be left to the market. There must be safeguards for a variety of channels for access, including production for own use, production by civil society organizations, and production by public sector agencies of service free at the point of delivery. Production by big business must be democratically regulated, and whistle blowers and watch dogs supported, to guard against regulators becoming subservient to the interest they are meant to regulate.

The expanding systems of production must provide decent work that recognizes that both men and women workers have care responsibilities for their families and communities, and which enables them to combine paid and unpaid work. Unemployment and underemployment must be addressed with the creation of sustainable jobs. There are many unmet needs in the care of people and the environment, and many people available to meet these needs, given appropriate training and adequate remuneration. What is missing, are the economic

policies that will support the creation of decent jobs, and employ people to meet these needs.

That is because economic policies privilege products and production systems that we need less of— big cars that use a lot of fuel; armaments; luxury apartments that require air conditioning; water-thirsty golf courses; sex tourism; fast food and highly processed food that creates obesity and diabetes; financial systems oriented to high bonuses for the few and high risks for everyone else; and production systems oriented to treating most people as disposable components for generating profits.

But this is not inevitable. It can be changed. People are already working in many parts of the world to bring about that change, with women in the forefront in many cases.² The pressures of climate change and ecological crisis make this change even more urgent. The question that needs to be addressed is not growth versus no growth, but growth of 'goods', complemented by contraction of 'bads', with measures to create more decent employment in the production of 'goods', to which people can be channelled as employment in the production of 'bads' declines. The knowledge of low-income women, who spend so much time caring for their families and communities, will be especially valuable in identifying which are the 'good' products, and which the 'bad' products. ■

Endnotes

- 1 See, for instance, Devaki, Jain, and Diane Elson (eds), 2011. *Harvesting Feminist Knowledge for Public Policy – Rebuilding Progress*. IDRC and Sage, New Delhi.
- 2 See www.awid.org for examples.

Economic policies privilege products and production systems that we need less of—but this is not inevitable. It can be changed.

BOX 6

GENDER EQUALITY CASE STUDY: THE BODY SHOP

Christina Archer

When Anita Roddick founded The Body Shop in the 1970s, her way of doing business was ahead of its time; she passionately believed that businesses should deliver social change. Five core values—Support Community Fair Trade, Defend Human Rights, Against Animal Testing, Activate Self-esteem and Protect Our Planet—underpin how The Body Shop does business. To further these values, The Body Shop established the cosmetic industry's first fair trade programme, Community Fair Trade (originally Trade Not Aid). The industry's largest programme, it buys accessories and ingredients from 25 producer groups in 21 countries. The programme benefits thousands of people by providing, among other things, participatory price setting, transparent forecasts and stable long-term demand. The Body Shop support has been instrumental to many groups' efforts to build and expand their businesses beyond initial demand.

In 2009, The Body Shop updated the programme's operational framework and developed the Community Fair Trade Charter. The Charter, based on the principles of fair trade, incorporates the International Labour Organization's core principles of labour rights, as interpreted in the Ethical Trading Initiative's Base Code. It also includes more explicit commitments for the

company and its suppliers to understand production's impacts on environmental sustainability and biodiversity, in order to put in place systems to manage and reduce these. The Charter codifies The Body Shop's commitments as a fair buyer, and producers' responsibilities as Community Fair Trade suppliers.

One of the longest-standing Community Fair Trade relationships is with the Juan Fransisco Paz Silva cooperative, in Achuapa, northern Nicaragua. The cooperative was set up over 20 years ago, and works to support its over 270 member families develop sustainable livelihoods. Although women have been involved in the cooperative from the start, and are represented on the elected Board, they did not join as members in their own right, as traditionally the head of the family (in majority of cases the man) would be the family representative.

Achupan farmers have traditionally grown maize, beans and sorghum as subsistence crops, and sesame as a cash crop. Sesame, one of the world's oldest commercial oil crops, has been used in cosmetics for thousands of years. The Body Shop started trading with the cooperative in 1992, becoming its first international client. Inclusion in the Community Fair Trade programme provided

The Body Shop follows a business model that is based on having a supply chain that not only delivers high-quality products, but also maximizes community-level development impacts.

cooperative members with the support needed to upgrade their production and quality control processes, increasing the volume and quality of their sesame seed oil. Today, cooperative members have a portfolio of international clients and have moved up the supply chain, joining with other local cooperatives to form their own export/import company.

In 2009, the cooperative suggested piloting a pioneering fair pricing model that incorporates women's unpaid labour—labour that is essential to the functioning of a productive household unit growing sesame. This work not only takes into account traditional activities in the home, but also acknowledges tasks such as seed grading that is done at home and may fall out of traditional pricing models based on labour hours worked on the land. The funds generated by this additional premium are put into the Anita-Maria Zunilda Women's Fund, a revolving loan fund that is only accessible to women in the community. The fund has enabled over 70 women, currently organized into eight small community enterprise groups, to carry out small-scale income generating activities both individually and as a group.

Although the fund has only been operational for a few years, the women already describe its impacts on their lives: for the first time they are in control of the money they are earning and saving, and have been able to access credit to set up their own economic initiatives (due to assets being held in their husband's names women lack the collateral to access loans from traditional sources). This

programme has increased the women's empowerment and self esteem, and has resulted in a marked increase in women wanting to join the cooperative.¹

The Body Shop follows a business model that is based on having a supply chain that not only delivers high-quality products, but also maximizes community-level development impacts. This business model—by recognizing women's role in the supply chain, acknowledging the interdependence of women's and men's paid and unpaid work, creating a fund to rebalance income distribution within producer households, and increasing the income generated and held by women—has improved intra-household food security and households' resilience to changing environments.

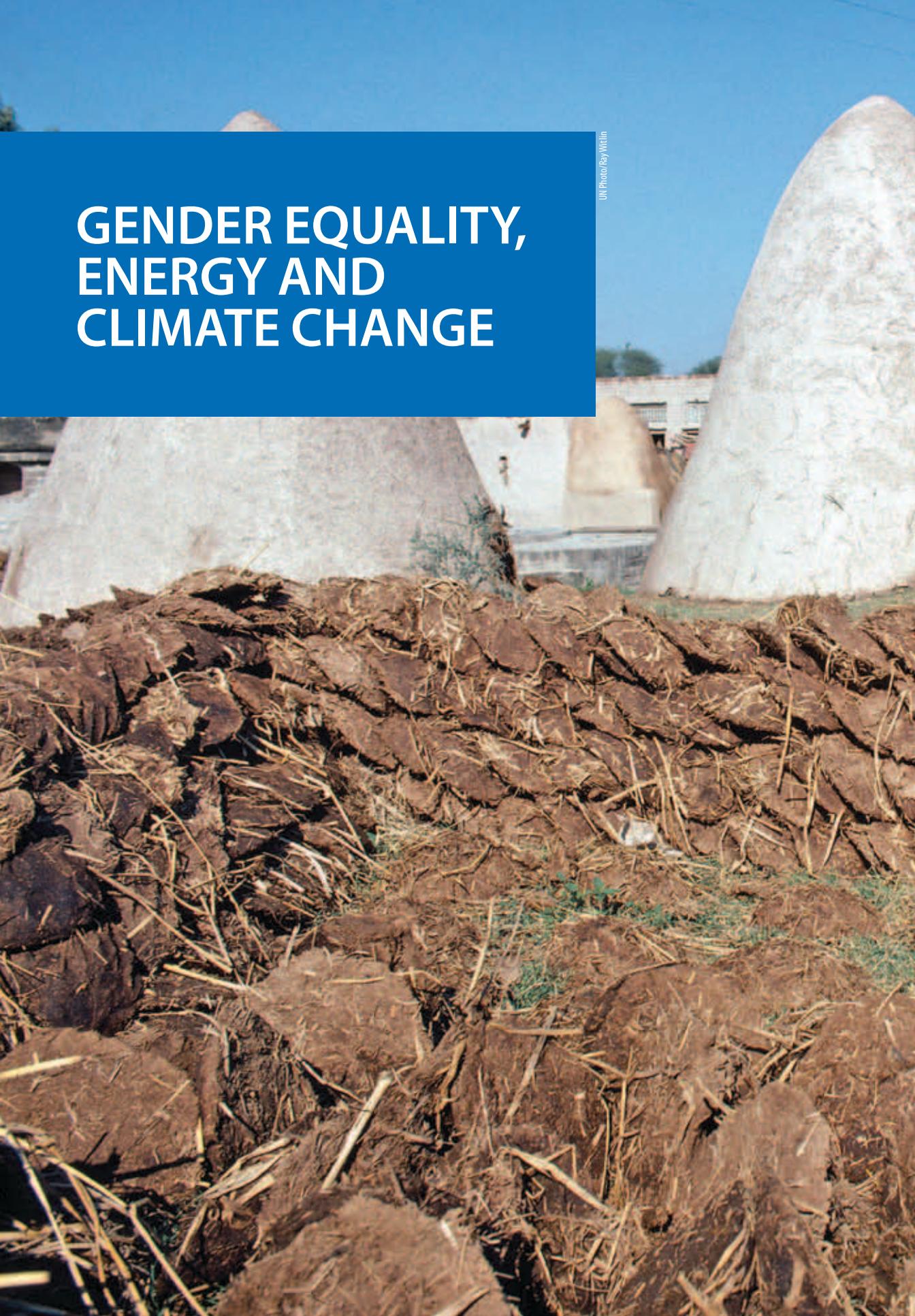
Following this model and building close relationships with producer groups can ensure long-term security of supply for the buying company and can inform purchasing practices that ensure that the benefits of trade are equitably shared at the community and household level. This visibility is also important for companies that are beginning to understand how climate change will affect producer communities, and how unfair purchasing practices can exacerbate these impacts. ■

Endnotes

- 1 To evaluate the benefit of this innovative pricing model for women in this supply chain, The Body Shop is co-funding a PhD through the ESRC Collaborative Award, held at Royal Holloway, University of London. For more information visit <http://womenincommunitytrade.org>.

GENDER EQUALITY, ENERGY AND CLIMATE CHANGE

UN Photo/Pay Writin







IT IS CRITICAL FOR GOVERNMENTS TO ENSURE BASIC LEVELS OF ENERGY RESOURCES FOR THE MOST VULNERABLE GROUPS, WITH PARTICULAR ATTENTION TO WOMEN'S NEEDS, ESPECIALLY AS PEOPLE STRUGGLE TO DEAL WITH THE IMPACTS OF THE CURRENT ECONOMIC AND FINANCIAL CRISES.

6

LINKS BETWEEN GENDER EQUALITY, ACCESS TO SUSTAINABLE ENERGY AND CLIMATE CHANGE MITIGATION MEASURES

GAIL KARLSSON
ROSE MENSAH KUTIN

INTRODUCTION

In preparation for the Rio+20 Conference on Environment and Development, UN Secretary-General Ban Ki-moon stressed the need to look at sustainable development issues in a holistic way. “We have to connect the dots among climate change, the food crisis, water scarcity, energy shortages and women’s empowerment and global health issues. These are all interconnected issues” (UN News Centre 2012).

The Rio+20 Conference offered an opportunity to link gender and energy access within overall plans and commitments on sustainable development and climate change responses. It also provided an important platform for mobilizing investments in energy initiatives that support women’s rights and economic empowerment.

Due to a variety of collaborative advocacy efforts, the Rio+20 outcome document, ‘The Future We Want’, incorporated many references to gender equality, women’s empowerment and women’s participation in decision-making. Specifically with respect to energy access, paragraph 125 stated: “We recognize the critical role that energy plays in the development process, as access to sustainable modern energy services contributes to poverty eradication, saves lives, improves health and helps provide basic human needs. We stress that these services are essential to social inclusion and gender equality...” This was important progress, since the text provides a strong basis for incorporating a gender perspective into energy programmes, including the UN’s Sustainable Energy For All initiative. However, there was relatively little attention given to climate change in the outcome document, and no specific mention of gender in that context except with regard to the design and implementation of disaster risk management plans (UNCSD 2012, paragraph 188).

During the preparations for Rio+20, ENERGIA¹ worked with other members of the Women’s Major Group, governments, UN agencies and other partners in calling for commitments that include a focus on women’s access to cleaner, more efficient energy sources and technologies for household use and productive activities. This is seen as particularly critical since women bear a disproportionate share of the burdens of providing basic energy resources in households and communities in developing countries. In addition, in order for energy access to support women’s economic empowerment, women need training, financing and support for new business activities—including ones that involve designing, producing, marketing and managing new energy products and services.

Meanwhile, extreme weather, droughts, desertification and flooding are affecting women’s livelihoods and workloads, and threatening their communities. The Women’s Major Group emphasized women’s valuable experience, knowledge and ideas about climate change adaptation, mitigation, resilience and disaster risk management, insisting that “women’s decision-making power and participation in the development and implementation of climate change policies, mechanisms and funding must be increased to ensure they are gender-responsive” (Women’s Major Group 2011).

Building on the results from Rio+20, this paper examines linkages between strategies for expanding access to sustainable energy in developing countries, adopting effective climate adaptation and mitigation approaches and funding mechanisms, and promoting the advancement of women as an essential element of sustainable development. It also presents examples of projects and approaches that combine gender awareness, energy access and low-carbon development strategies.

IMPORTANCE OF GENDER EQUITY AND ATTENTION TO WOMEN IN ENERGY ACCESS PLANS

In support of the General Assembly's designation of 2012 as the International Year of Sustainable Energy for All, the UN Secretary-General initiated a global campaign to help put countries on a more sustainable energy pathway. He particularly emphasized the importance of energy access for women. "The implications of energy poverty are enormous. Parents cannot grow enough food or adequately support their families without motorized equipment, irrigation pumps, and power for business activities. Women spend hours each day on routine daily subsistence activities—pounding grain, hauling water and gathering firewood. They have little or no time for earning income. And when they cook over open fires, they and their children are exposed to harmful pollutants from inhaled smoke" (Ban Ki-moon 2011).

It is critical for governments to ensure basic levels of energy resources for the most vulnerable groups, with particular attention to women's needs, especially as people struggle to deal with the impacts of the current economic and financial crises. Yet, even though energy access is an element of sustainable development that is particularly important for women, their voices and perspectives are rarely considered in energy decision-making. The traditional approach to energy access policies has been to focus on household-level electricity connections or off-grid technology solutions rather than on the particular needs of different household members. Recently, however, UN agencies have acknowledged the links between gender and energy-access needs, recognizing that the delivery of energy services and technologies is not gender neutral (UN-Energy 2005); this was reflected in the Rio+20 outcome document.

Particularly in rural areas, the lack of modern fuels and electricity (and their high costs when available) tend to reinforce gender inequalities. Due to traditional gender roles and relationships in developing countries, women generally have to assume responsibility for providing energy for the household. This unpaid work often involves long hours of labour, collecting wood or other biomass fuels (e.g. animal dung, crop wastes), and hinders women's opportunities to pursue educational and income-generating activities.

Unpaid or 'informal' women's work generally does not figure in national economic reports or energy sector planning, as human labour is usually not counted in conventional energy statistics. For example, the energy used to run an electric pump or fuel truck can be easily measured and reported, but the physical energy expended by a woman carrying water or wood is invisible and unrecorded (Cecelski 2000). However,

women's labour is often critical for the survival of household and community members, and for the national economy.

ENERGIA-supported research has shown that in many countries, women's work in collecting and managing traditional biomass fuels represents a major portion of the energy sector. In Uganda, for example, biomass (mostly collected by women) accounted for almost 90 percent of the total energy consumed in the country, and in Zambia wood fuel for use by households represented over 80 percent of the total energy supply (ENERGIA 2007).

For many years, ENERGIA network members have been working to raise awareness about gender and energy access linkages. Beyond calling attention to the ways in which women are burdened by lack of energy services, ENERGIA members focus on promoting gender-sensitive energy policies and actions. Targeted policies and actions can relieve women's household burdens and enable them to engage in more profitable enterprises—which can then lead to greater economic independence, security and climate resilience. This includes support for the active engagement of women in the energy sector, through new enterprises, entrepreneurial activities and sustainable resource management.

Overall, it has been a challenge to get government energy planners in developing countries to pay attention to the energy needs of rural women when there are pressing demands for fuel and electricity to support urban development, industrial expansion and transportation. In part, this is due to the lack of value placed on women's labour, and erroneous assumptions about women's natural capacity to provide for the needs of household members.

Where energy policies have been targeted towards women, they have mostly addressed household cooking needs, by increasing access to improved stoves and alternative cooking fuels or by promoting tree-planting to increase fuel wood supplies (UNDP 2001). While women can benefit from these initiatives, they also need readily available and affordable energy for lights, processing of food and crops, and water pumping. In addition, they need energy for their traditional income-generating activities (e.g. small-scale farming, food processing and informal production and marketing activities) as well new types of entrepreneurial activities.

Lack of energy tends to have a disproportionate impact on women and girls not only due to their traditional responsibilities for household and community maintenance activities, but also because of their subordinate social and economic status, which is reinforced by inequalities in legal rights and widespread gender discrimination in institutions. This limits their ability to make decisions, control resources and escape from conditions of poverty. Though some countries have made progress in terms of promoting women's rights through policies and legislation, this has not necessarily led to direct

impacts on women's well-being in terms of improved access to clean, affordable energy.

A recent United Nations Development Programme report, *Towards an Energy Plus Approach for the Poor*, highlighted the importance of focusing on women in energy-access initiatives because bringing energy to women and girls helps lift communities out of poverty and improves health conditions. The report also concluded that the greatest potential for poverty alleviation comes from combining energy service delivery with efforts to support income generation through information services, training in business development skills and access to capital and markets (UNDP 2012). In line with this emphasis on income generation, Lighting Africa, a joint initiative of World Bank and International Finance Corporation, focuses on marketing solar lights to women to replace candles and kerosene lamps, and highlights the potential for generating new income by expanding work hours and pursuing business opportunities using the solar lights (IFC 2011).

WOMEN, ENERGY AND CLIMATE CHANGE

Rural women who depend directly on the local environment for biomass fuels, food production and water collection will be particularly affected by climate change impacts. The UNDP *Human Development Report 2007/8: Fighting Climate Change*, which considered the connections between gender inequalities and climate risks, observed that women's historic lack of rights and resources makes them highly vulnerable to climate change, and that climatic changes are likely to magnify existing patterns of gender disadvantages (UNDP 2008). It was therefore a disappointment to women's advocacy groups that the final Rio+20 Outcome Document did not include text that reflected gender and climate change linkages.

A recent civil society report, Social Watch 2012, noted the ways that climate change will affect women and men differently, and described how women can make unique contributions to adaptation and mitigation efforts due to their distinct roles in food production, fuel consumption, resource management, disaster responses and the care economy. The report went on to say that climate funds which overlook the roles that women play will miss significant opportunities for implementing adaptation and mitigation initiatives effectively.

A major issue is that the traditional biomass fuels collected by women are becoming scarce in many areas due to droughts, floods and erosion, and this fuel scarcity is likely to be exacerbated by climate change. Women's access to fuels is also affected by policies that constrain their land ownership or limit their access to formerly communal lands and forests that have been privatized for logging or agriculture.

Energy scarcity due to ecosystem damage and destruction affects the provision of people's basic needs for food and water, especially in rural areas. Health and nutrition are directly affected if there is less fuel for cooking food or boiling water. Impacts include increased incidences of water-borne diseases, fewer meals, and increased sickness and mortality. In addition, if longer treks are required for collecting wood, women have less time to attend to other household chores, or engage in activities that produce income to meet family needs. Other family members, particularly girls, then need to help with basic subsistence activities, which limits their opportunities for education and employment.

The World Health Organization has estimated that about 2.7 billion people use biomass for household energy while another 0.4 billion people use coal. Burning these fuels produces high levels of indoor air pollution in unventilated rooms (WHO 2011). Women and children who spend a substantial portion of their time in the home are particularly affected by respiratory illnesses such as pneumonia and chronic obstructive pulmonary disease. At the same time, inefficient traditional stoves and open fires also contribute to global climate change through the release of carbon dioxide, particulates (black soot), and methane, a potent greenhouse gas (WHO 2006).

CLIMATE CHANGE RESPONSES LINKED TO ENERGY EXPANSION EFFORTS

In recent years, climate change has become a dominant factor in discussions about energy policies, in some cases overshadowing development needs. Current energy production and consumption patterns (particularly in the richer countries) are tightly linked to increased levels of greenhouse gases in the atmosphere, and scientists warn of serious risks to people and ecosystems as a result of rising temperatures.

However, while there needs to be an overall focus on energy efficiency, conservation and a transition to renewable energy, in many poorer countries the promotion of low-emission fuels and technologies needs to be combined with efforts to expand access to basic energy services. The Secretary-General highlighted this in launching the 2012 Sustainable Energy for All campaign:

“As I see it, we face two urgent energy challenges. The first is that one in five people on the planet lacks access to electricity. Twice as many, almost 3 billion, use wood, coal, charcoal or animal waste to cook meals and heat homes, exposing themselves and their families to harmful smoke and fumes. This energy poverty is devastating to human development. The second

challenge is climate change. Greenhouse gases emitted from burning fossil fuels contribute directly to the warming of the earth's atmosphere, with all the attendant consequences: a rising incidence of extreme weather and natural disasters that jeopardize lives, livelihoods and our children's future. Sustainable energy for all by 2030 is an enormous challenge. But it is achievable. My vision is for a world with universal energy access coupled with significantly improved rates of energy efficiency and a doubling of renewable energy in our mix of fuel sources." (Ban Ki-moon 2012.)

Expanding access to new fuels and energy technologies for rural women offers them the hope for improved lives and livelihoods. It can also contribute significantly to climate change mitigation if the fuels and energy technologies that are used produce relatively low levels of carbon dioxide or other greenhouse gases.

Women are frequently custodians of traditional community knowledge and can provide valuable insights into sustainable management of fuels and natural resources. In 2001, governments participating in the Commission on Sustainable Development discussions on energy and climate change called for actions to promote equal access to energy and natural resources for women, and greater involvement of women in decision-making processes. However, women's perspectives are still not well integrated into global discussions on energy and climate change, and gender equality has rarely been taken into account in this context.

Given the importance of energy access for women's economic and social empowerment, it is critical for women's needs to be addressed in national and international climate change and energy policy discussions. The overall amount of funding and investment expected for climate change adaptation and mitigation efforts in developing countries could substantially boost economic development and women's empowerment—if it can be channelled into expanded energy access initiatives for rural areas.

At the March 2012 meeting of the UN Commission on the Status of Women, Michelle Bachelet, the head of UN Women, led a discussion called 'Rural Women, Climate Change and Access to Energy'. She emphasized the multiple co-benefits of expanding sustainable energy access—including for the empowerment, education, literacy, nutrition and health of women—and noted that responses to climate change can accelerate the development and expansion of clean energy sources. "This provides a clear opening for women to adopt roles as producers, managers, promoters and sellers of modern sustainable energy. An opportunity therefore exists to collectively advance sustainable development, rural women's empowerment and climate justice by increasing access to sustainable energy where it is needed most" (Bachelet 2012).

GENDER ISSUES AND THE UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE

In order to address the potentially devastating consequences of increased global greenhouse gas emissions, the heads of state attending the 1992 Earth Summit signed the United Nations Framework Convention on Climate Change. The Framework Convention set out objectives for stabilizing concentrations of greenhouse gases in the atmosphere, including voluntary commitments by industrialized countries to reduce their emissions. Few countries met their emission reduction commitments, and this led to the adoption of the Kyoto Protocol to the Framework Convention, which entered into force in 2005 (and expires at the end of 2012).

The Kyoto Protocol set new emission reduction goals for richer countries, and also created innovative mechanisms to help them comply with their commitments. One of these was the Clean Development Mechanism (CDM), a market-based programme through which investments in projects in developing countries can result in emission reduction credits. The Certified Emission Reductions offered by projects implemented in developing countries are traded on carbon markets, and have become a significant source of project financing for developing countries. Besides reducing emissions, the CDM programme is also meant to promote sustainable development in countries where the projects are located.

Major concerns for women is that the Framework Convention on Climate Change neither explicitly recognizes gender as a relevant issue, nor references gender equality and women's participation issues. In 2007, a coalition of organizations, including UNDP, the United Nations Environment Programme, the International Union for the Conservation of Nature, the Women's Environment and Development Organization, ENERGIA and many others, began working to address this problem through the Global Gender and Climate Alliance. The alliance now has over 50 members.

In October 2008, the Third Global Congress on Women in Politics and Governance adopted the 'Manila Declaration for Global Action on Gender in Climate Change and Disaster Risk Reduction'. The Declaration underscored women's roles as vital agents of change, holders of valuable knowledge and skills, and potentially powerful leaders in climate change adaptation, mitigation and disaster risk reduction. It pointed out that the absence of a gender perspective in the Framework Convention violated legally binding national and international commitments on gender equality.

At the March 2010 session of the UN Commission on the Status of Women, US

Secretary of State Hillary Clinton added her voice to the calls for engagement of women in climate change responses. “Women in developing countries will be particularly hard hit, because as all of the changes of weather go on to produce more drought conditions and more storms and more floods, the women will have to work even harder to produce food and walk even farther to find water safe for drinking. We believe we must increase women’s access to adaptation and mitigation technologies and programmes so they can protect their families and help us all meet this global challenge” (Clinton 2010).

In 2009, the UN Secretary-General had also urged governments to foster an environment “where women are key decision makers on climate change, and play an equally central role in carrying out these decisions” (Ban Ki-moon 2009). However, in 2010 when he convened a high-level advisory group on climate change financing, there were initially no women in the advisory group. After protests by women’s organizations, one woman was appointed to the group.

ADVOCACY FOR GENDER MAINSTREAMING IN CLIMATE FUNDS

In the past few years, many different international funds have been set up to provide financing for various types of climate change responses. Unfortunately, most of the funds do not take gender issues into account in their design, implementation and monitoring. As even more financing possibilities have become available, the Global Gender and Climate Alliance and other civil society groups have worked to ensure that women, and women’s projects, will be able to access and benefit from climate-related funds and processes.

Gender-sensitive climate-related funds and investments could help transform women’s current fuel collection work into sustainable energy enterprises that simultaneously promote women’s economic and social development, reduce emissions and help build community resilience to climate change. They could also help provide sustainable energy sources to improve essential social development services such as health care, schools, and communications. However, maximizing climate mitigation is not necessarily closely aligned with meeting women’s energy access needs. Energy efficiency investments in large power plants, industrial facilities and transportation systems lead to greater emission reductions, and have attracted most of the climate-related investments and financing, but do not necessarily benefit rural women without grid connections.

Typically, the types of projects women’s groups develop have been too small, and the

transaction costs (e.g. feasibility reports, consultant fees, and registration and verifications costs) too high, for many of these projects to benefit from the Clean Development Mechanism programme. Most CDM projects approved so far have been relatively large-scale, and in the largest developing countries (e.g. China and India), where project developers see the greatest potential for achieving quick emission reductions.

The Manila Declaration called for the market-based mechanisms, such as the Clean Development Mechanism and other carbon trading funds and credits, to be made equally accessible to both women and men. “Thus, CDM should fund projects that enhance energy efficiency and make renewable energy technologies available and affordable to women for household needs, enhancing economic activities and socio-economic mobility” (CAPWIP 2008).

In addition to the CDM, a number of other climate-related funds have emerged in the past few years, including multilateral initiatives established by the UN, the World Bank and the regional multilateral development banks. Yet these also paid little attention to gender-differentiated impacts, needs and capabilities. There was initially no consideration of gender in the World Bank’s Climate Investment Funds, even though the bank’s own research has shown that gender mainstreaming increases the effectiveness of its development funding (World Bank 2012). The World Bank has been criticized for the significant gap between its commitment to providing funds for gender-equitable policies and a near total absence of gender-based analysis of climate change fund policies and programming (Rooke et al. 2009). Now, the Climate Investment Funds’ programme, Scaling-Up Renewable Energy in Low-Income Countries, solicits information about social and gender co-benefits, including greater involvement and empowerment of women and other vulnerable groups; however there is still no overall, systematic integration of gender concerns (Schalatek 2011).

From a gender perspective, it is important that climate change funds address the broader social and economic inequalities that affect women’s participation in adaptation and mitigation efforts, and work to bridge these gender gaps. The proposal for the Green Climate Fund in the 2009 Copenhagen Accord promised to provide \$100 billion dollars for climate adaptation in developing countries by 2020. The Global Gender and Climate Alliance and other civil society groups have pushed for explicit attention to gender in this new fund. As a result, its governing documents call for a gender balance on the governing board and staff of the secretariat, and its objectives and principles stipulate that promoting gender responsiveness is to be considered an explicit co-benefit (Legatis 2012). At a regional level, 21 African countries are participating in the Africa Adaptation Programme, which has allocated \$1.3 billion for climate change adaptation

and mitigation. Between 2004 and 2011, a total amount of \$390 million was disbursed. Within the programme, gender issues have been considered to some extent in the initiatives that are being implemented on the ground, although it is not clear that frameworks have been established to address gender inequalities in a systematic manner.

Fulfilling international commitments to promote gender equality and respond to climate change both involve expenditures based on principles of equity as well as economics. However, many governments look primarily at short-term cost-benefit analyses. In this context, an examination of climate change funds should consider the division between paid and unpaid labour. Women continue to perform a disproportionate amount of unpaid labour, much of which is directly impacted by climate change. Thus, climate change financing mechanisms that measure impacts in terms of paid work and gross national product do not capture the growing burden of unpaid work on women, or the impacts of mitigation strategies in decreasing that burden. For example, in Ghana, a project supported by UN Women and implemented by ABANTU for Development with Gender Action on Climate Change for Equality and Sustainability, introduced efficient stoves for income-generating activities. These stoves have reduced women's biomass fuel consumption, and have had multiplier effects in terms of reduced time and labour for women, with positive impacts on their health and the health of their families. None of these impacts can be measured, however, without measuring the nature and effects of unpaid work on women and their communities.

DEVELOPING GENDER-SENSITIVE ENERGY ACCESS AND CLIMATE-RESPONSIVE PROJECTS

Women are already engaged in some climate change responses, individually and as members of community organizations or self-help groups, through such activities as fuel and crop switching, water harvesting, irrigation, tree planting and intercropping of biofuel oil species. In addition, women's traditional uses of forests for sustainable livelihoods—gathering food, medicines and productive materials—are compatible with preservation of the forests for carbon sequestration and biodiversity conservation. However, women's actions are not always sufficiently acknowledged or supported. ENERGIA has worked with UNDP Cambodia on introducing gender mainstreaming into its energy and environment programme in order to make the activities more gender-sensitive and inclusive. This work includes projects on climate-resilient water

resource management and agricultural practices, sustainable forest management and community-based adaptation.

In linking energy access and climate change mitigation, there are also substantial possibilities for engaging women in efforts to adopt and distribute renewable energy technologies such as wind, solar and small hydro-generators that can provide electricity and motorized power for essential equipment, such as water pumps and grain mills, without increased greenhouse gas emissions. Access to these technologies would relieve women's time and labour burdens related to fuel collection and management and free up their time for other types of activities.

In Nepal, the Biogas Support Programme has received Clean Development Mechanism credits for widespread production of household biogas plants. ENERGIA has worked with this programme to develop a gender-mainstreaming plan, and it now has targets for promoting women's ownership, building and management of biogas digesters. The project has reduced women's fuel wood collection, improved cooking and health conditions, lowered carbon dioxide emissions, and given women more time to engage in income-generating activities (ENERGIA Asia 2009).

The Grameen Shakti programme in Bangladesh has installed thousands of solar panels in rural areas, taking advantage of CDM provisions allowing for aggregation or 'bundling' of small clean energy projects to earn emission reduction credits. To engage women in this work, Grameen Shakti has established technical training centres run by female engineers. These centres have trained rural women to assemble, install, maintain and repair solar systems. The women gain skills, confidence and financial independence while working to expand renewable energy access.

The Global Alliance on Clean Cookstoves, a public-private partnership led by the UN Foundation, aims to save lives, empower women, improve livelihoods, and combat climate change by creating a thriving global market for clean and efficient household cooking solutions. The Alliance has a '100 by 20' target, which calls for 100 million homes to adopt clean and efficient stoves and fuels by 2020. ENERGIA has provided recommendations to the alliance on roles for women entrepreneurs in establishing local markets for clean cookstoves. Women can become actively engaged in starting businesses around, and earning income from, the cookstove value chain through product design, engineering, manufacturing, maintenance, marketing, distribution and sales. Women buying the stoves can also establish or expand businesses using the more efficient cookstoves, saving time and/or money on fuel requirements.

There are already some large cookstove projects that have received climate-related funding. For example, in February 2012, the CDM Executive Board registered the first

African cookstove Programme of Activity. Under this arrangement, different types of more efficient wood burning stoves can be included within one CDM registration. Up to 100,000 improved cookstoves will be distributed over five years, generating emission reductions of up to 250,000 tons of carbon dioxide annually. It is a joint initiative of two German non-governmental organizations, Atmosfair gGmbH and Lernen-Helfen-Leben e.V., along with the Nigerian Developmental Association for Renewable Energies. In addition to generating emission reductions, the programme will also reduce wood consumption, conserve forests, and decrease indoor air pollution (Atmosfair 2012). Women's groups and representatives from the Ministry of Women Affairs and Education in Nigeria were invited to attend a stakeholder conference and comment on the design of the programme, as most of the end users will be women. Their suggestions included expanded collaboration with grassroots groups and institutions focusing on the roles and rights of women, and more training programmes and/or workshops for women on the use and assembly of the stoves (Atmosfair 2011).

For women to actually benefit economically from these possibilities, they may need targeted training in business management as well as technical skills, and financing options to support their involvement in new business opportunities.

CONCLUSION AND RECOMMENDATIONS

Although there are significant differences in the goals of climate mitigation and energy access activities, both can benefit substantially in terms of social equity and effectiveness by integrating gender concerns, and seeking greater participation of women. Without the full participation and engagement of both men and women, the world is unlikely to be successful in reaching the Sustainable Energy for All targets by 2030, or addressing climate change threats.

Climate-related programmes and funds can contribute to women's access to improved energy technologies, engage them in responding to climate change threats, and help make a transition to sustainable energy solutions. Through improved energy access, women can then gain better health, livelihoods and community services, which will promote climate resilience and overall sustainable development.

An important step in integrating gender into energy and climate change initiatives would be to incorporate a greater focus on equality and social and economic development when considering policy choices and technology investments. Another step would be for national and international planners and funders to recognize that women are

already active agents of change, particularly at the household and community level, and make an effort to enlist them in energy and climate change plans and activities.

There are many tools and resources that can be useful in taking these steps, including conducting gender audits of energy and climate change decision-making and management processes; collecting gender-disaggregated data; incorporating gender-sensitive budgeting and accounting approaches in energy and climate change funding and investment programmes; and using gender-based project indicators and evaluation procedures. In addition, targets and affirmative action programmes could be used to ensure that qualified women are trained and hired for decision-making positions, and to correct gender imbalances in international organizations, panels and governing boards.

With regard to follow-up on the Rio+20 conference, there are a number of NGOs and research groups, including ENERGIA, that can offer assistance to governments, agencies, institutions and project managers on developing strategies and action plans to establish gender-sensitive objectives, outcomes, activities and monitoring frameworks. They can also provide guidance on gender issues for coordinators of the Sustainable Energy for All initiative, and to climate fund administrators. ■

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Endnotes

- 1 The ENERGIA International Network on Gender and Sustainable Energy was launched in 1995 as a network of committed individuals and organizations working on gender mainstreaming in energy policy and practice. ENERGIA is hosted by the ETC Foundation and connects over 8,000 development practitioners across the world, with an active presence in 22 countries in Africa and Asia.

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IN AREAS THREATENED WITH DROUGHT AND DESERTIFICATION, WOMEN'S AND GIRLS' INCREASED DOMESTIC CARE RESPONSIBILITIES COULD SIGNIFICANTLY REDUCE THEIR OPPORTUNITIES TO ENGAGE IN INCOME-GENERATING ACTIVITIES, WITH NEGATIVE IMPLICATIONS FOR FOOD AND HEALTH ACCESS, EDUCATION AND SECURITY.

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7

GENDER-SENSITIVE STRATEGIES TO ADDRESS THE CHALLENGES OF CLIMATE CHANGE ON HEALTH AND NUTRITION SECURITY

CRISTINA TIRADO

INTRODUCTION

Climate change, described as “the biggest global health threat of the 21st century” (Costello et al. 2009), will exacerbate the neglected global crisis of under-nutrition—one of the world’s most serious but least-addressed health and socio-economic problems (UNSCN 2010b). Humans will experience both direct and indirect effects of climate change, including extreme weather events (e.g. droughts, floods, storms, wildfires), impacts on the availability and quality of food and water, changes in ecosystems, agriculture and livelihoods, all of which can cause death and disability (Confalioni et al. 2007).

Climate change will have differentiated effects on women and men, such as vulnerabilities to direct and indirect impacts of climate change on health. Though women are particularly vulnerable to the effects of climate change, they are powerful agents of change in their communities, often playing key roles in all aspects of health care, food production and in ensuring household nutrition. However, official policy frameworks and formal channels have yet to adequately recognize or promote these important

roles. Further, women are insufficiently included in climate change-related initiatives, planning and decision-making processes. Women must be empowered as climate change and health leaders, both as a matter of human rights and in order to enhance the effectiveness and sustainability of climate change strategies and health-promoting policies.

This paper advances a framework that advocates the promotion of gender equality within climate change, health and nutrition strategies. This approach recognizes that empowering and strengthening women's leadership is a matter of equity and justice, attained through processes that affect and involve all members of society.

CLIMATE CHANGE, HEALTH AND NUTRITION: GENDERED IMPACTS, VULNERABILITY AND RESPONSES

Climate change impacts human health and well-being through different pathways, including under-nutrition due to recurrent droughts, changing patterns of vector, food, and waterborne infectious diseases such as malaria or diarrhoea; increasing death and injury due to extreme weather events such as heat waves, storms and floods which also contribute to increased population dislocation and insecurity (Confalioni et al. 2007, IWGCCH 2009). Many of the same inefficient and polluting uses of energy that are causing climate change are exacerbating chronic diseases such as cardiovascular disease, stroke, asthma and other respiratory illnesses (IWGCCH 2009; WHO 2009). Differences occur in women's and men's vulnerabilities to both direct impacts (e.g. heat waves, droughts, storms and floods) and indirect impacts (e.g. water and food and nutrition insecurity).

Climate-sensitive health impacts, such as under-nutrition and malaria show important gender differences (WHO 2012). For example, pregnant women are at greater risk of contracting malaria (WHO 2012). Women's nutritional needs make them more prone to deficiencies caused by food and nutrition insecurity, particularly while they are pregnant or breastfeeding. For example, in South Asia and South-East Asia, 45 to 60 percent of women of reproductive age are underweight, and 80 percent of pregnant women have iron deficiencies (WHO 2012).

The effects of climate change on health have disproportionate impacts on socially vulnerable members of society, particularly poor women and children (WHO 2008). Under-nutrition remains one of the world's most serious but least addressed health and socio-economic problems, hitting the poorest the hardest (Horton et al. 2010; FAO 2009). In turn, poor health and under-nutrition undermine vulnerable populations' resilience to climatic shocks and adaptive capacities.

Rural women in developing countries who rely on subsistence agriculture to feed their families make up most of the world's poorest peoples (FAO 2006). Climate change will intensify water and food insecurity, thereby increasing poor women's work burdens, particularly in Africa and Asia (Parikh and Denton 2002). This will adversely affect health and nutrition security through a number of pathways: reduced access to household food; lack of time for child-caring practices (e.g. breastfeeding); and lack of access to clean drinking water, safe sanitation and health services (Tirado et al. 2011).

In areas threatened with drought and desertification, women's and girls' increased domestic care responsibilities could significantly reduce their opportunities to engage in income-generating activities, with negative implications for food and health access, education and security (Masika 2002, Tirado et al. 2011). During the dry season in rural India and Africa, 30 percent or more of a woman's daily energy intake is spent fetching water (WHO 2012). Carrying heavy loads over long periods of time causes cumulative damage to the spine, the neck muscles and the lower back, thus leading to early ageing of the vertebral column (WHO 2012). Women may have heavier family and caring responsibilities that cause stress and fatigue, while also preventing wider economic participation and access to health care services (WHO 2012). Drought disproportionately has increased suicide rates among male farmers in Australia (Nicholls et al. 2006) and among poor male farmers in India (Nagaraj 2008).

Exposure to smoke from traditional cookstoves and open fires—the primary means of cooking and heating for nearly three billion people in the developing world—causes 1.9 million premature deaths annually, with women and young children the most affected (WHO 2004). Women face severe personal security risks as they forage for fuel, especially from refugee camps and in conflict zones.

Globally, natural disasters such as floods and storms kill more women than men, and tend to kill women at a younger age (Bartlett 2008, WHO 2012). Women are more vulnerable than men to climate-related disasters' physical and social impacts. This vulnerability, however, is not due to differences in physical characteristics per se. Rather, it is a reflection of women's lower status and roles, different responsibilities and socio-economic and human rights status (Neumayer and Plümper 2007).

In communities affected by forced migration, women and girls are at a higher risk of exposure to sexual violence, exploitation and abuse, domestic violence, HIV/AIDS and face a lack of access to adequate health care services.

There are gender differences in risk perception, and responses to climate impacts differ in the face of ensuring health, food and livelihood security (FAO 2010b). An example is their different perceptions of impacts of climate change on the availability of water. Men are likely to note that ponds drying up decrease the number of livestock,

ADDRESSING GENDER INEQUALITIES: A PRECONDITION TO ADAPTING TO CLIMATE CHANGE IMPACTS ON HEALTH AND NUTRITION SECURITY

There are key areas related to women rights, non-discrimination and gender equality that need to be addressed in order to reduce vulnerability and increase adaptation capacity and resilience to climate change health impacts. These include education; access to resources, financial services and technologies; and safety nets.

- **Education.** Access to information and education enhances women and men's capacity to adapt to climate change. When climate-related disasters or environmental degradation diminish household resources, girls are more likely to be pulled from school (Eldridge 2002, WEDO 2008). Promoting girls' education has yielded benefits for community resilience in some communities (Blankespoor et al. 2010). Activities such as incorporating school meals and food-for-education programmes help achieve full enrolment, educational gender equality and improved food security (FAO 2010a). Girls with more education grow up to have smaller and healthier families (Herz and Sperling 2004). Education of adolescents and women on reproductive health and access to voluntary contraceptive methods is

critical to allowing them to decide and plan their education and future livelihoods, which affects their assets to access to health care.

- **Access to resources, financial services, technologies.** By giving women equal access to productive agricultural resources—land, inputs, training, credit—women's farm productivity would increase by 20 to 30 percent, and 100 to 150 million fewer would be hungry (FAO 2011). Promoting equal access to resources such as capital, technical assistance, technology, equipment and markets is needed for effective socio-economic participation. This is critical to ensure livelihoods that allow for appropriate access to nutrition security and health care services.
- **Gender-sensitive safety nets.** Social protection programmes, including social cash transfers and food- and cash-for-work programmes, can prevent poor families from selling off their few productive assets during times of crisis. Given the critical role women play in children's health and nutrition, transfers should be delivered through gender-sensitive mechanisms. Safety nets are critical to preventing irreversible losses in human capital and protecting families' access to health and food—particularly for children, mothers and the elderly.

whereas women tend to be more concerned with the shortage of drinking water and the effects this has on their families' health (FAO 2010b).

Information on gender diverse roles, behaviours and choices regarding adaptation and mitigation responses can support more targeted, effective efforts to develop healthy and environmentally friendly policies. The transport and energy sectors make the largest contribution to greenhouse gas emissions and cardio-respiratory health impacts, and have the strongest evidence of gender-specific differences. For example, in many countries men consume more energy than women, particularly for private transport, while women are often responsible for most of the household consumer decisions, such as those related to food, water and household energy (WHO 2012). Mitigation instruments and mechanisms should reflect these gender differences regarding energy use and emissions in order to achieve the maximum benefits from the policies (Miller et al. 2007).

GENDER-SENSITIVE OPTIONS TO ADDRESS THE CHALLENGES OF CLIMATE CHANGE ON HEALTH AND NUTRITION SECURITY

IMPROVING HEALTH ACCESS

Universal health coverage is critical for poverty eradication and sustainable development. Health care systems should be gender-sensitive and protect and address the needs of the most vulnerable populations. There is a need to develop gender-responsive and accessible health services that reach the poorest populations and address women's and men's particular health needs (WHO 2012). Supporting health access through investing in health care systems will address significant climate change impacts on health. Incorporating gender into health interventions is a crucial component of addressing gender inequality and ensuring women's full access to comprehensive health services (WHO 2010). This is particularly relevant in connection with natural disasters and displacement, and in refugee settlements. Climate change adaptation plans should facilitate access to comprehensive health services and outreach initiatives, to promote the availability of basic vaccinations, nutrition programmes and gender-sensitive education and communication programmes on climate and health-related risks.

PROMOTING CO-BENEFITS FOR HEALTH AND THE ENVIRONMENT

Addressing climate change by supporting greenhouse gas emissions reductions in the transport, housing, agriculture and energy sectors can substantially reduce the global burden of disease. In particular non-communicable diseases such as heart diseases, chronic respiratory diseases, diabetes and cancer are influenced by transport, energy, urban planning and agricultural policies.

Gender-sensitive adaptation and mitigation strategies have great potential for generating co-benefits by improving health while reducing greenhouse gas emissions. There are important differences in the circumstances, attitudes and behaviours of women and men in relation to decisions on mitigation policies and their relation to health (WHO 2012). For example, inefficient burning of biomass in traditional cookstoves releases high levels of black carbon, contributes to global warming, and causes approximately 1.9 million deaths per year, mainly of women and children (WHO 2004). Women are frequently critical decision makers in terms of consumption patterns at the household level and therefore the main beneficiaries of access to cleaner energy sources (WHO 2012).

Women make over 80 percent of consumer decisions and are more likely to be sustainable consumers, with a higher tendency to recycle and recognize the importance of energy efficiency compared with men (OECD 2008). Such differences are likely to be particularly important in relation to choices such as food, because decisions such as moderating meat and dairy consumption bring both large health benefits and substantial reductions in agricultural greenhouse gas emissions (WHO 2012).

INCREASING ACCESS TO MATERNAL AND CHILD HEALTH AND CARE PRACTICES AND NUTRITION SERVICES

Good nutrition makes essential contributions to health objectives, equality goals and the fight against poverty. It protects and promotes health; reduces mortality, especially amongst mothers and children and the elderly; encourages and enables children to attend and benefit from school; and enhances adult productivity and incomes. Women's nutritional status has a direct impact on their children's nutrition status, with many health effects over the course of life.

Pregnant women, new mothers and young children are particularly vulnerable to the impacts of climate change on under-nutrition and health consequences. Climate change will exacerbate chronic under-nutrition. Pregnant women with chronic malnutrition and micronutrient deficiencies experience a higher rate of maternal mortality, and are more likely to give birth to developmentally challenged or stunted children. Even mild stunting is associated with higher rates of illness and death, impaired cognitive function and reduced school performance in children. Health and nutrition interventions during the critical period between conception and the first 18 to 24 months of a child's life, can be particularly effective (Horton and Shekar 2010).

Adapting to climate change requires incorporating strategies that strengthen and protect primary maternal and child health services, including: promoting breast feeding and healthy lifestyles (UNSN 2010b); nutrition supplements to prevent anaemia and other nutritional deficiencies; immunizations and growth monitoring of infants and children; and provision of family planning and other sexual and reproductive health services. Strategies to promote maternal and child health care require strengthening public health systems and basic clinical care systems (UNSN 2010b).

Focusing on women's roles in food production and distribution at the household level is an important strategy for improving children's nutrition and health outcomes. In order to ensure food security and nutrition for women and children at the household level, social investments must be made to improve women's social rights and nutritional status, as well as promoting nutrition-sensitive agriculture, which ensures diet diversity

and household food access. Strengthening women's roles in promoting sustainable and diverse diets, resilient livelihoods, local food systems and climate-smart agriculture, including the production and consumption of nutrient-rich crops, is critical for ensuring food and nutrition security under a changing climate (Tirado et al. 2012).

ENVIRONMENTAL HEALTH

Promoting improved environmental health through water, sanitation and hygiene interventions, and clean cookstove distribution programmes addresses significant environmental exposures that routinely impact women and children's health, while also responding to the environmental effects and causes of climate change. Strategies that reduce exposure to indoor air pollution, conserve increasingly scarce biomass products, increase women's participation in water system planning and management, and can achieve health and environmental co-benefits.

Steps should be taken to create capacity-building and training on environmental health and water management programmes targeted at women and men and based on their needs. Studies have shown that when women and girls are given the opportunity to participate in water management and development programmes, there are corresponding increases in efficiency and sustainability (UNDP 2006).

Incorporating fuel-efficient clean cookstoves into climate change adaptation strategies has numerous co-benefits, including reducing cardio-pulmonary disease among women and children, reducing overall levels of toxic substances emitted by inefficient cooking, and reducing the amount of time that women and girls spend collecting firewood.

Promoting healthy environments through investing in water and sanitation systems, clean energy access, environmentally friendly urban settings, housing and clean transport systems all address significant climate change impacts on health. This will be more successful for improving health and equity if gender-sensitive policies and investments are addressed in climate mitigation and adaptation.

CONCLUSION AND RECOMMENDATIONS

The potential co-benefits and synergies between gender, health, nutrition security and environmental objectives should be addressed in the post-2015 development agenda. Efforts to promote health in a green economy should be seen in the context of poverty eradication.

Key recommendations to address gender, health and nutrition within sustainable development and poverty eradication include:

- Mainstream gender equality, health and nutrition as key dimensions of sustainable and equitable development and climate resilience;
- Support universal health coverage, including universal access to sexual and reproductive health, as an essential component for poverty eradication, gender equality and sustainable development;
- Promote gender-sensitive approaches and interventions in resource-insecure settings to address climate change impacts on health and nutrition and promote sustainable development and poverty eradication;
- Build climate change resilience by addressing the underlying causes of vulnerability and main socio-economic determinants of health and equity such as poverty, empowerment, health access, education, safety nets and gender equality;
- Support gender equality as a key for successful leadership on climate policies and sustainable development and in decision-making processes related to urban and transport planning, agriculture and risk reduction;
- Invest in gender-sensitive policies that bring co-benefits to health, nutrition and the environment by promoting healthy life styles and healthy environments while reducing emissions in the transport, housing, agriculture, energy and other sectors;
- Promote gender-sensitive assessments and gender-responsive interventions in order to enhance health and health equity in climate change adaptation, mitigation and sustainable development efforts;
- Ensure the inclusion of gender, health and nutrition-sensitive indicators of sustainable development efforts, particularly in the context of the development of the sustainable development goals; and
- Commit the necessary resources to ensure the implementation of the sustainable development goals in the framework of equity and social inclusion. ■

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DEMOCRATIZING FINANCING FOR SUSTAINABLE DEVELOPMENT: GENDER EQUALITY IS THE KEY

LIANE SCHALATEK

THE CENTRALITY OF GENDER EQUALITY FOR SUSTAINABLE DEVELOPMENT

The Rio Declaration, Agenda 21 and the Rio+20 Outcome Document, ‘The Future We Want’, focused on sustainable development, drawing linkages among nature, markets and societies to determine the social, ecological, political, cultural and economic interventions that would most likely secure a decent life for everyone, and protect the environment. Centred on the notion of intergenerational and societal justice, and of care and precaution in dealing with each other and the earth, sustainability as a concept was and is inconceivable, and cannot be realized without including gender equality ideals into all aspects of development work. Agenda 21 and the Rio Declaration, particularly Rio Principle 20, explicitly recognized women as key actors for environmental protection and poverty eradication; Principle 10 affirmed their rights to participate in environmental and development policy decision-making.

Making development and climate financing instruments and processes more gender-responsive and equitable—indicators of the progress to democratize sustainable

development processes—will help highlight and address accountability and transparency gaps in global environmental and development regimes. Gender equality, and the financing needed to implement gender-responsive sustainable development, must also be at the core of a commitment for a set of new sustainable development goals to be developed in the post-2015 development agenda.

The understanding that ecology and development are not gender-neutral developed during the 1990s and early 2000s. It gradually became recognized that any analysis of interactions between market-based economies and nature would be incomplete without considering gender relations. The 1995 Fourth World Conference on Women, with its Beijing Platform for Action, included gender and the environment as one of 12 critical areas of concern. The 2000 Millennium Summit, with its endorsement of the Millennium Development Goal (MDG) process with specific (but separate) goals for both gender equality (MDG3) and environmental sustainability (MDG7), reflected the highest ambition of this emerging policy consensus.

During these international processes, governments acknowledged that achieving gender equality would require significant financial resources. Many other high-level meetings and processes (e.g. the 2002 International Conference for Financing for Development and the 2005 Paris Declaration on Aid Effectiveness) echoed these demands for gender equality-related funding (UNDAW 2007). However, while governments committed themselves politically, they neither set specific financial benchmarks nor instituted comprehensive tracking mechanisms and procedures nationally or globally for gender equality and women's empowerment expenditures.

The Development Assistance Committee of the Organisation for Economic Co-operation and Development (OECD-DAC) gender equality policy marker for official development assistance is a noteworthy, but underutilized exception. For example, though the policy marker could correlate with other OECD markers (such as the Rio Markers for climate change-relevant official development assistance expenditures), its potential has not been sufficiently exhausted. Within the UN system, some tailored modifications of the policy marker are used to varying degrees.

The years since the 1992 Earth Summit have seen mixed progress, with advances, stagnation and setbacks in achieving gender-equitable sustainable development. The interrelated financial, food and fuel crises have disproportionately affected women. Sexual and gender-based violence and discrimination have persisted, despite binding international legal frameworks (e.g. the Convention on the Elimination of All Forms of Discrimination against Women).

Global poverty primarily affects women—despite and in many aspects because of economic and financial globalization and liberalization efforts centred on a

growth-profit-efficiency trilogy, which have created both opportunities and risks for women. For example, though international trade has opened up new employment opportunities for women, many of these jobs are precarious, hazardous and do not offer a living wage. Furthermore, the liberalization of many essential services (e.g. health and education), leading to service delivery by for-profit companies, has curtailed universal access to basic social services and social protection (UNDAW 2007).

Without fundamental reforms and strict government regulations, the global economic paradigm is incompatible with the care, precaution and intergenerational principles required to attain sustainable development (Gottschlich 2012, Wichterich 2012). The care economy—predominantly women’s unpaid work to support families and their livelihoods—remains largely excluded, hidden and undervalued from the economic sphere. It is treated as a given, a resource to be utilized, but not considered in economic policy-making from the macro to the micro level. This is similar to prevailing macroeconomic models and policies’ systematic externalization of environmental inputs and harms. The fact that climate change has been called the “greatest market failure” by the 2006 ‘Stern Review on the Economics of Climate Change’ is a testament to that shortcoming. Analogously, the non-consideration of women’s care contributions in a more holistic valuation of what constitutes desirable and productive economic activity, and the cumulative societal effects of gender inequality, have to be considered “bad economics” (UNDAW 2007).¹

ADDRESSING AND REMEDYING BAD ECONOMICS

Rio+20 should have addressed current economic models’ shortcomings of not factoring environmental and care economy externalities into the determination of what should be considered as good economic practices and desirable economic outcomes. In order to capture these externalities, both gender equality and environmental considerations must be integrated centrally into all policy actions, from development and implementation to monitoring and evaluation, in a double mainstreaming approach (Schalatek, 2011b). Such a transformation must go beyond mere technological innovation by including commitments to a human rights-based democratization of economic, socio-cultural and ecological change.

Such an approach could have offered a breakthrough on the path to a social, just, gender-equitable, low-carbon and resource-efficient world. It would be driven less by vested political and economic top-down interests than by a bottom-up approach by movements, communities and civil society actors. The conceived system should be more transparent, accountable, participatory and inclusive in governance and decision-making

processes. Approaches will have to be based on the concept of subsidiarity, and start at the local-level to inform global policy frameworks. Such change processes will be incomplete without actions addressing women's empowerment and gender equality.

One of the major components of Rio+20 has been the discourse about the green economy and developing a roadmap towards achieving sustainable development and poverty eradication goals. Unfortunately, the green economy conceptualized by the United Nations Environment Programme as a key contribution to Rio+20 looks mainly at avoiding the over-exploitation of natural resources. It fails, however, to address social and political rights and aspects of gender discrimination (Wichterich 2012, Gottschlich 2012). The concept suggests that it is possible to decouple economic growth from material throughput and conventional energy use—a view many climate change experts dispute, pointing to the limits of efficiency gains and constraints on governance and markets that are inherent to the capitalist market system (Hoffmann 2011). Critics see the green economy concept as too timid and falling short of advocating for new prosperity, development, lifestyle and consumption models built around equity and justice, with sufficiency and a “good life” as the ultimate goal of human economic activity (Fatheuer 2011, Unmüßig 2012).

The United Nations Environment Programme concept is largely conceived of as a global green investment and job creation programme for low-emission, pro-poor development, with suggested investments of up to \$1.3 trillion per year (or two percent of global economic investment). However, it does not address compliance with existing international environmental law, human rights principles or other rights and norms (e.g. the right to water or food) as the normative framework to guide investments, nor does it integrate a gender-differentiated view (Unmüßig 2012, Schalatek 2011a).

The post-2015 development framework needs to remedy these conceptual shortcomings and anchor any action plan for a global green economy firmly within a human rights and equity framework based on existing international obligations and principles, while any attempts to weaken them in ongoing negotiations and deliberations—a concern many civil society observers have—must be thwarted.

Developed countries should commit themselves to helping developing countries pay for immediate actions towards sustainability because of equity considerations and the application of the principle of “common but differentiated responsibilities and respective capabilities”—a key concept of the international climate negotiations and an application of the ‘polluter pays principle’ elaborated at the Earth Summit. However, in an era of public-sector indebtedness and economic crisis, such commitments by developed countries might be unattainable idealism, given that many developed country governments are financially constrained if not politically reluctant to invest in their own countries’ overdue economic and energy paradigm shifts.

ADDRESSING EXISTING ACCOUNTABILITY GAPS FOR FINANCING GENDER-EQUITABLE SUSTAINABLE DEVELOPMENT

Concrete finance numbers, spending targets and enforceable commitments are needed in the post-2015 environment. These are the first important steps towards democratizing spending. This means moving beyond transparency of whether pledges are fulfilled and what and how public monies are spent, by allowing citizens (in both donor and recipient countries) to participate in the way funding is governed and funding decisions are made, to hold their governments accountable.

Spending promises often define only what policy makers consider politically feasible within a given political context. Promises are usually neither indicative of nor synonymous with what experts calculate as actual global costs. An estimate of global costs, for gender equality interventions for example, must aggregate country-specific gender needs assessments. These must take into account national sustainable development strategies formulated with the full participation of all relevant stakeholders, including women, indigenous peoples and affected communities.

Financing targets, and the democratic accountability they promise, are only useful if there is full transparency and comprehensive tracking on all actual public financing provided, including the role that public finance plays in leveraging investments by the business sector. Democratizing finance for sustainable development therefore requires mechanisms for monitoring, reporting and verifying financing claims by governments that allow for citizens and civil society groups to play a primary role.

Lastly, the participation of all citizens, particularly the affected groups and communities who are the ultimate beneficiaries of sustainable development investments, is absolutely necessary to democratize funding for sustainable development actions. Including women is paramount for such democratization efforts to be successful. Increasing the democratic gender-responsiveness of sustainable development—from establishing funding needs, to funding allocations and programme implementation—is not only the right thing to do, but in times of scarce public financing it is also the smart thing to do because it assures more effective use of limited resources (World Bank 2012).

The experiences of the efforts of the international community and national governments with development assistance and public climate financing are worth a closer look, as they highlight persistent barriers that need to be overcome and key reforms that need to be implemented to successfully democratize finance provisions. These lessons can contribute to effective, equitable and gender-responsive low-emission, and climate-resilient development actions. This paper focuses on the gender-responsiveness of financing efforts in the development and climate contexts as a proxy for how inclusive and democratic these efforts have been to date, and to provide insight on improving current practices.

GENDER EQUALITY AND DEVELOPMENT FINANCE

The financing target for official development assistance is an old one—0.7 percent of the gross national product of developed countries. For most OECD countries, this remains an aspirational goal. The voluntary OECD-DAC creditor reporting system tracks and regularly reports on official development assistance contributions. This gives development proponents as well as civil society advocacy groups (as the multitude of aid transparency initiatives demonstrates) the information and opportunity to publicly challenge developed country governments. In 2011, 23 OECD countries and the European Union together provided \$133.5 billion or 0.31 percent of their combined gross national product, which is almost three percent less than 2010 and ended a decade-long period of official development assistance growth.²

The creditor reporting system also reports on a gender equality policy marker. OECD donor countries voluntarily report spending for an official development assistance activity as gender-equality focused, and rate aid projects as having gender equality as a ‘principal’ or ‘significant’ objective. However, the system provides no guidelines regarding what criteria need to be fulfilled for classification under each marker category. Further, no financial differentiation is made between the two markers in accounting for gender-relevant official development assistance. Despite these imperfections, OECD-DAC data is the only available data set on donor country support for gender-equality programme support, relative to total official development assistance. According to the latest available OECD data, in 2009 and 2010, roughly \$25 billion of official development assistance per year was reported as having a principal or significant gender equality focus (OECD 2012); this amounts to roughly 21 percent of all official development assistance in 2009 and 19 percent in 2010.³

An analysis of gender marker data indicates that gender equality is still only selectively integrated in sector-specific development assistance. It is most dominant in traditionally ‘soft’ sectors such as health, education and population policies (as opposed to ‘hard’ sectors, such as economic infrastructures, business and financial services, environment, energy and industry). This holds true both for bilateral aid delivery as well as development assistance implemented via multilateral development banks and UN agencies (Schalatek 2010). This practice of favouring ‘soft’ over ‘hard’ sectors for gender equality-focused aid expenditures was reinforced by the narrow, mostly social sector-focused indicators for gender equality used in Millennium Development Goal 3 on gender equality and women’s empowerment (e.g. girls’ school enrolment rates and reductions in maternal death rates). Gender equality is both multidimensional and

multi-sectoral; the MDGs, which should collectively define the minimum of what is necessary for a decent life, insufficiently reflect this.

Although individual MDGs have been costed globally and nationally over the past decade, there have been few efforts to calculate the international community's costs to achieve comprehensive gender equality (beyond the narrowly defined targets in MDG3). These costing exercises are notoriously difficult because some sector interventions, though not explicitly gender-targeted, still promote (or harm) gender equality and women's empowerment. For example, infrastructure-focused interventions in sustainable water or energy access, not only benefit all members of a household, but also reduce the gender-specific time-burden on women's care work (Grown et al. 2008). In that sense, there is virtually no truly gender-neutral development investment.

A 2007 calculation of targeted official development assistance gender-equality expenditures suggested that low-income countries' costs to realize MDG3 ranged between \$23 and up to \$29 billion annually, not counting additional domestic financing needed by these countries (Grown et al. 2008). No doubt, the overall price tag today could be higher, given the severe impacts of the multiple crises on women since then and the inertia of the global community to significantly increase funding for gender equality over the last years. Underscoring the relative paucity of data, a recent comprehensive update on the status of gender equality and development, World Bank's *World Development Report 2012*, did not provide revised cost estimates.⁴

Significant gaps in the international and national collection of gender-disaggregated data inhibit analysis of gender equality finance needs and existing shortfalls. More and better data is needed in order to support and legitimize a wider, more comprehensive range of development investments targeting gender equality and women's empowerment in the non-social sectors (including actions focusing on the environment and macroeconomic policy). To address these gaps, development organizations (multilateral development banks, UN agencies and bilateral development cooperation providers) should mandate and promote improved quantitative and qualitative sex-disaggregated data collection and analysis, when implementing projects and programmes. The international development community should also provide funding, technical assistance and capacity building to strengthen developing country statistical systems in collecting and analysing gender and sex-disaggregated data.

Domestic gender data and data-collection capacities are prerequisite to ensuring that government promises for gender equity action translate into practical policies and programmes. The institutionalization of gender-responsive and participatory budgeting of public sector revenues and expenditures should be considered as a democratic goal. Unfortunately, in recent years, gender budgeting seems to have fallen out of favour in

the international discourse. Further, despite its clear benefits many developing countries have been treating it as a ‘one-off’ activity, not an integral part of the annual domestic budget process (UNDAW 2007). Though not a panacea for addressing gender equality implementation deficits, gender-responsive budgeting processes should be more widely applied, particularly because ongoing Paris Aid Effectiveness processes have led to increased official development assistance, delivered via direct budget and sector support. National gender-responsive budgeting has become even more relevant when considering that in the future, a significant portion of public climate change financing will be channelled via direct access (through the new Green Climate Fund, for example).

Gender-responsive budgeting processes provide increased transparency and accountability, giving assurances to the international donor community and developing country’s citizens that scarce public monies are spent equitably and effectively. They strengthen citizens’ democratic right—and ability—to participate in budgetary processes and to have a say in financial resource allocations. This will increase the power of women both as a group of political stakeholders and as beneficiaries, and will reduce their traditional disenfranchisement in many developing countries.

DEMOCRATIZING CLIMATE FINANCE BY INCREASING ITS GENDER RESPONSIVENESS

At the 2009 Copenhagen climate summit, the international climate community committed to providing \$100 billion per year by 2020 in long-term climate financing to developing countries. Though the maximum of what was political feasible, the pledge is significantly lower than what many experts calculate will be needed for mitigation and adaptation efforts in poor countries.⁵ Persisting poverty levels among and within countries increase the poor’s vulnerability to climate change. Women, who form the majority of the world’s more than 1.4 billion poorest people, are already disproportionately affected by climate change impacts, largely due to persisting gender norms and discriminations. Women and men also contribute to climate change responses in different ways and have different capabilities to mitigate and adapt. Recent decisions in the 2010 Cancún and 2011 Durban climate summits acknowledged that gender equality and women’s effective participation are important for all aspects of climate change, particularly for adaptation efforts.

Overall, adaptation and mitigation project design and funding insufficiently consider women’s specific knowledge and experiences, for example in safeguarding the natural resources on which they more often depend than men for providing a livelihood for their families. Climate change projects and programmes often focus on technology-centred

solutions with a bias towards larger, capital-intensive projects instead of the low-tech, small-scale and community-based activities women typically engage in. Such a focus on technology-centred, not people-centred solutions ignores that climate change is caused by human behaviour and that it will need behavioural change—including in the way in which gender norms and roles are set and men and women interact—to address climate change.

Gender-responsive climate action plans are urgently needed. In order to implement them, climate financing and funding mechanisms must be gender-aware. This is a matter of using funding in an equitable and effective way. Ignoring women as a crucial stakeholder group will lead to suboptimal results. Gender-aware climate financing and funding mechanisms also acknowledge that climate finance decisions are not made within a normative vacuum, but must be guided by recognition that women's rights are unalienable human rights.

Though private-sector investments in climate solutions are important, their narrowly defined cost-benefit calculations (i.e. focusing predominantly on emissions reductions achieved in relation to expenditures) rarely take into account intangible and intrinsic normative values and co-benefits, such as social equity, the promotion of gender equality, poverty reduction goals or non-climate related environmental considerations, such as biodiversity protection. Similarly, to including women's unpaid care work in budgetary analysis and policy making, capturing full economic, social and environmental co-benefits of climate-projects is imperative for smart and effective decision-making. For example, improved cookstoves not only reduce emissions, but also women's time-burden and their exposure to unhealthy indoor pollutants—a win-win for the climate and gender equality. Such projects, which won't create large emissions reductions individually (but could in the aggregate), are often not considered profitable enough by the private sector to invest in. For the foreseeable future, public finance is key for providing gender-equitable climate finance—either through dedicated multilateral and bilateral climate funds or as climate-relevant official development assistance, channelled through traditional bilateral and multilateral development institutions. Together, they amounted to an estimated \$24 billion in 2009/2010 flows (Buchner et al, III)—much less than the pledged \$100 billion per year to be reached by 2020.

Currently, the tracking of how much public money that developed countries are committing for climate action in developing countries is insufficient, non-transparent and non-comprehensive due to a lack of a global common reporting format (Schalatek 2011a). Data deficiencies can be as problematic as data inaccuracies; without numbers, there is no accountability. No mechanism systematically tracks investments in gender-responsive climate projects or initiatives. Regular and mandatory gender audits and gender tracking of climate funding is required for a gender accounting of how climate

funds are spent and whom they benefit. Establishing regular gender auditing of climate-relevant spending, one of many possible steps to reduce accountability gaps, could be easily made within the current OECD-DAC tracking system for official development assistance. For example, OECD-DAC should cross-reference the existing OECD Gender Equality Marker with the Rio Markers for adaptation and mitigation and extract all official development assistance projects that list both climate change and gender equality as a significant or principal focus. A cross-reference of the 2009 project database revealed that OECD countries reported 800 activities worth roughly \$1.5 billion that had both the Gender Equality Marker and Rio Marker classifications. It follows that donor countries considered approximately 17 percent of climate-relevant 2009 official development assistance expenditures to contribute to gender equality and women's empowerment.⁶

The resulting data analysis should be annually and publicly reported as part of the respective markers' summary analysis (Schalatek 2012). This is currently not done, but should be mandated. Having such numbers available—from bilateral and multilateral official development assistance and from dedicated climate funds—and being able to track and compare them over time would create accountability for gender-responsive climate projects by closing the existing gender and climate finance data and evidence gaps.

Making climate financing more gender-responsive will require improving climate funding mechanisms' structure, composition and operations. Currently, dedicated climate financing mechanisms do not systematically address or integrate gender considerations—many mechanisms have started out largely gender-unaware. Although some improvements have been made (Schalatek 2012), many more actions are still necessary. There are some promising developments.

For example, the Green Climate Fund is the first dedicated climate fund to include a gender perspective from the outset. Its governing instrument contains key references to gender and women relevant to its mission, governance and operational modalities. This is significant given the expectation that the Fund might consolidate and rationalize the existing set of diverse climate financing instruments and could garner a significant portion of multilateral public climate financing. The challenge is to ensure that these gender references—only the beginning of a gender mainstreaming approach for the Green Climate Fund—are operationalized into concrete measures and mechanisms, for example by devising mandatory gender indicators for financing, and drafting guidelines for gender-inclusive stakeholder participation.

The initial outlook is positive, as perception and awareness of the relevance of gender considerations in climate finance has increased among governments, multilateral organizations (often acting as implementing agencies for existing climate funds) and a wider range of civil society organizations. Whether these efforts can succeed in bringing

key actions for gender equality to climate financing mechanisms, including the Green Climate Fund, will be the true determinants, and a litmus test for how accountable, transparent and democratic climate financing mechanisms can be.

Key actions necessary to comprehensively make climate change funds more gender-responsive include: integrating gender equality as a guiding principle and goal into funds' design and operation; developing gender-responsive funding guidelines and criteria for each thematic funding window or instrument; achieving a gender-balance on all decision-making governing bodies and secretariats; ensuring funds' staff has sufficient gender-expertise; stipulating the inclusion and use of gender indicators within a fund's operational and allocation guidelines; requiring a mandatory gender analysis and gender budget for all project and programme proposals; integrating regular gender audits of all funding allocations; establishing internal and external accountability structures such as reporting requirements and periodic evaluations; guaranteeing women's input and participation as stakeholders and beneficiaries during all stages of implementation; securing funding support to enable the engagement of women's and other community and civil society groups; developing best practices with robust social, gender and environmental safeguards that comply with existing human and women's rights conventions, labour standards and environmental laws; and acknowledging respect for country-ownership of funding plans and proposals.

In the climate finance context, country-ownership needs political redefinition beyond national governments to include a multitude of sub-national actors as a fund's eligible counterparts. Considering societal groups, non-governmental organizations and other stakeholders within the context of country ownership presents them with the right and opportunity to interact with international financing mechanisms. It is crucial to allow non-profit groups, including women's organizations, to gain direct access to funding mechanisms, for example via a designated small grants facility or special funding programme for women, local communities and indigenous peoples. Gender-responsive climate funds will need an independent evaluation and recourse mechanism, which will secure for women who have been negatively affected by climate financing, the ability to have their grievances heard and addressed (Schalatek 2012).

Each of the actions outlined above can contribute to increasing the participation and voice of women as a crucial group of agents and beneficiaries in the formulation and implementation of climate actions, and related decision-making. However, only the synergistic effects of full implementation will create a truly gender-democratic climate financing mechanism.

CONCLUSION

Providing adequate and predictable (and in the case of climate finance, new and additional) financing resources for gender equality is crucial to achieving the urgent and visionary goals and political commitments on sustainable development set since the Earth Summit, and largely reiterated and refocused at Rio+20. Knowing the specific interventions needed (via action plans, targets and benchmarks) and their costs, coupled with the ability to juxtapose needs and funding availability, will help close the accountability gap in development and climate change financing—one of the major obstacles to democratizing financing for gender-equitable, sustainable development. Similarly, developing more participatory and gender-responsive decision-making processes within budget processes, financing mechanisms and allocation frameworks will include and address women as a key stakeholder group. Both could drive a fundamental shift in thinking: a double-mainstreaming of the economic development paradigm that internalizes, respects and accounts for the environment and for the life-sustaining contributions of the gendered care economy. Gender equality and women's empowerment are fundamental to turning the 'bad economics' of business-as-usual approaches into a global economy guided by more care, precaution, inclusion and justice. ■

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Endnotes

- 1 World Bank's *World Development Report 2010: Climate Change and Development* for the first time—in the absence of a human rights framework at the Bank—acknowledges gender equality both as a development goal in itself based on women's unalienable rights, but also as "smart economics."
- 2 See: http://www.oecd.org/document/3/0,3746,en_21571361_44315115_50058883_1_1_1_1,00.html.
- 3 For 2010 official development assistance figures, see http://www.oecd.org/document/35/0,3746,en_2649_34447_47515235_1_1_1_1,00.html; for 2009 numbers, see: http://www.oecd.org/document/0,3746,en_2649_34447_44981579_1_1_1_1,00.html.
- 4 In comparison, World Bank's *World Development Report 2010: Climate Change and Development* made estimates of the global financing needs for adaptation and mitigation a key feature of its analysis.
- 5 World Bank's *World Development Report 2010: Climate Change and Development* estimated that developing countries' adaptation and mitigation efforts might cost up to \$275 billion per year by 2030. See http://wdronline.worldbank.org/worldbank/a/c.html/world_development_report_2010/chapter_overview_changing_climate_development.
- 6 Author research in conjunction with staff at the OECD-DAC Statistical Office.

BOX 7

GENDER AND CLIMATE CHANGE FINANCING

Mariama Williams

The United Nations Framework Convention on Climate Change (UNFCCC) governing body and institutional frameworks and processes have recognized the importance of gender. However, proactive efforts to make the fund instruments gender responsive did not begin until 2010. The 2010 Revised Programming Strategy for the Least Developed Country Fund and Special Climate Change Fund states that the Funds should encourage implementing agencies to conduct gender analyses; require vulnerability analyses to take gender into account; and integrate gender as appropriate into all results frameworks and into updated operational guidance materials. Since 2010, the Global Environment Facility (GEF) has started explicitly including gender analysis and gender equity considerations within the structure of the modalities and mandates of its climate change funds. The Facility noted in its 2009 'Mainstreaming Gender at the GEF' that only 68 out of 172 of its projects had examples of gender mainstreaming. Further, both the Least Developed Country Fund and



the Special Climate Change Fund are now undergirded by at least two indicators disaggregated by sex.¹

Gender is being slowly integrated into the Adaptation Fund operational framework. Though its funding priorities and criteria are still evolving, the Fund's operation policies and guidelines place special emphasis on the needs of the most vulnerable communities. This gender-blind formulation does not necessarily mean that funding will flow to women and women's groups, as there is inadequate attention paid to women's and men's differentiated needs. However, the Fund also requires sex-disaggregated data for some indicators, and since it is predisposed to funding both small- and large-scale projects and programmes, it is likely to be friendly to women's projects and activities.

The most recent element in the climate finance architecture, the Green Climate Fund, has a governance structure that includes commitments to ensuring gender balance in its board and secretariat, and to ensuring that women are active participants in

stakeholder mechanisms. However, no women- or gender-specific sub-funding entity was created, specific language was not included with regards to gender equity in financial distributions, and the board lacks any semblance of gender balance among its current 24 members (five women) and 24 alternates (three women). The board, which is now fully operational, will set further policy guidelines in terms of the scope of outreach of the fund. Women's groups are actively monitoring this process to ensure that there will be scope for adequate funding to a range of scales of projects and programmes that would encompass the activities of poor women and poor men.

The UNFCCC has included gender as one of the ten guiding elements to be emphasized in both national adaptation programmes of action and national action plans. Annex II of a November 2011 technical paper on national adaptation plans, produced by the Subsidiary Body on Implementation of the UNFCCC, focused on integrating gender-related considerations in identifying and implementing medium- and long-term adaptation activities. Its Annex, which cites numerous reports from the UN Commission on the Status of Women and the United Nations Entity for Gender Equality and the Empowerment of Women (UN Women), argues that "Integrating a gender perspective into medium- and long-term adaptation is therefore necessary to ensure that adaptation

activities undertaken by the least developed countries will not exacerbate gender inequalities and will ensure women's equal participation in the decision-making and implementation phases of adaptation. It will lead to better adaptation and more resilient communities."

However, there remains a need for financing mechanisms that facilitate women's participation and gender mainstreaming at all levels of policy and architecture. This includes programmes and projects that enhance women's coping strategies to deal with weather-related hazards (e.g. floods, droughts); programmes and projects to increase women's role in adaptation and the adaptation of sustainable farm practices; programmes and policies that identify and work to decrease the barriers to women's access to credit and new technologies, extension services and credit; programmes that structure mitigation and adaptation strategies to build on and enhance women's traditional knowledge; programmes and projects that seek to integrate and scale up women's knowledge and skills for more effective integration into sustainable development and development goals centred in equity, environmental sustainability, poverty eradication and overall human development. ■

Endnotes

- 1 See UNDP 2011, *Ensuring Gender Equity in Climate Change Financing*. New York.

There remains a need for financing mechanisms that facilitate women's participation and gender mainstreaming at all levels of policy and architecture.

BOX 8

COMMUNITY RESILIENCE FUND: ADVANCING GENDER-EQUITABLE, PRO-POOR, SUSTAINABLE RESILIENT DEVELOPMENT

Suranjana Gupta

Since 2009, the Huairou Commission, through its Community Resilience Fund, has channelled over one million dollars directly to organized groups of poor women living in 12 countries.

Recognizing the absence of disaster reduction and climate adaptation resources for local grass-roots women's resilience priorities, the fund was conceived of as a decentralized mechanism that enables grass-roots women's organizations to collaborate with local and national governments in order to lead and scale up resilience practices. More than a financial mechanism, the Community Resilience Fund was designed to advance grass-roots women's social and political leadership, while deepening and scaling up resilience practices that sustain livelihoods, improve infrastructure and conserve natural resources in the face of natural hazards and climate change.

Using different entry points, organized groups of women living in poor communities adversely affected by natural hazards and climate change have used the Fund to map and prioritize community risks and vulnerabilities and to initiate practices to reduce vulnerabilities. They have negotiated

with local authorities for formal recognition and resources to scale up these initiatives.

In Uganda, women from the Slum Women's Initiative for Development utilized the Fund to acquire collective land in Jinja (the second largest town in Uganda) for planting food crops. This was initiated in response to action research in which urban communities realized that they had to secure food for their families in the face of growing food insecurity caused by factors such as increasing food prices, and the privatization of public lands once farmed by poor communities.

In Nicaragua, negotiations between Cooperativa Las Brumas (a cooperative of 1,200 women farmers) and two municipalities led to the establishment of a gender desk to monitor municipal budget allocations and to resources being dedicated to priorities identified through Las Brumas-led community risk mapping exercises. These include resources for seeds and saplings that are part of women's soil conservation and organic cultivation practices in the mountainous region of Jinotega.

Sustainable, resilient development is about reconciling short- and long-term, social, economic and environmental goals. The processes through which different socio-economic groups negotiate their development priorities and the future of their families and communities are deeply political.

In India, the Fund has been used to build a multi-state initiative led by women's self-help groups in the states of Maharashtra and Bihar to negotiate for collective land to be farmed for food crops, rather than the current cash crops. The leadership that women demonstrated in negotiating land and controlling its use, and reaching out to formal institutional actors, has resulted in formal recognition and access to government resources. In Maharashtra, vegetable farming groups are being recognized as farmers in their own right by institutions such as the government's *Krishi Vigyan Kendras* (agricultural research centres), which are partnering with vegetable farming groups to provide farming inputs and training. In Bihar, vegetable farming groups are negotiating for public resources to sustain livelihoods and improve water supply and sanitation in their communities.

In Lima, Peru, women from CONAMOVIDI, a national network, have used the Fund to leverage more than \$45,000 from decentralized municipal resources to build a retaining wall and plant more than 15,000 tara trees, a native species that survives the drought-prone conditions and helps to replenish the groundwater table.

In Guatemala, grass-roots women from 13 organizations were trained and certified as trainers in disaster preparedness, response, prevention and recovery by Coordinadora Nacional para la Reducción de Desastres, Guatemala's national disaster management agency. These results were achieved due to community risk mapping and food and agriculture initiatives led by Community Resilience Fund-supported indigenous women.

Sustainable, resilient development is about reconciling short- and long-term, social, economic and environmental goals. The processes through which different socio-economic groups negotiate their development priorities and the future of their families and communities are deeply political. While women from poor communities carry multiple burdens linked to their status and their living conditions, they also have vast reservoirs of knowledge and skills, which they have collectively mobilized to advance sustainable, resilient development. Thus they are using the Community Resilience Fund as a mechanism to improve their positions while driving sustainable development processes. There is a need for policy and financial mechanisms that recognize grass-roots women's expertise and experience, and scale up their pro-poor, gender-equitable sustainable development practices by incentivizing grass-roots/government collaborations. ■



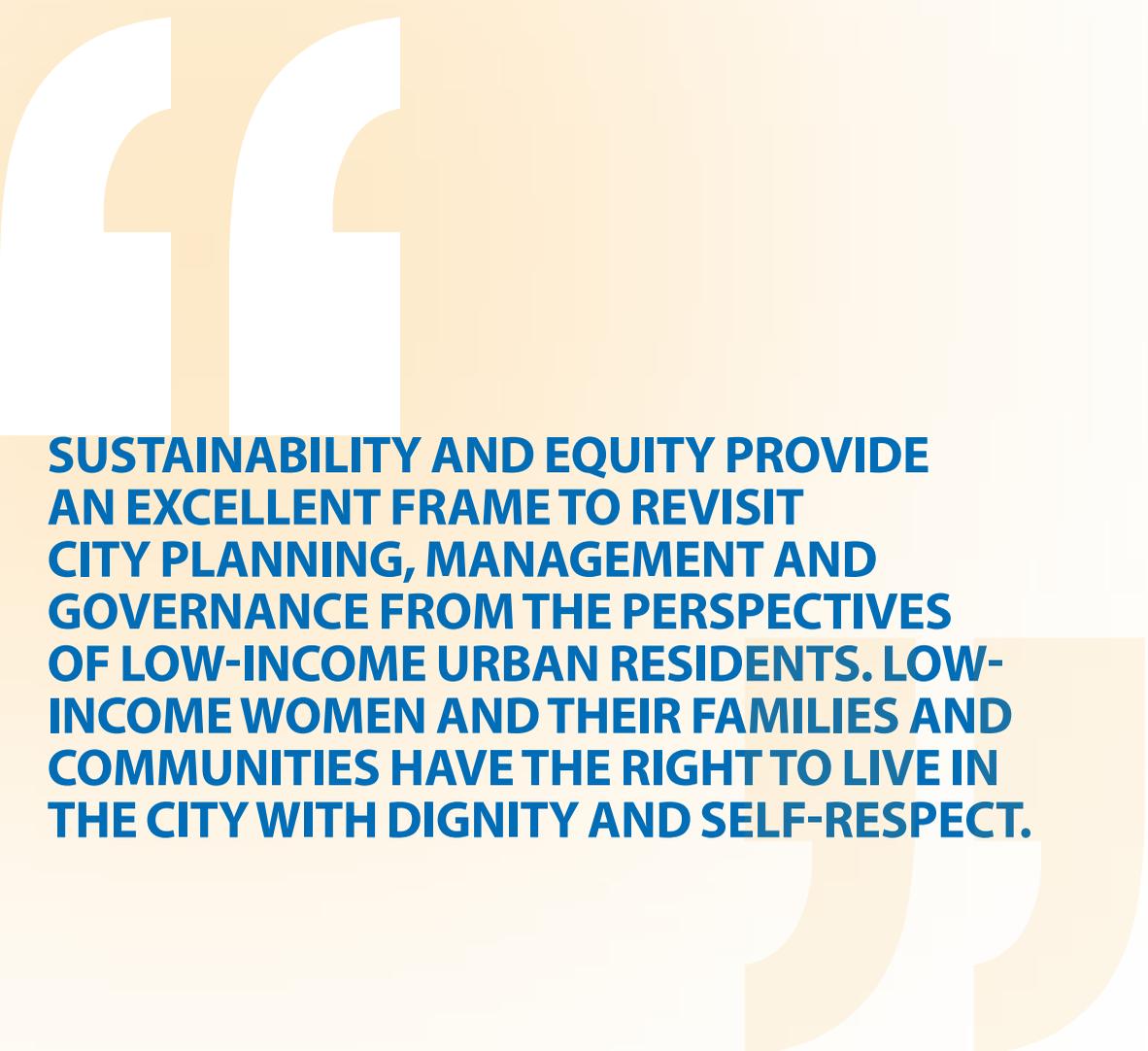
UN Photo/F. Charton

GENDER EQUALITY AND SUSTAINABLE DEVELOPMENT: SELECT PRIORITY AREAS

UN Photo/Asim Fehrat







SUSTAINABILITY AND EQUITY PROVIDE AN EXCELLENT FRAME TO REVISIT CITY PLANNING, MANAGEMENT AND GOVERNANCE FROM THE PERSPECTIVES OF LOW-INCOME URBAN RESIDENTS. LOW-INCOME WOMEN AND THEIR FAMILIES AND COMMUNITIES HAVE THE RIGHT TO LIVE IN THE CITY WITH DIGNITY AND SELF-RESPECT.

9

OUR URBAN FUTURE: GENDER-INCLUSIVE, PRO-POOR AND ENVIRONMENTALLY SUSTAINABLE?

PRABHA KHOSLA

INTRODUCTION

With half of the world's population living in cities, urbanization has a firm hold on policy makers' attention—particularly their recognition that cities have a major responsibility to shape sustainability. Forty years have passed since the United Nations Conference on the Human Environment was held in Stockholm. In 1970, over 1.3 billion people—37 percent of the world's total population—lived in urban environments.¹ The sustainability agenda focused on cities, racism and colonialism and their function in human settlements. As Principle 15 of The Declaration of the Conference declared, “planning must be applied to human settlements and urbanization with a view to avoiding adverse effects on the environment and obtaining maximum social, economic and environmental benefits for all. In this respect projects which are designed for colonialist and racist domination must be abandoned.”²

However, women were not on the agenda. Neither women nor equity are mentioned in the Declaration—its language consistently uses “man” and “mankind.” For example,

Principle 1 states, “Man has the fundamental right to freedom, equality and adequate conditions of life.”³ The UN and many member states had not yet substantively engaged with issues related to women’s subordination and their link to development and sustainability. Women’s rights and empowerment were not integral to international conventions. The first United Nations World Conference on Women took place in Mexico City in 1975 and the Convention on the Eliminations of All Forms of Discrimination against Women (CEDAW) was adopted in 1979.

The 1987 report of the UN World Commission on Environment and Development, *Our Common Future*, was a landmark in defining the relationship of human beings to the planet (UNWCED 1987). By 1985, urban citizens numbered 2 billion—41 percent of the global population.⁴ The report highlighted the intersecting connections between gender inequality, poverty and environmental degradation, and the importance for urban centres to address inequities in providing shelter and basic services. The intensification of urbanization, poverty and inequity as indicators of future trends in human settlements were being fuelled by an equally intense process of neo-liberal globalization. Many corporations had come to have more power, money and rights than many nation states and their citizens.

The remaining years of the 20th century witnessed numerous conferences, conventions, declarations and platforms on women’s rights, sustainable and social development, population, AIDS, poverty, the indigenous and the marginalized. Many governments and institutions affirmed women’s right to self-determination in reproduction, and equal access to decision-making, resources and assets. As the rights-based approach to human development became the governing paradigm, the rights of low-income women and men to live and work with dignity and in safety, with adequate food and housing and with safe and appropriate access to basic services such as drinking water, sanitation, health, and education became incontestable.

Unlike the sustainability discourse, which has advanced considerably over the years, the recognition of intersecting identities and of multiple discriminations based on gender, age, class, ethnicity, caste, race, sexuality, religion and disability have not been integrated into the urban sustainability agenda. Local Agenda 21 processes and action plans have attempted to integrate social justice issues with economic and environmental issues—though there was little focus on gender mainstreaming.

The growing numbers of urban dwellers reflect a great diversity of urbanization processes; political, economic, cultural and governance systems; ecosystems; population densities and in many countries of the global South, an almost parallel process of growing urban poverty and inequality. While urbanization has historically offered a higher quality of living, increased access to work, education and basic services, the ‘urban advantage’ has reduced over time. This is particularly true for low-income young women and men who face disparity in accessing school and skills training, lack of

employment, higher poverty rates, and for young women, pervasive gender discrimination that also puts them at risk of sexual exploitation and violence.

Migration from rural to urban areas is no longer a predominantly male phenomenon. In recent years, women and girls have been migrating to cities for work, better life options and control over their lives (Malaba 2006). Many of these migrants join the ranks of the urban poor. Poverty and lack of rights is an overwhelming reality for many in cities. The number of people living in slums⁵ in cities is often used as an indicator of urban poverty. The number of slum dwellers in developing regions is around 828 million—33 percent of the total global urban population (UN-HABITAT 2008b).

THE FUTURE IS URBAN, BUT WILL IT BE EQUITABLE?

The world's urban population stands presently at 3.5 billion—52 percent of the global population.⁶ In order to achieve sustainability and secure the rights of all people to decent standards of living, cities will have to focus on improving the daily lives of low-income women, men and their families. The time is long overdue for a gender and poverty analysis to inform how urban centres are planned, managed and governed.

A BRIEF OVERVIEW OF URBAN PLANNING AND (IN)EQUITY

The global South has rich histories and traditions of social, physical and spatial planning, specific to different societies and geographies, and shaped by the dominant political and economic powers. Colonial cities grew alongside indigenous cities, signifying a different power equation and growing inequality. In recent history, western, patriarchal and capitalist practices of urban planning and management have dominated the interrogation and re-creation of urban centres of the global South. These practices have tended to disregard indigenous methods of spatial organization, land tenure and distribution and environmental management. Usually the colonial conceptual frame for urban planning and management is dominated by a 'master' or 'official' plan. These plans segregate land-uses and provide broad guidelines for land use, environmental protection, infrastructure, transportation, community services, and residential areas. The plans often define cities as though there is no inter-connectedness between the built form and its functions and users. Unfortunately, these plans often undervalue cities' dynamic engagement of urban forces on multiple levels and ways.

Due to the inequalities women face, cities of both the global North and the South

have excluded women's daily lives and perspectives from informing urban forms and functions. Segregated land-use planning approaches also exclude low-income women and men. This exclusion leads to the continual expansion of slums as illegal and informal settlements, instead of their integration into the urban fabric.

One reason why the master or official plan approach is not suited to the daily context of urban women and men in global South cities is due to vast differences in the socio-economic status of residents in cities of the North and South. For example, Manila, Mumbai and Nairobi are cities with large-scale informal employment and millions of low-income women and men living in informal and often illegal settlements without the housing, services, facilities or infrastructure as warranted by an official plan. Efforts to transform these cities to look like New York or London, and to conform to conventional notions of master or official plans, means ignoring or overriding the lives and communities of low-income women and men.

Urban planning is not necessarily wrong or irrelevant; along with urban management and governance, urban planning is very important. What is needed is a radical rethinking of urban planning through the lens of gender equality and poverty reduction.

THE SUSTAINING ROLE OF WOMEN'S UNPAID CARE WORK

For many years, feminist activists, professionals and scholars have highlighted the importance of recognizing women's and girls' unpaid care work in raising families and sustaining homes as a vital function of all societies. The same is true for cities. Without the millions of hours that women and girls spend every day in social reproduction, in the informal economy and in the waged economy, no city could function or contribute to national income. Yet, the dominance of patriarchal traditions limit many urban women and girls' access to assets for livelihoods and basic services, impose discrimination in employment and wages, detract from their safety, exclude them from decision-making, and fail to provide sufficient services for child care and sexual and reproductive health.

Women's work in the care, formal and informal economies determines how they live in cities, and what services and infrastructural systems they use, and when. Women's multiple responsibilities (e.g. providing food and water, maintaining a household and caring for children, elders and sick family members) lead to varied engagements with the city's environments. Their work determines how often they navigate their neighbourhood or city, at what times of day or night, and by what modes of mobility. Due to their multiple responsibilities, their journeys are typically more varied and complex than men's.

As women and girls are half the urban population, do more than half the work, have a greater burden for social reproduction, and are often subjected to sexual and

gender-based violence, it follows that cities should be designed and built with women in mind and with their involvement. Municipal spatial organization, infrastructure and services could better serve women and girls than they currently do.

FEMINIST PROPOSITIONS FOR CHANGING THE URBAN PLANNING PARADIGM: THE INFRASTRUCTURE OF EVERYDAY LIFE

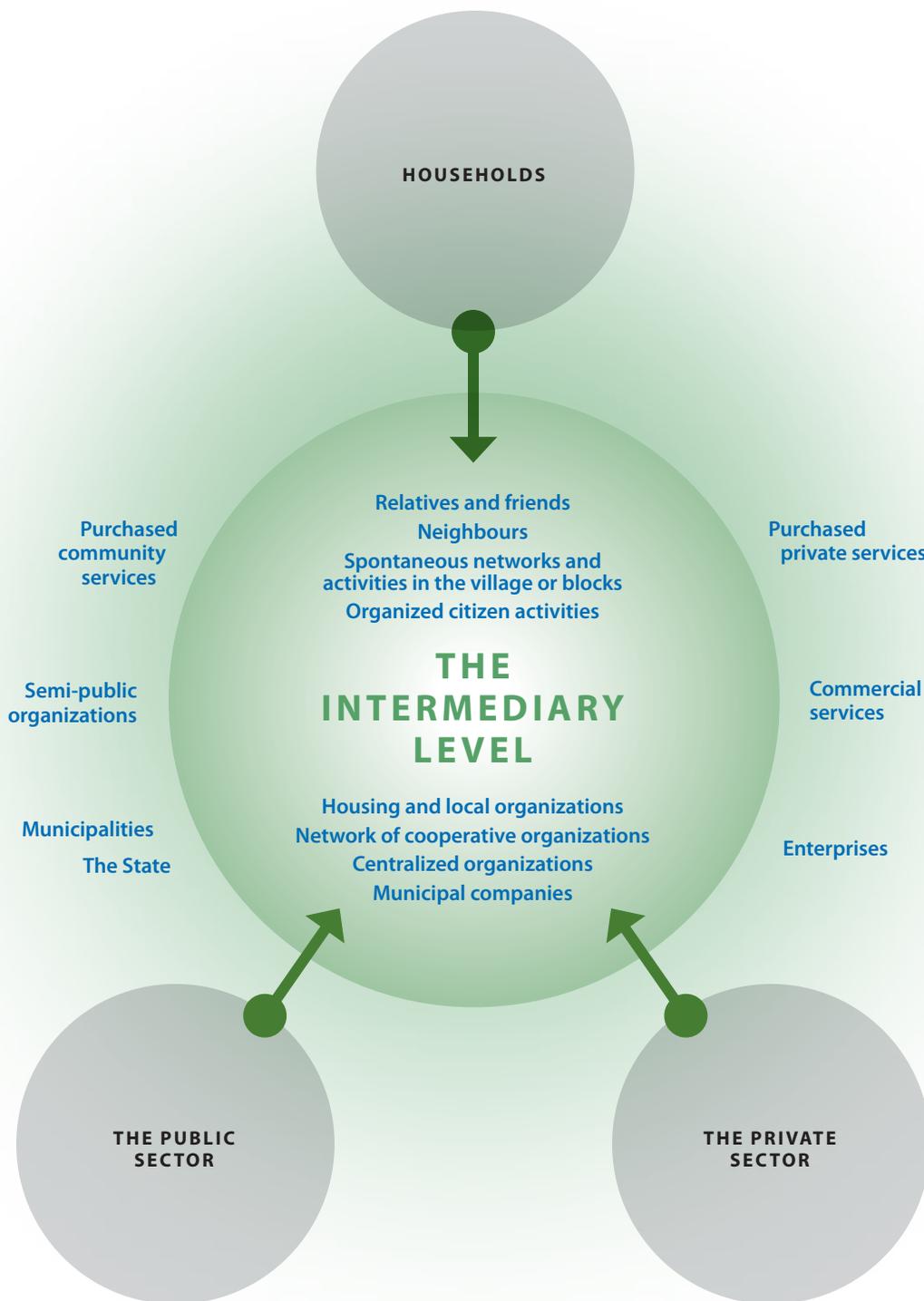
In the 1990s, EuroFEM—a Gender and Human Settlements Network—consisting of women’s groups, entrepreneurs, researchers and scholars, came together to shape local and regional development so it would enable women to care for families, be employed and support communities. Their objective was to elaborate the Nordic feminists’ proposition that the ‘infrastructure of everyday life’, should inform urban planning, management and governance and through this, realize the vision of a harmonious, creative, just and sustainable society.

They proposed an ‘intermediary level’ between households and the public and commercial world. The ‘intermediary level’ would be a new structure in neighbourhoods and include environmentally friendly housing, services, employment, and other activities that would support everyone inclusive of their age, sex, ability and ethnicity (Horelli n.d.). (See Figure 1.)

Ultimately, the objective was to focus on children’s and women’s needs and social reproduction of all people and nature. Putting concepts and visions to reality, women’s groups in Europe created projects grouped around the four major themes of the infrastructure of everyday life. These were gender-sensitive planning and development, job creation and local initiatives, models of involvement and re-organizing everyday life around housing. Projects included housing that also provided childcare, collective laundries and cultural engagements; women’s resource centres that nurtured job creation; gendered planning that facilitated raising children, working and appropriate transportation planning and new networking organizations (Horelli n.d.).

Using neighbourhoods as the hub and focus of people-centred planning reduced the barriers between employment, services and social reproduction. Though this proposal of re-focusing urban planning and development was developed by European feminists, its premise has wide appeal due to most women’s responsibilities in the care economy, and particularly so for low-income women. Many low-income women who live in slums are not only responsible for caring for their own families and communities, but they also provide domestic services in middle and upper-income families’ homes within their cities, and sometimes in other countries. There are numerous ways that women can shape their urban environments based on their specific realities and preferences.

FIGURE 1.
'INFRASTRUCTURE OF EVERYDAY LIFE' –
THE INTERMEDIARY LEVEL



Source: Horelli n.d.

PROGRESS SO FAR

There has been progress on a broad range of issues, commitments and quality of life indicators arising out of the 1992 Rio Earth Summit. Over the last twenty to thirty years, local governments and communities have been involved in numerous environmental sustainability initiatives, such as rehabilitating natural ecosystems, recycling and better solid and liquid waste management, increasing public transport systems, improving pedestrian and bicycle access, and mitigation of greenhouse gases. Numerous initiatives and projects from both governments and civil society also targeted social and economic inequity. However, most initiatives lacked a holistic approach that integrated gender and an equalities analysis, and failed to engage low-income women and men as decision makers.

According to an assessment by UN-HABITAT, the Millennium Development Goals' target to improve the lives of 100 million slum dwellers by 2020 has already been surpassed by more than twice that number. Notwithstanding the importance of these improvements, UN-HABITAT concedes that the target of 100 million slum dwellers was too low and represented only 10 percent of the global population of slum dwellers. Furthermore, UN-HABITAT acknowledges that in absolute terms the number of slum dwellers has actually grown and will continue to rise in the future at a rate of at least six million people per year. (UN-HABITAT 2008b.)

UN-Habitat's assessment adds weight to many women's groups' critiques that the Millennium Development Goals were insufficient, missed intersecting links and had inappropriate targets for women's empowerment. For example, there was no target on violence against women and girls, a key area of concern for women and for poverty reduction in cities. Furthermore, to truly reduce poverty, gender considerations should have been cross-cutting to all the Goals.

It is important to examine the changes in the living conditions of the now more than 227 million slum dwellers who no longer live in slums—particularly since low-income women and children spend a lot of time in slums. Key questions include: How many low-income women and men were active participants in processes to reduce or upgrade slums? How many people were evicted against their will and re-settled in inadequately serviced areas, far from their original homes and work? How many low-income women lost homes, communities and livelihoods in the process? Is it possible to measure the impoverishment of dislocation against the new non-slum settlements? How safe and gender-sensitive are the services, facilities and infrastructure in these new settlements? Do conditions in the new settlements measure up to UN-HABITAT's own slum indicators? Considering that many low-income communities in cities are living in environmentally sensitive areas (e.g. slopes, wetlands, river channels or fragile coastal zones), is there a parallel process to rehabilitate these areas as the slums are being upgraded or removed? Analyzing these (and

other) questions would provide insights for a more robust gender-sensitive, pro-poor and environmentally sensitive approach to reducing poverty in cities.

This interrogation creates an opportunity to reconsider how we build, manage, and govern urban centres, and to carry co-responsibility for the areas in which people live in poverty. A good place to begin is the *Human Development Report 2011*, specifically its focus on sustainability and equity. A key argument advanced by the UNDP's flagship report related to the direct link between expanding women's effective freedoms and women's engagement in decision-making in addressing equity and environmental quality, and how both of these are tied to poverty reduction.

SUSTAINABILITY AND EQUITY

The *Human Development Report 2011* explores the commonly accepted Brundtland Commission definition of sustainable development: “development that meets the needs of the present without compromising the ability of future generations to meet their own needs”. The report refers to Sudhir Anand and Amartya Sen's argument that, “it would be a gross violation of the universalist principle if we were to be obsessed about **intergenerational** equity without at the same time seizing the problem of **intragenerational** equity” (UNDP 2011).

Sustainability and equity provide an excellent frame to revisit city planning, management and governance from the perspectives of low-income urban residents. Low-income women and their families and communities have the right to live in the city with dignity and self-respect. They have the right to food, proper housing, decent work and gender-sensitive infrastructure and services that facilitate easier, safer, and improved navigation in the infrastructure of everyday life.

TOWARDS GENDER-INCLUSIVE, PRO-POOR AND ENVIRONMENTALLY SUSTAINABLE CITIES

There are many possibilities for creating gender-inclusive and pro-poor cities. For example, governments can support the work of non-governmental and community-based organizations on women's rights and gender equality. Other possibilities include implementing the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) at the municipal level, considering the initiatives of GenderLinks⁷ on local governance in southern Africa; the work of Shack/Slum Dwellers International⁸ and their national federations of slum dwellers, the Women in Informal Employment:

CASE STUDIES

from Bangladesh and Brazil (see following page) illustrate what is possible with a commitment to gender equality and poverty reduction in urban environments.

Globalizing and Organizing's recommendations on the informal economy and cities;⁹ and implementing municipal-level gender-responsive budget Initiatives.

Some interesting guides specifically geared towards gender mainstreaming urban planning include the Royal Town Planning Institute's Gender and Spatial Policy: Good Practice Note' (RTPI 2007), *Gender Equality and Plan Making: The Gender Mainstreaming Toolkit* (RTPI 2001) and Clara Greed-edited *Report on Gender Auditing and Mainstreaming: Incorporating Case Studies and Pilots* (Greed 2003). Also see UN-HABITAT's publications, *Gender and the Involvement of Women in Local Governance* (2006a) and *Gender in Local Government: A Sourcebook for Trainers* (2008a). The Global Land Tools Network has numerous publications and resources on women, communities and urban land management. The United Nations Development Fund for Women (now UN Women) has an excellent record of supporting and promoting gender-responsive budget initiatives.

RECOMMENDATIONS

City building—including a city's institutional, policy and governance frameworks—should be informed by an intersectional analysis.

A sustainable urban economy would need to be anchored in a gender-inclusive pro-poor city strategy. Focusing on the livelihoods of low-income women and men, and on upgrading and climate-proofing their living and working environments, will enhance cities' sustainability.

ACCESS TO LAND AND SECURITY OF TENURE AND HOUSING

Security of tenure and shelter can contribute to reducing women's poverty, provide them with a safe place to raise and care for their children and families, and provide safety from sexual and gender-based violence.

- Legalize slums, giving women and men security of tenure, and include these areas in urban planning;
- Provide serviced land for low-income women and men and those migrating from other areas; and
- Create a housing and infrastructure fund that is based on the ability of low-income residents to pay, and linked to their income generating abilities/strategies.

RECIFE, BRAZIL

THE USE OF GENDER EVALUATION CRITERIA FOR EQUITY IN LAND TENURE AND SECURITY

The Huairou Commission and UN-HABITAT through the Global Land Tool Network, piloted a project¹² in Brazil to test gender evaluation criteria for land tools¹³ on the Master Plan of Recife. The project was implemented by Espaço Feminista, a local non-governmental organization and a Huairou Commission affiliate. They worked with a research institute, civil society partners and officials from the local, provincial/state and federal governments. The pilot project is part of Espaço Feminista's ongoing work to secure tenure in Recife.

Forty percent of the city's population lives in Recife's slums. The focus of the project was on four communities in an area called Ponte do Maduro. More than 9,000 low-income and 'illegal' families, comprising about 55,000 individuals, have been living on approximately 50 hectares.

Despite insecure tenure, residents continued to consolidate their homes and businesses and create and strengthen infrastructure and basic services such as water, electricity, and sewerage at their own cost.

Espaço Feminista used gender evaluation criteria to assess whether the city's master plan was gender-responsive. The Master Plan of Recife includes a number of Special Zones of Social Interest (ZEIS). ZEIS is a legal land-use instrument to designate the boundaries of a low-income informal settlement whose residents have been occupying the land for a period of five years or more, and where the land is unclaimed by its legal owner. Getting a settlement declared a ZEIS is the first step in achieving security of tenure and land rights that favour the residents.

The second step is residents making a commitment to a participatory planning process to upgrade basic services and distribute property titles. ZEIS applies specifically designed codes, norms and land use regulations to prevent market forces from evicting residents. ZEIS areas are entitled to alternative criteria for zoning and building that both allows them to slowly upgrade the quality of structures and services, and makes integration into the rest of the city manageable. These alternative land use policies are developed with the residents from each ZEIS area. Thus, each household would receive legal title to the land and the area is gradually integrated into the city's master plan.

Discriminatory practices and cultural norms often exclude or discourage women from applying for land titles. Gender-blind land regularization often excludes and exacerbates gender inequity, and undervalues the importance of land to women in terms of security, access to a space to generate income, access to credit and full citizenship. Espaço Feminista began testing gender evaluation criteria to explore the inclusion of women in land titling and security of tenure.

The pilot process demonstrated that to benefit women, the regularization process had to have an explicit gender dimension. Local women were often unaware of the provisions of master plans, how they might benefit them or how to demand that certain spaces be demarcated for particular functions.

The regularization process, which started in October 2011, is being used to make sure that the steps involved in regularizing the area include the needs of both women and men. The regularization is expected to be completed in 2012. An impact assessment will take place a year later. This will assess how the regularization may have affected women and men in practice.

Gender evaluation criteria assisted in locating the potential opportunities and shortcomings of the land regularization and titling processes, and in reducing gender inequity and improving the condition of women. The process was guided by five criteria:

1. Equal participation of women and men from the community in the process of land regularization and gender-sensitive land governance;
2. Training, organization and empowerment of women and men from the community to use and access the benefits from the tool;
3. Legal and institutional realities should be considered and included in the tool;
4. Gendered economic realities of men and women's ability to access land should be reflected in the tool; and
5. The scale, coordination and sustainability of mobilization around land regularization should be considered in order to maximize the number of women and men the tool will reach.

A community committee was created to accompany the process and to monitor the socio-economic survey which was part of the regularization process. Throughout the process there were many intense discussions in the communities about the meaning and implications of gender inequality and equity. Additional complicating questions involved how to resolve the situation of multiple families residing in the same house; inheritance; and the relationship between renters and owners.¹⁴

ACCESS TO INFRASTRUCTURE AND SERVICES

Limited access to health centres, schools and recreation services increase women's care responsibilities. Women and girls spend long hours waiting to get water and use public toilets. Girls miss school because they are collecting water or because schools do not have proper facilities for those menstruating. Many women face sexual harassment and assault while attempting to access unsafe public services, including transit. Unsafe water increases women's care responsibilities, raises health costs and limits income generating possibilities.

- Design and locate essential infrastructure, facilities and services (such as access to water, sanitation and toilets, solid waste management, drainage, electricity and transport) with a gender-sensitive awareness;
- Provide community, recreation and child care centres, health centres, schools and sexual and reproductive rights services in low-income neighbourhoods; and
- Prioritize the safety and security of women and girls in urban planning, management and design.¹⁰

ENHANCED LIVELIHOOD STRATEGIES

Lower employment options and low incomes prevent housing security and reduce households' ability to pay for services. Insecurity of tenure limits low-income women's access to resources, assets and credit.

- Develop local government and civil society partners' understandings of low-income women and men's livelihood strategies and formal and informal wages;
- Support and enhance the efforts of working women and men by legalizing and supporting the informal economy and enforcing labour regulations and protection;
- Integrate low-income residents' work into municipal planning and services (e.g. informal sector recyclers, street vending);
- Integrate the informal economy into official planning processes;¹¹ and
- Provide appropriate training for livelihoods options.

SAFETY AND SECURITY

Inadequate services and infrastructure (e.g. water, toilets, lighting, transportation) put women and girls at risk of sexual assault and gender-based violence. Women and girls' employment in the informal sector makes them vulnerable to sexual harassment from landlords and intermediaries and often leaves no options to make ends meet except the sex trade.

- Provide women-focused and community-level police and legal services; and
- Expand local governments' engagement in preventing violence against women and girls and in securing safe private and public spaces for them and their families.

BANGLADESH

URBAN GOVERNANCE AND INFRASTRUCTURE IMPROVEMENT, THE ASIAN DEVELOPMENT BANK

Of Bangladesh's more than 146 million people, 36 million live in urban areas.¹⁵ In 2002, the Asian Development Bank approved the Urban Governance and Infrastructure Improvement Sector Project with the aim of helping selected municipalities to: enhance accountability in municipal management and strengthen capabilities in municipal services; and develop and expand physical infrastructure and urban services to increase economic opportunities and reduce vulnerability to environmental degradation, poverty, and natural hazards. The project also promoted the participation of women in municipal management and services, and improved the conditions of the poorest and the neediest groups in slum areas.¹⁶

A 'gender action plan' was developed in the design phase and focused on promoting the participation of women as councillors and of women residents (service users) in urban planning and municipal management.

Key Achievements and Lessons in Relation to the Gender Action Plan

- **A more institutionalized approach to gender equality:** Each participating municipality developed a gender action plan to ensure women's participation in municipal development and governance.
- **More active and better-supported female ward commissioners:** Elected women are gradually strengthening their leadership, chairing one quarter of the municipal committees and comprising one third of the membership of each committee (including committees for tender evaluation); separate office spaces are allocated to female ward commissioners and staff (because municipal offices and facilities were not designed with women in mind) in all participating *pourashavas* (towns); five regional ward commissioners and a national forum were established.
- **New mechanisms to engage women citizens in decision-making and social change:** Gender and Environment sub-committees made up of council members and municipal staff are functioning in all 30 participating towns; their activities include tree planting, environmental cleanliness as well as efforts to resist early marriage, dowry, violence against women and acid violence (gender and environmental issues are addressed together in these committees).
- **New approaches to reaching women and raising awareness on rights and key issues:** Courtyard meetings led by women councillors have provided forums to raise awareness on rights and responsibilities (e.g. in relation to cleanliness, sanitation, health, education, early marriage, dowry, timely payment of municipal taxes, tariffs and utility bills).
- **More women-friendly facilities:** Including the design of bus terminals with separate facilities and toilets for women, and toilet facilities in public markets.
- **Employment opportunities in project-funded construction:** Women's representation among labourers hired varied among sites, from above 50 percent in some participating towns to none in others, with most in the 10 to 35 percent range; over 450 contractors have been oriented to engage women and reduce wage gaps between men and women;
- **New income opportunities for women:** This was through the extension of micro-credit for income-generation to low-income women (\$2.5 million as micro-credit to 10,200 women, in a project component targeted to women only).
- **Institutional change:** The provision for low-income and women citizen's participation in various committees has been integrated in the Municipal Act of 2009.

REGENERATION OF URBAN ENVIRONMENTS

Many low-income neighbourhoods are in areas contaminated by industrial wastes, landfill sites and in environmentally compromised areas with degraded rivers, wetlands, and woodlots. Often, residential lanes are full of solid waste, standing water and mosquitoes and flies, contributing to ill-health and unsanitary home environments that in turn exacerbate women's care responsibilities.

- Implement environmental remediation efforts in low-income communities; and
- Upgrade neighbourhoods and provide better services for solid and liquid waste management, sewerage and hygiene.

ENHANCED POLITICAL VOICE

Women and girls are often excluded from participating in decision-making in governance and community groups, denying their human right to choices over their lives.

- Enable and engage low-income women and girls in decision-making within urban policy and planning, management and governance. ■

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- 3 Ibid.
- 4 UNDESA, 2011. *World Urbanization Prospects: The 2011 Revision*. Available at: <http://esa.un.org/unpd/wup/CD-ROM/Urban-Rural-Population.htm>, retrieved 7 April 2012.
- 5 According to UN-HABITAT (2006), a slum household is a group of individuals living under the same roof in an urban area, who lack one or more of the following five conditions: durable housing (defined as, not built on a hazardous location, offering adequate protection from extreme climatic conditions); sufficient living area (no more than 3 people sharing the same room); access to improved water (households with sufficient water for family use at an affordable price without the need to obtain it with extreme effort); access to sanitation (access to a private or public shared toilet with a reasonable number of people); and secure tenure (protection against forced evictions with evidence of documentation as proof of tenure); p. 19.
- 6 UN-HABITAT 2010, p. 45.
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WASTE PICKERS— A GENDERED PERSPECTIVE

Sonia Dias and Lucia Fernandez

Millions of people—a large number of them women—make a living collecting, sorting, recycling and selling valuable materials that someone else has thrown away. Vital actors in the informal economy, they provide widespread benefits. In many countries, waste pickers supply the only form of solid waste collection. They contribute to public health and lower municipalities' costs of solid waste management. Also, since recycling creates 1/25th of the emissions caused by incineration (Tellus 2008), waste pickers contribute to reducing greenhouse gas emissions.

However, despite their significant societal contributions, waste pickers often face deplorable living and working conditions, low social status and receive little support from local governments. Increasingly, their livelihoods are threatened also by conventional approaches to the modernization of solid waste being adopted by many cities. For example, incineration and waste-to-energy schemes in many locations are taking access away from waste pickers and giving it to private companies. In one example in Dar es Salaam, Tanzania, a private waste collector that held the contract to collect waste from downtown hotels threatened a women's group that tried to pick up plastic bottles from one hotel, driving the women away (Scheinberg 2011).

Waste pickers are organizing in many different ways—cooperatives, associations, companies, unions, micro-enterprises. The extent and depth of these organizations of waste pickers varies within and across countries, but organizing has proven beneficial in both tangible and intangible ways, raising social status and self-esteem along with incomes and quality of life through better working conditions. It provides institutional frameworks for hiring waste pickers as service providers to local bodies and/or firms; it helps circumvent intermediaries and thus improves gains. Finally, collective strength helps prevent harassment and violence against waste pickers.

When asked if organizing brought better social and economic conditions to their lives, 81 percent of the organized waste pickers from CATAUNIDOS network in Brazil responded “yes,” and most responses pointed out that the sense of solidarity found in a membership-based organization was one of the reasons for them to join (Dias 2009).

To address the transnational threats of privatization and waste-to-energy, networks and alliances are also being formed like the Global Alliance of Waste Pickers, whose largest members are the Latin American Waste Pickers Network and the Alliance of Indian Wastepickers.



UN Photo/Pasqual Gorniz

Why a Gendered Approach is Needed

A significant number of waste pickers are women, and some are children. In some Indian cities, for example, about 80 percent of the waste pickers are women; in Brazil, a small-scale study found that 56 percent of the members of waste picker organizations are women.¹

Some women-only organizations have formed, as in the case of the fully owned women waste picker cooperative, SWaCH, in India. Through a long process of collective struggles for social recognition and quantification of their contribution to the waste management system, the informal waste pickers in Pune and Pimpri-Chinchwad have come to be seen as ‘green collar’ workers (Inclusive Cities 2012).² In 2012, SWaCH members are earning two to three times more than before the cooperative formed (GAIA 2012), and the local government announced an expansion of its inclusive waste picking approach to 15 more wards in 2012.

Despite the growing strength of women in the waste picking profession, persistent barriers to their full participation in their representative organizations necessitate a gendered approach. Some of the main gender issues faced by women waste pickers are:

- Denial of access to recyclables with the highest value;

- Exclusion from positions of authority within their communities and disrespect when holding those positions;
- Perpetuation of barriers that prevent women from involvement in the public realm, such as symmetrical power relations at the household level, affecting their ability to take part in public committees or to exercise leadership within their representative organizations; and
- Limitations on women’s time and energy to take up leadership opportunities (e.g. unpaid care responsibilities).

When waste picking activity is formalized, women often do not enjoy the same opportunities as men for fair earnings. The case of Brazil’s solid waste serves as an example. A gender analysis of an official database called Risk Assessment Information System, which records information on employees of commercial establishments, concluded that among waste pickers, men earn much more than women in all age groups, and no women are found in the highest income groups (those that earn more than 10 times the minimum wage).³ These discrepancies may be why women are drawn to the cooperative model⁴ to find more favourable working conditions. In Brazil, increasing numbers of women are employed as waste pickers in associations and cooperatives—rising from 18 percent in 1993 to 55 percent in 1998 (Dias 2002).

Despite the growing strength of women in the waste picking profession, persistent barriers to their full participation in their representative organizations necessitate a gendered approach.

Facilities for child care and equity in earnings are among the reasons given, as to why women find the cooperative model more advantageous.

A gendered approach to waste picking thus needs to address the multiple dimensions of subordination that women are subject to at home, in the workplace and within their organizations. Such an approach needs to provide women waste pickers with the tools to enhance their role as economic and political actors, strengthening their capacities and voice. ■

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SOCIAL NORMS IN MANY OF THE WORLD'S MOST VULNERABLE COMMUNITIES OFTEN TRANSLATE INTO HARSH REALITIES FOR GIRLS AND YOUNG WOMEN, WHO ARE EXPECTED TO CARRY OUT DOMESTIC DUTIES THAT ARE PARTICULARLY VULNERABLE TO ENVIRONMENTAL CHANGE. FOR EXAMPLE, FEMALE CHILDREN ARE MOST OFTEN RESPONSIBLE FOR COLLECTING FIREWOOD, FODDER AND WATER. THE TIME AND EFFORT DEVOTED TO THESE ACTIVITIES CONTRIBUTES TO THEIR UNDER-NUTRITION AND POOR HEALTH AND INCREASES THE INTENSITY OF THE DEPRIVATIONS THAT AFFECT THESE CHILDREN'S LIVES.



10

ADOLESCENT GIRLS AT THE TIPPING POINT OF SUSTAINABLE DEVELOPMENT

DONNA L. GOODMAN

ADOLESCENT GIRLS IN THE POST-2015 UN DEVELOPMENT AGENDA

A healthy environment and prosperous economic potential, children's rights and gender equality are interdependent, and inextricably linked to the social structures that provide for the health, education and development of the world's 2.2 billion people under the age of 18 (UNICEF n.d.). In the least developed countries, children comprise nearly half of the population; nearly a quarter of this number is comprised of adolescent girls between the ages of 10 and 19 (UNICEF 2011b). Therefore, policies and programmes that improve the lives of adolescent girls are a prerequisite for sustainable development. Further, building from the premise that women are more likely to be agents of change if they have post-primary education, achieving equality in education is critical if women are to engage fully in society and the global economy.

It is universally recognized that poverty is a major cause of human rights violations and a barrier to sustainable development. The importance of a healthy and safe environment to gender equality—and the right to it—must be considered within the scope of an

intergenerational approach to poverty eradication. As the gender dimensions of climate change and ecosystem degradation are gaining a greater profile in the global debate, the cross-cutting ‘double jeopardy’ brought by gender and adolescence has largely been ignored (Plan International 2011).

In light of Rio+20 outcomes, and to inform the emerging post-2015 international development agenda, this paper substantiates the case for incorporating age-appropriate inter-sectorality into analyses, and paying focused attention to the transitional time of adolescence as a strategic opportunity to facilitate the development of a gender-responsive, empowered, adult citizenry. This paper makes the case for integrating life skills-based, empowering education and non-formal vocational opportunities for adolescent girls in developing countries, in and out of schools.

To that end, the UN System Task Team on the Post-2015 UN Development Agenda, points out that “education for sustainable development provides the values, skills and knowledge needed for shaping new attitudes, and consumption and production patterns conducive to sustainable development. Appropriate technical and vocational education and training will be essential for preparing people, including youth, for jobs enhancing environmental sustainability.” (UN 2012.)

However, it is necessary to disaggregate ‘youth’ as an age- and gender-diverse stakeholder group in order to hone in on the need to invest in the rights, needs and potentials of adolescent girls in post-2015 agenda as a key strategy for empowering and engaging women in the long-term. Boys and young men’s education is also important for a sustainable shift in cultural norms; consideration for male inclusion in gender mainstreaming processes has been increasingly documented as vital to the long-term success of systemic change (Women’s Commission for Refugee Women and Children 2005). Integrated regional and national-level programming and policy support for girls’ education, youth ministries and relevant stakeholders can leverage the synergies between policies for gender equality, poverty reduction, governance, education for all and sustainable development.

MAKING THE CASE

An increasing body of evidence indicates that a mother’s education level is strongly linked to her children’s health and education prospects (Buchmann and Hannum 2001). Policies that capitalize on this opportunity are essential to achieving the goals and objectives of the post-2015 international development agenda.

Studies have found that investing in girls’ primary education leads to strong economic returns (e.g. boosting eventual wages between 10 and 20 percent). (Herz and Sperling

2004.) Moreover, the rights of adolescent girls and, more broadly, all children, impact the multidimensional poverty index, as set forth in the UNDP's *Human Development Report 2011*, substantiating the call for long-range planning for investment in quality, equitable primary schooling, which enables girls and women to participate in post-primary education and income-generating activities (UNGEI 2012). An educated girl is more likely to delay marriage, have fewer, healthier and better-educated children, and enjoy greater income and quality of life. According to the World Bank, investments in girls' education may go further than any other spending in global development (UNESCO 2006b, World Bank 2012b).

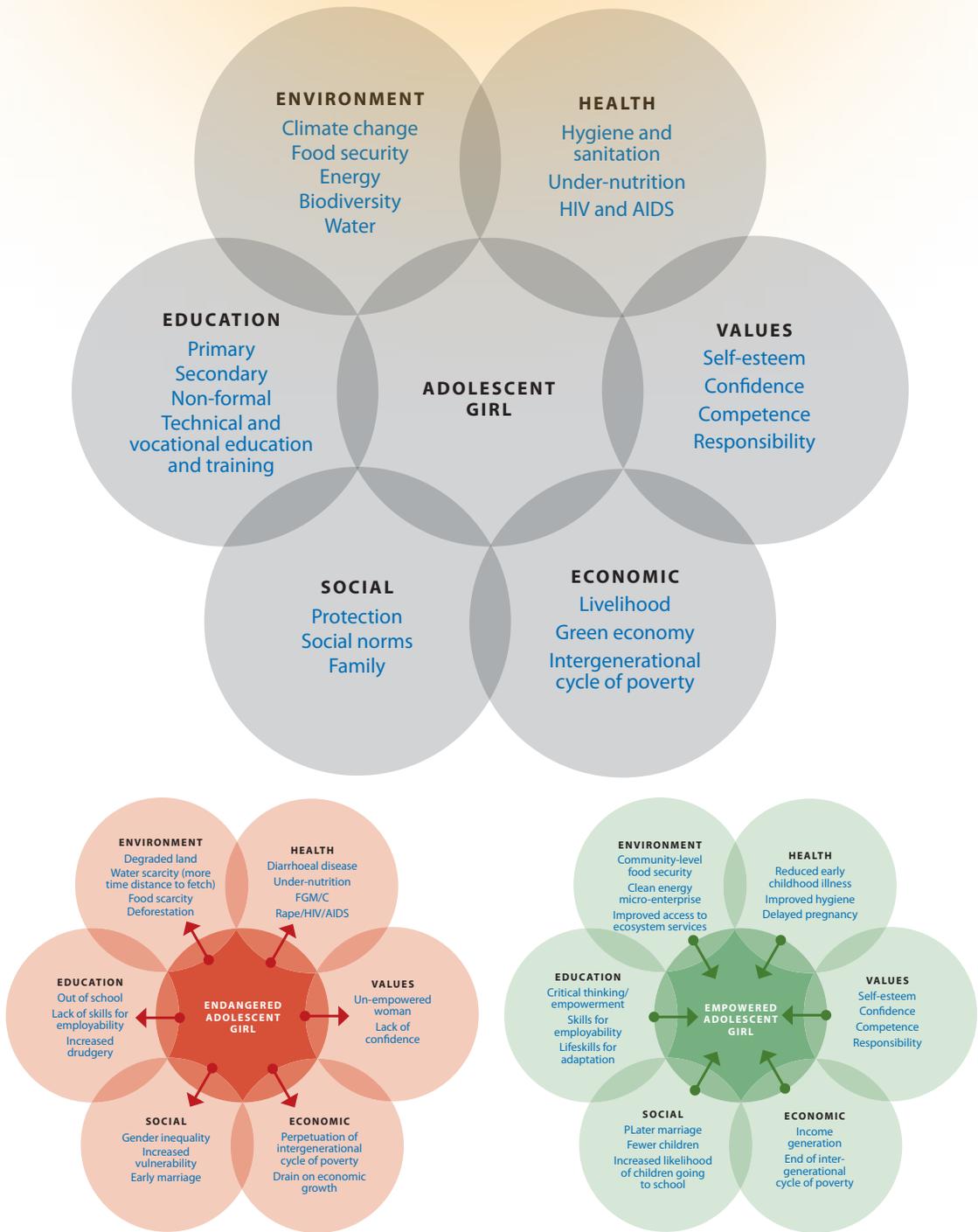
A 2008 UNICEF analysis of demographic and health surveys and multiple cluster surveys found that educating children increases the probability that the following generation will also attend school, thereby underscoring the importance of the intergenerational effect of education (Huebler 2008). Furthermore, in 'Keeping the Promise: Five Benefits of Girls' Education', Rihani notes "in 43 developing countries ... secondary gross enrolment rates are under 50 percent and the majority out of school are girls" (Rihani 2006).

The UN Girls' Education Initiative reports that children who leave primary school often do so for economic reasons. As they work, they gather some knowledge and training from parents, elder siblings and the community, and some may attend informal schools or classes at youth centres. However, most who leave school will remain uneducated, having missed their chance to gain the knowledge and skills to advance in the labour market. In most cases, this relegates them to life in the poorly paid and insecure informal sector, which includes rural agriculture (UNGEI 2012). Further emphasizing this point, the report, *Girls' Speak: A New Voice in Global Development*, notes that being young and female in the developing world is a double disadvantage in life that girls cannot overcome on their own. The report recommends that families, communities, and policy makers acknowledge the low status to which girls are relegated and help them overcome its constraints. (ICRW 2009.)

The *Human Development Report 2011* notes the prevalence of 'overlapping deprivations' within the multidimensional poverty index, underscoring inter-sectoral impacts related to environmental health risks, associated with chronic intergenerational poverty and the adverse implications of girls' burden of resource collection, which has been demonstrated to decrease school attendance. Moreover, studies show that educated girls have lower fertility rates, and that self-determined communities are often empowered to suffer less pollution. (UNDP 2011.)

Social norms in many of the world's most vulnerable communities often translate into harsh realities for girls and young women, who are expected to carry out domestic

FIGURE 1. INTERDEPENDENT RELATIONSHIP BETWEEN AN ADOLESCENT GIRL AND THE LARGER WORLD



Source: Author's elaboration.

duties that are particularly vulnerable to environmental change (Bandiera 2009). For example, female children are most often responsible for collecting firewood, fodder and water. The time and effort devoted to these activities contributes to their under-nutrition and poor health and increases the intensity of the deprivations that affect these children's lives (Alkire and Roché 2009).

Further, ethical and social concerns regarding indigenous community dynamics warrant consideration because, while indigenous peoples make up about 5 percent of the world's people, they own, occupy, or use (generally by customary rights) up to 22 percent of the world's land—land that comprises 80 percent of global biodiversity. Indigenous peoples and communities legally own around 11 percent of global forests, and an estimated 60 million of indigenous peoples depend wholly on forest resources for their livelihoods (UNDP 2011). Within the context of this discussion, it is important to note that a majority of the world's indigenous peoples are children or adolescents.¹

Evidence of age and gender inequities related to derogation and discrimination associated with ethnic subgroups within countries (World Bank 2012c)² is often accompanied by cultural and structural norms that exclude girls from school. Yet many remote rural ethnic groups include the same forest communities that are particularly vulnerable to the impacts of deforestation and loss of biodiversity; therefore they would derive great benefit from educating their adolescent girls (Foa 2009).

Thus, education for an adolescent girl, post-primary education in particular, has important individual benefits in terms of her options and access to resources over her lifetime. The interdependent association between the impacts and benefits of external sustainable development policies that affect girls extend beyond them to affect her family and society as a whole (see Figure 1). (UNICEF 2004.)

A strategic opportunity exists to educate and empower girls in the developing world with the critical thinking, values and tools they need to contribute to, and potentially lead, a truly green economy.³ Moreover, cross-sectoral collaboration is needed among governments and all stakeholders that have signed on to the Convention on the Rights of the Child and Convention on the Elimination of Discrimination against Women (CEDAW) and are committed to environmental governance treaties. Improving social structures to empower girls will have substantial intergenerational effects.

EMPOWERING GIRLS' EDUCATION TO FUEL THE GREEN ECONOMY AND AS A TARGETED SOCIAL SAFETY NET FOR COMMUNITIES

In practical terms, Rio+20 did not adequately recognize the importance of education or meaningful participation of girls as key stakeholders as a strategy to reduce risk and increase impoverished rural and urban communities' adaptive capacities and resilience. The need to mainstream policies across sectors within the context of differentiated capacities in relation to a changing global environment and fragile global peace processes is often associated with deeply rooted social norms and the chronic nature of intergenerational poverty.

According to the United Nations Environment Programme, a green economy is one that results in improved human well-being and social equity while significantly reducing environmental risks and ecological scarcities. In its simplest expression, a green economy can be thought of as one that is low-carbon, resource-efficient and socially inclusive (UNEP 2011). In this regard, girls and young women who lack equitable access to public vocational training, apprenticeships and job-training programmes are being denied crucial opportunities to participate in emerging markets and value-added activities (UNGEI 2012). Therefore, efforts are needed to expand job-training opportunities that will prepare them for inclusion in the global green economy (ibid.). Achieving these goals will lead to higher productivity, lower poverty and better development outcomes for future generations (World Bank 2012b).

Education for sustainable development was first described by Chapter 36 of Agenda 21 (UNCED 1992) through four major thrusts:

1. Improve basic education;
1. Reorient existing education to address sustainable development;
2. Develop public understanding and awareness; and
3. Training.

If taught in safe schools, an Education for Sustainable Development agenda that integrates the core principles of relevant content knowledge, critical thinking skills, quality learning, disaster risk reduction and environmental and climate change education, could lead to sustainable attitudes and practices, which are known to reduce environmental degradation and promote adaptation to a changing climate (Anderson 2010). Life skills education helps young people build their confidence and empowers them to problem-solve their way out of the hardships and vulnerable situations they face in their daily lives while engaging in economically viable market-relevant solutions (UNICEF 2011b).

Considerable progress has been made in recent years in advocating for and achieving policy frameworks for gender mainstreaming and community-based action for women. Among other things, the 2002 'Johannesburg Plan of Implementation' agreed to improve "the status, health and economic welfare of women and girls through full access to economic opportunity, land, credit, education and health-care services" (Section II, Poverty eradication, paragraph 7(d)). Yet post-primary education and alternative options for adolescent girls continue to be scarce, and budgetary choices at national, regional, and global levels are lacking. Although acquisition of cognitive skills is crucial for national economic growth, gender differences are widest at the level of post-primary education (World Bank 2012b).

Though strides have been made on behalf of youth as a stakeholder, not enough is being done to engage and empower adolescent girls. In 2007, the World Bank's 'Youth Employment Inventory' examined 291 interventions from 84 countries. It found that only 15 percent of programmes actively promoted the inclusion of young women, either by targeting them as principle beneficiaries or incorporating specific measures (e.g. child-care allowances) to ensure their participation.

The 2011 Chicago Council on Global Affairs' *Girls Grow* report indicates that in the developing world, "adolescent girls and women are the key to fully realizing the productive potential of agriculture. If women farmers were given the same access to productive resources as men, agricultural yields could increase by 20 to 30 percent and reduce the number of undernourished people by 12 to 17 percent" (Chicago Council on Global Affairs 2011). Girls' responsibilities at home and on the farm give them unique knowledge of local crop species and environmental conditions, making them natural players in resource management and associated risk reduction.

Therefore, the proposed curriculum should be relevant and tailored to the local culture, girls' experiences, and their post-educational opportunities. Of particular importance for adolescent girls' participation in post-primary education

A STUDY ON YOUTH IN CÔTE D'IVOIRE

In 2008, the Ministry of Technical Education and Vocational Training and the United Nations Industrial Development Organization collaborated on a demographic study in Côte d'Ivoire. The study estimated that about 4 million youths remained unemployed since the country was affected by the conflict in 2002. Most of these young people and adolescents are excluded from any opportunity to improve their living conditions, although there are 60 Vocational Education Institutes covering 70 sectors and 13 fields. The Talent Academies initiative aims to support adolescent and youth population in order to cultivate their individual talents towards enhanced livelihoods by strengthening their contribution to economic growth and national development. With the support of UNICEF, the Ministry of Technical Education and Vocational Training has set up one Talent Academy for Fashion. A 'talent academy' for Agro-Food engineering will be set up in consensus with the project actors.



Source: UNICEF 2011a.

INDIAN GIRL SPEAKS AT INTERNATIONAL CONFERENCE ON RAINWATER HARVESTING

Chinchu George is from Kerala, India. At the age of 16, Chinchu was a member of the children's advisory council to the adult district government. At her school she pioneered the introduction of a new rainwater harvesting unit that provides water to the school and community during the dry season. Chinchu's innovation has inspired students in 13 nearby districts to follow her example. In 2006, she made a speech to adult professionals from over 50 countries at the International Conference on Rainwater Harvesting in New Delhi.



Source: UNICEF 2007.

is their enrolment and achievement in math, science and technology courses. Technical and vocational education and training that promotes long-term strategies and solutions and inclusive and rights-based approaches is a priority area for action that is aligned with Education for All Goal 3 related to “appropriate learning and life skills” (UNESCO 2006). New research by a team that includes vocational psychologists at the University of Wisconsin-Milwaukee, indicates that the self-confidence instilled by parents and teachers is more important for young girls learning math and science than their

initial interest in these subjects (*Science Daily* 2008).

In a recent speech for the Association for the Development of Education in Africa, Director-General of the United Nations Educational, Scientific and Cultural Organization Irina Bokova noted “an explosion in the number of African youth, which adds to the urgency of linking education, training and employment.” In some countries, such as Guinea, Liberia, Nigeria and Sierra Leone, 60 percent of the population is under 25. She went on to say, “too many children leave school with insufficient skills and competences, which do not allow them to integrate the workforce.”⁴ Of further relevance is that a new cross-national analyses of more than 100 countries commissioned for UNDP's *Human Development Report 2011* confirmed the strong correlation between “proxies for the distribution of power” and environmental quality. The report found that empowerment is linked with access to improved water, less land degradation, and fewer deaths due to indoor and outdoor air pollution and dirty water. Furthermore, empowerment variables are even more important than income in explaining many key dimensions of environmental quality, including positive and negative indicators of environmental quality such as access to improved water, deaths due to pollution and mortality in children under age five. The implication of these findings within the context of this work is that empowering children, adolescent girls in particular, is key to improving environmental quality.

Within the context of the most vulnerable rural girls, beginning in 2001, UNICEF's Adolescent Empowerment Initiative in Bangladesh has been working with 20,000 teenage girls on local entrepreneurial knowledge and life skills. A 2007 evaluation found that 7,500 of those girls started their own businesses after completing livelihood training (BRAC 2008). Further success has been documented within the context of

reducing deforestation and forest degradation activities Brazil. Both community- and school-based reforestation initiatives are an important pathway for students, teachers and communities to make tangible contributions to climate change mitigation efforts (Earth Child Institute and Planet2025 Network n.d.).

Lastly, early childhood education and interventions cannot be overlooked, both within the context of our “common but differentiated responsibilities” and because, among other development priorities, research has found that preschool experiences result in substantial positive impacts on adult cognitive skills (Behrman 2005). Preschool-age experiences related to nutrition, health, water quality, and other determinants have been found to substantially and significantly affect adult non-verbal skills, even in those without further schooling.

CALL FOR ACTION

“The solution to gender inequality in education goes beyond the education sector, requiring a multi-sectoral strategy that addresses education as well as law, health, agriculture, and infrastructure” (World Bank 2012b). However, most governments are organized largely in sectoral ministries or departments, making it difficult to develop a shared view of the underlying problems and the required solutions. The interwoven challenges of sustainable development—from combating extreme poverty, controlling disease to addressing climate change and ecosystem vulnerability—can only be resolved by leveraging knowledge and skills from a range of sectoral expertise (The Earth Institute and MacArthur Foundation 2008). Recognizing the coexistence of multiple constraints and challenges, the need for coordinated action across sectors is a crucial but difficult step towards a sustainable future. Linking these entities and strengthening coordination between them is, therefore, particularly important for gender equality policy making (World Bank 2012a).

GIRL ENTREPRENEURS: CONVERTING WASTE TO HEATING FUEL

In 2009, at the age of 10, Cassandra Lin and her friends in Rhode Island (USA) started a project called Turn Grease Into Fuel, which collects waste cooking oil from residents and restaurants and turns it into biofuel. The biofuel is then distributed to low-income families that cannot afford heating. Cassandra came up with the idea after discovering that the current fund-raising programme for emergency heating assistance in her town was unsustainable. Today, the project partners with 105 restaurants to turn 48,000 gallons of waste cooking oil into biofuel, which benefits 60 families in the area every year. They have also been able to influence legislation in Rhode Island, which now mandates that all businesses who consume cooking oil must recycle their waste.



Source: Earth Child Institute 2011.

JOURNEY FROM A MENTAL PATIENT TO A BAREFOOT SOLAR ENGINEER: CASE STUDY FROM RAJASTHAN, INDIA

Angori was hardly 14 years-old when she was married and sent to live with her in-laws, forcing her to leave her studies to work to earn daily meals. She was bullied and tortured in her new home and started to lose her mental equilibrium as a result. She gave birth to a child thinking conditions would improve, yet conditions worsened. Angori, unable to cope with the pressure, was declared a mental patient. Through intervention of Doosra Dashak (a local non-governmental organization), she was able to regain her senses and chose not to return to her in-laws. Instead, she joined a three-month training programme: Barefoot Solar Engineers in Tilonia's famous Barefoot College.

The training instilled knowledge and confidence to make, repair and install solar panels. As Angori returned to her block, she started to make the panels and her skills reached such a level that she was invited to serve as a trainer for a Primitive Tribe Training Centre in her village, and was put in charge of the training on solar energy. This empowered young woman now trains men and women, girls and boys. A number of her installations can be found across two blocks in houses relying on solar energy for their daily chores. Angori proudly says, "I can not only install the panel, but am also fully capable of repair, upkeep and maintenance. I am invited by villagers on regular basis to do the job. I think I am contributing in a small manner to promote the concept of renewable energy training people about the benefits of using it."

Source: Shubhangi Sharma.

The United Nations Educational, Scientific and Cultural Organization undertook a comparison of global education and finance statistics. The results indicated that public spending on education is a significant percentage of gross domestic product. Governments that make substantial investments in education spend 8 to 20 times more than low-spending countries in relative terms. Sub-Saharan Africa is home to 15 percent of the world's school-age population, but combined spending on education by national governments in the region amounts to only 2.4 percent of the global education budget. (UNESCO 2007.)

Notably, some of the countries that spend the lowest percentage of gross domestic product on per pupil expenditure have a high percentage of girls out of school, and are also those most vulnerable to environmental degradation and climate change.⁵ Further research and development related to this theme would benefit from analysis on a

per-country basis, in regard to environmental degradation and vulnerability to climate change cross-referenced with education indicators, which could then be used to inform meaningful action.

Girls Count: A Global Investment and Action Agenda notes that rapid improvements are possible through a combination of legal reforms and education and economic opportunity, and states that "a fair share of public vocational training, apprenticeship programmes, and other job training programmes provided to young women is essential" (Levine 2008). Within the context of a green economy, efforts to build the girls' skills in renewable energy, water, sanitation, and small-scale irrigation techniques can provide

win-win scenarios for all stakeholders and goals. Targeted investments in policies and programmes that meet girls' needs can help break the cycle of intergenerational poverty and increasing vulnerability to global environmental change.

RECOMMENDATIONS

Education is a critical social strategy to reduce risk and mitigate environmental degradation. Girls' education should be promoted to fuel sustainable development and the green economy and as a targeted social safety net for adolescent girls and their communities.

Improving adolescent girls' lives is a prerequisite for sustainable development. Achieving equality in education is critical if women are to engage fully in society and the global economy; women are more likely to be agents of change if they have post-primary education.

Long-term investment in girls' education is essential for promoting sustainable development. This requires devising a multi-sectoral approach that addresses the gender gaps and linkages between education, law, health, agriculture, environment and infrastructure. Gender-specific indicators for core competencies need to be developed at national and local levels.

Targeted recommendations include:

- Recognize education as a social strategy to increase resilience and to promote sustainable development;
- Ensure specific programmes for universal access to education for girls and young women, and for women's life-long education, enhancing their full participation in sustainable development processes, consultations and initiatives;
- Transform prevailing gender stereotypes through narratives and institutional frameworks as well as social beliefs and practices, including through formal and informal education and training;
- Ensure, within the context of sustainable development, investments and long-term funding in the education sector, including targeted resource allocations to invest in capacity development and the empowerment of girls and women (Raynor and Wesson 2006, World Bank 2012c).⁶ Seeking opportunities to bridge sectors among similarly structured incentives for forest conservation, energy or water stewardship will exponentially strengthen benefits for all stakeholders, at all levels; and
- Enhance opportunities for girls' participation in sustainable development processes and consultations to promote intergenerational dialogue with policy makers.⁷ ■

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Endnotes

- 1 According to a UNICEF statement to the UNPFII, the majority of the 370 million indigenous people worldwide are children or adolescents, and they are often among the most marginalized and vulnerable members of society.
- 2 Also noted in World Bank Group, 2009, *Girls Education in the 21st Century*, page 115: "70 percent of out of school girls from 'socially excluded groups'"
- 3 Agenda 21, Chapter 36, states: "Relevant authorities should ensure that every school is assisted in designing environmental activity work plans, with the participation of students and staff. Schools should involve schoolchildren in local and regional studies on environmental health, including safe drinking water, sanitation and food and ecosystems and in relevant activities." See: http://www.un.org/esa/dsd/agenda21/res_agenda21_36.shtml.
- 4 See: http://www.unesco.org/new/en/dakar/about-this-office/single-view/news/youth_is_africas_main_asset_says_unesco_director_general/.
- 5 E.g. Bermuda (1.9 percent), Cambodia (1.9 percent), Cameroon (1.8 percent), the Dominican Republic (1.8 percent), Equatorial Guinea (0.6 percent), Gambia (2.0 percent), Guinea (2.0 percent), Indonesia (0.9 percent) and Zambia (2.0 percent). (UNESCO 2007.)
- 6 UNICEF Liberia's 2011 Annual Report notes that a social cash transfer programme in Bomi county involved 7,123 beneficiaries and increased school enrolment, attendance and performance among 63 percent of children.
- 7 A/CONF.216/L.1, Para 50 "We stress the importance of the active participation of young people in decision-making processes, as the issues we are addressing have a deep impact on present and future generations, and as the contribution of children and youth is vital to the achievement of sustainable development. We also recognize the need to promote intergenerational dialogue and solidarity by recognizing their views."

BOX 10

PROMOTING GENDER EQUALITY THROUGH SUSTAINABLE AGRICULTURAL PRODUCTION AND FOOD SECURITY

Agnes A. Babugura



Victor Diaz/Kitanari/UNDP Picture This

BEST PRACTICE FROM UGANDA:¹ SUSTAINABLE RURAL LIVELIHOODS PROGRAMME

The Sustainable Rural Livelihoods Programme, established in 2004 in eastern Uganda's Kamuli district, was designed to improve food security, nutrition and health at the household and community levels. The programme employs a farmer-to-farmer training and extension approach to demonstrate and disseminate information on key management practices, such as planting banana or cassava in ways that ensure productivity and control diseases, enhancing soil fertility through composting with manure and growing and utilizing nutrient-dense crops (e.g. amaranth grain and vitamin A-rich sweet potatoes). The programme also emphasizes establishing multiplication gardens and seed nurseries, post-harvest management and storage, improving livestock breeding and feeding, integrating nutrition and health with agriculture, farm enterprise development, marketing and strengthening farmer groups. Women make up the majority of farm group members, leaders and trainers. For example, women make up about 58 percent of

community-based rural development extension workers, 75 percent of community nutrition and health workers, 76 percent of committee members and 71 percent of executive committee members.

The programme has enhanced women's human capital through training and experience gained in developing leadership skills, improved nutrition and health and community-wide respect for their role as sources of valuable knowledge. The women are also involved in farm groups and emerging marketing associations. Another key reported result has been a significant increase in household food security.

BEST PRACTICE FROM INDIA:² SUSTAINABLE DRYLAND AGRICULTURE PROGRAMME

This project was initiated by the Andhra Pradesh Mahila Samatha Society in collaboration with UNDP. The project aimed at ensuring women's access to productive resources, bringing dry lands into cultivation, ensuring household food security and meeting women farmers' information needs.

The project targeted 500 Sanghams (village women's groups) from five districts in the South Indian state of Andhra Pradesh. The village women's groups were provided with financial support and given a number of farm implements such as cultivators, ploughs sickles, sprayers and weeders. Larger equipment, including multi-crop threshers and maize shellers, were given to clusters of five villages to be used in rotation. With knowledge and skills gained through training

inputs in soil testing, crop selection, soil and water conservation, non-pesticide management, dryland farming, inter-cropping and vermi-composting, the women's agricultural output improved. Using inter-cropping and crop rotation, the Sangham women grow various vegetables, fruit and medicinal plants and a varieties of millets and sorghum foods known to be much more nutritious than polished white rice. In addition to vegetable cultivation and floriculture, the women have expanded operations into dairying and marketing of bio-pesticides.

This production has enabled women to ensure food security in their homes (particularly by storing food to meet sustenance needs during drought periods) and generate household income by selling some of the excess. The women have gained recognition in the surrounding villages, not only as women farmers but in providing food security to the villagers. Through the project, women have challenged gender stereotypes as they took up ploughing and marketing in addition to other activities that they have traditionally carried out. ■

Endnotes

- 1 Food and Agriculture Organization of the United Nations, 2011. *The State of Food and Agriculture 2010-2011 – Women in Agriculture: Closing the Gender Gap for Development*. Rome. Available at: <http://www.fao.org/docrep/013/i2050e/i2050e00.htm>.
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BOX 11

THE IMPACT OF COMMERCIALIZATION ON WOMEN'S ACCESS TO LAND IN GHANA— A CASE STUDY ON LAND RIGHTS

Tracy Higgins and Jeanmarie Fenrich

Although a majority of land in Ghana is still family or lineage land where customary law and kinship dictate and constrain access, the proportion of land that is traded in the market is increasing. Studies have documented the impact of rapid urbanization and emerging land markets in peri-urban areas in Ghana.¹ Given the problems with respect to women's access to land under customary law, one theory is that this move towards market alienability is also a move towards greater gender equality in land access.² In Ghana, women face no formal legal impediment to acquiring land in the marketplace. If they have the resources, they may purchase or lease land.³ For this reason, some have argued that the increasing privatization favours women who are no longer constrained by traditional norms and assumptions about their ability to acquire and manage land.⁴

The reality, however, is somewhat more complex and requires an examination of actual practices, not simply legal norms. Though women may legally access land through the market to the same degree as men, even women with both the means and the knowledge to do so face considerable social stigma as social norms disfavour women owning land in their own right. To avoid this stigma, women often acquire land in the name of a man, typically their husband, brother or father.⁵ Notes one academic: "Sometimes cultural prejudices affect a woman's ability to acquire land through the market. Some people are not happy to sell to women so they have to get a male to formally acquire the land. That's also another source of insecurity," because the land is in the man's name.⁶

Better information and clarity regarding land ownership and transfer at all stages will benefit women, but this does not necessarily move away from traditional forms of access to land. Recall the importance of customary forms of access for many poor women.



Curt Camermark/Worl Bank

Moreover, and more importantly, women make up a disproportionate share of Ghana's poorest citizens.⁷ They are simply less likely than men to have the resources to purchase land.⁸ As noted by one individual working on land administration issues in Ghana, "If you look at household surveys and income surveys you find that women are among the poorest in Ghana, so I can't see how they are liberated by [being able] to purchase land, which is also becoming more expensive."⁹

The increasing privatization of land affects these poor women in complex ways. Traditionally, family land was valuable to the extent that it could be put to productive agricultural use. Thus, women had access to parcels of their or their husband's family land if they were capable and willing to farm it. When the value of land increases because of its potential for commercial development, traditional decision makers may be more reluctant to allocate land to members of the community and instead seek to sell or lease it.¹⁰ This has led to a number of conflicts between community members and their traditional leaders in Ghana.¹¹ It has

also led to increased displacement and landlessness in peri-urban areas.¹² When this happens, it tends to put pressure on the weakest members of the community, often women, migrants, and young people, making it more difficult for them to obtain land allotments.¹³

In addition, when land is transferred for commercial purposes, a number of different types of claims to the land might exist. The customary land owner may seek to transfer title to the land without necessarily recognizing other types of rights held by others—sharecropping arrangements, for example, or the right to gather.¹⁴ Cash crop production is more valued in terms of compensation, but "women engage in small production like tomatoes and cassava, which are considered insignificant in terms of valuing for compensation."¹⁵ Thus, the sale or lease might be transacted without compensating other kinds of claimants to the land, their claims being more difficult to document and to value. As explained by one non-governmental organization working on land issues, "The rural communities in Ghana are the target of

investors to acquire large concessions and use it for production. Women wake up overnight and see their land taken by some investors. And they don't have any say because there is no documentation of any interest that they may have had in the land."¹⁶

In itself, legal pluralism is not the problem in terms of women's land access. Rather, it complicates a system that lacks transparency, a system of recording, consistency in definition, clear choice of law rules and jurisdictional boundaries for dispute resolution. This complexity and information asymmetry benefits the powerful, most of whom are men. And yet, solving the problem of information asymmetry and reducing the complexity and confusion is insufficient to solve the underlying problem of women's inequality with respect to access to land. Women face discrimination in land access under both customary and common law, discrimination that stems from broad cultural assumptions about women's labour and their relationship to the land.

Simply put, the labour women typically engage in does not translate into property rights. Rather, it is uncompensated care-giving of men and children, work that is already 'owed' to the husband as part of the marriage contract. Or it is the type of work on the land that is defined as not conferring rights. Consider the work that men do: clearing land and growing cash crops, for example, gives rise to long term interests in land. Women typically grow seasonal crops, engage in maintenance work (weeding, gathering), all of which yield, at best, short-term interests. Further, women who do overcome the odds and marshal the resources to purchase or lease land on their

own face cultural taboos in doing so. Couple these problems with the lineage-based concept of family, a virilocal system of marital residence and the lack of a concept of marital property, and women's access to land becomes much more tenuous than men's.

Better information and clarity regarding land ownership and transfer at all stages will benefit women, but this does not necessarily move away from traditional forms of access to land. Recall the importance of customary forms of access for many poor women. Even though these traditional forms of access may be inferior to men's access and less secure, for women who have them, it may be all they have.

Instead, what needs to happen is a move towards greater recognition of women's labour by changing rules such that this labour can be translated into enforceable rights. To this end, the single most important legal change would be to create a legal presumption in favour of community property in marriage such that women's economic contributions to the family will be recognized and enforced upon divorce or death of the husband. In Ghana, enacting the current draft Property Rights of Spouses Bill would accomplish this. Such a change would have the affect not only of securing women's access to land, but would also alter the balance of power within marriage such that the woman's access to land, which is often her livelihood, is not dependent on the good will or whim of her husband's family. Under such a regime, women would be much more capable of negotiating joint decisions within marriage. Improving the bargaining power of women has been shown to have indirect benefits as well, including

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improved economic growth for the household and, where systemic gender-based obstacles to economic development are removed, gross domestic product growth.¹⁷ Such changes would also further the goal of implementing measures to promote gender equality in sustainable development and other areas as set forth in the Rio+20 Outcome Document and other international environmental declarations. ■

Endnotes

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- 9 Interview with Land Administration Project, Accra, Ghana (13 April 2010).
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- 12 See Kasim Kasanga & Nii Ashie Kotey, *Land Management in Ghana: Building on Tradition and Modernity*, International Institute for Environment and Development, London 26 (2001), at 18.
- 13 See Kasanga & Kotey, *supra* note 147, at 18; Susana Lastarria-Cornhiel, *Women's Role in Agriculture and in Rural Welfare: Access to Land and Resources*, U.N. Doc. EGM/BPFA-MDG/2009/EP.1 (November 4, 2009).
- 14 See Nii Ashie Kotey and Mark Owusu Yeboah, *Per-Urbanism, Land Relations and Women in Ghana*, GTZ Legal Pluralism and Gender Pilot Project 16, 28 (May 2003).
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- 17 See International Finance Corporation, 2007, 'Gender and Economic Growth Assessment for Ghana 2007', World Bank Group, at 26-28. Box 10. Gender, Water and Sanitation

BOX 12

GENDER, WATER AND SANITATION

Susan Bazilli and Olimar Maisonet-Guzmán



UN Photo/Ian Steele

Lack of basic sanitation and safe water is an acute problem for people that live in poor and overcrowded urban slums and in rural areas of the developing world. For sociocultural and biological reasons, women and girls usually suffer the most. Limited access to hygiene facilities and lack of sanitation and water exacerbate poverty by reducing productivity, negatively affecting health and well-being and elevating health costs. With no toilets, many must wait to relieve themselves until dark; lack of potable water infrastructure requires travelling long distances to fetch water—often risking sexual and gender-based violence. Lack of access to safe water and no separate toilet facilities at schools for boys and girls strongly correlates to girl's lower school attendance and higher drop-out rates.

Communities' valuation of technological options often affects water use. An irrigation pipeline is often associated with an understanding of the 'productive' use of water, and men have more influence than women over the utilization of such resources.

In contrast, a hand-dug well is generally associated with women's domestic use of water. While this use can also be considered productive, and provides benefits to women and men by providing water, the low-tech solution may not be given the priority. The decision-making mechanisms and politics associated with water allocations have different implications for men and women.

Evidence shows that water and sanitation services are generally more effective—and more sustainable—if women take an active role in designing, planning and operating facilities and programmes. In addition to managing technical and practical issues, women fill an important role in educating their families and the community about hygienic practices. Involving women typically increases management transparency, improves financial management and empowers women by example. The World Bank produced an evaluation of 122 water projects; the evaluations found that a project's effectiveness was six to seven times higher when women were involved, compared to when they were not.¹

The Dublin Principles, developed at the 1992 International Conference on Water and the Environment, form the basis of good water management practice. They recognize women's roles in Principle Three. This principle states, "Acceptance and implementation of this principle requires positive policies to address women's specific needs and to equip and empower women to participate at all levels in water resources programmes, including decision-making and implementation, in ways defined by them." The Johannesburg Plan of Implementation of the 2002 World Summit on Sustainable Development, paragraph

25(a), includes agreement by governments to “support capacity building for water and sanitation infrastructure and services development, ensuring that such infrastructure and services meet the needs of the poor and are gender-sensitive.” The Rio+20 Outcome Document, ‘The Future We Want’, recognized that safe and affordable drinking water and basic sanitation are necessary elements for achieving women’s empowerment.

Women water users’ involvement in public consultations and forums demands specific attention and approaches. The current tools used in multi-stakeholder consultations are mainly suited for an educated, literate group, and will require adaptation for use at the local level. Many women in traditionalist social contexts face cultural constraints that prevent them from speaking in public, and many poor women face economic constraints that do not allow them to voice their needs.²

Recommendations for Gender Mainstreaming in Sustainable Development Policies

Member States and policy makers must take into account gender when designing policies for sustainable development. Mainstreaming gender in policy formulation processes for integrated water resources management requires:³

- Incorporating a gender-sensitive approach in key written documents, including identifying gender gaps in the water sector and delineating a clear action plan to address these gaps;
- Clarifying the entitlements and responsibilities of water users and water providers, with special consideration to gender-related impacts. Additional clarification must be provided for the roles of government, the private sector and civil society

institutions. Such roles must specify the rights, duties and obligations for men and women, where appropriate;

- Collecting and analysing sex-disaggregated data, developing effective gender indicators and conducting gender audits to strengthen women’s participation in governance processes;
- Performing multi-stakeholder consultations that include women and women’s organizations, in order to better clarify water policies’ roles and effects on women;
- Establishing a legal status for government and user group water management institutions that stipulates the proportional share of women in participation and employment;
- Making a conscious effort to consult with women and men during planning processes through the use of, among other things, gender-inclusive participatory tools designed to engage grass-roots women and men; and
- Viewing issues of women, governance and water management as gender issues as well as recognizing broader issues of power relations, control and access to resources by disadvantaged groups. ■

Endnotes

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- 3 This section was taken from the Global Water Partnership Technical Committee, “Gender mainstreaming: An essential component of sustainable water management.” Policy Brief 3, 2006. See http://www.gwptoolbox.org/images/stories/gwplibrary/policy/pb_3_english.pdf.



BOX 13

MULTIDIMENSIONAL MEASUREMENT, WOMEN'S EMPOWERMENT AND FOOD SECURITY

Sabina Alkire

Multidimensional measurement methods have advanced significantly in recent years. New methods provide more comprehensive and accurate overviews of focal problems, reflecting interconnected contributing parts. They can be broken down by indicator and by any region or population group the survey permits, and can be used to analyse changes over time. Such measures can inform policy makers for more effective decision-making.

While unidimensional measures provide vital information, they do not show the richness of people's achievements in a number of crucial dimensions at the same time. Further, they cannot be used to target people and communities that face multiple, simultaneous disadvantages — which is essential in a time of scarce resources.

For example, in the area of poverty and well-being, new multidimensional measures include: Mexico's national multidimensional poverty measure (2009); Colombia's national multidimensional poverty measure and binding poverty reduction strategy (2011); Bhutan's Gross National Happiness Index, a pioneering well-being measure which aims not for GDP growth, but for gains in 'gross national happiness' (piloted in 2008, and updated in 2011); and the United Nations Development Programme's Human Development Report Office, which in 2010 released a new

international measure of acute poverty—the Multidimensional Poverty Index—that analysed multidimensional poverty in 104 countries (109 countries in 2011).

These measures all use an adaptation of a multidimensional measurement tool developed by Alkire and Foster that builds on a well-known approach used in monetary poverty measures. The Alkire Foster method provides a flexible multidimensional measurement tool that puts together dimensions and indicators in a way that is robust, academically solid (fulfilling a number of desirable properties), and simple to use. It does not prescribe the dimensions or indicators, as these are context-specific. Rather, the measure is tailored according to the need, context and purpose of the measurement exercise.

Gendered measures: It is impossible to construct gendered measures of poverty and well-being for many countries—particularly measures that reflect intra-household inequalities. The binding constraint is data. The global Multidimensional Poverty Index, for example, cannot be disaggregated by gender because of data constraints. Most national or international household surveys do not interview women and men from the same household. Nor do they usually interview women and men in equal proportions. Further, many surveys do not reflect essential economic contributions such as caring

and household work. Thus, while there tends to be gender-disaggregated data on children, education and labour force participation, gendered data even on a topic as key as individual earnings or adult malnutrition are often difficult to obtain. When such data constraints are lifted, new measurement fields open out.

Women's Empowerment in Agriculture

Index: In 2012, the United Nations Development Fund for Women, the International Food Policy Research Institute and the Oxford Poverty and Human Development Initiative created the new Women's Empowerment in Agriculture Index using the Alkire Foster method for multidimensional measurement. The Index is a composite measure that reveals women's control over critical parts of their lives in the household, community, and economy. It identifies the women who are disempowered and reveals the areas where their disempowerment is greatest, thus showing how to empower them in agricultural activities.

Women play a critical and potentially transformative role in human development in rural areas and in agricultural growth in developing countries, but they face persistent obstacles and economic constraints limiting further inclusion in agriculture. The Women's Empowerment in Agriculture Index measures women's empowerment, agency, and inclusion in the agricultural sector in order to identify ways to overcome those obstacles and constraints. The index is a significant innovation in its field and aims to increase understanding of the connections between women's empowerment, food security and agricultural growth. It measures the roles and extent of women's

engagement in the agricultural sector in five domains: decisions about agricultural production, access to and decision-making power over productive resources, control over use of income, leadership in the community and time use. For households that are not women-only, it also assesses a woman's empowerment relative to the primary male within her household and creates a 'gender disparity' measure. It was possible to construct the index because special surveys were used in which both the primary male and female of each household were interviewed.

Measuring food security: A potential area for index development using the Alkire and Foster method is food and nutrition security. It is increasingly recognized that traditional measures based on isolated dimensions—such as average caloric intake, micronutrients, food availability, infectious disease, or biometric parameters—are far from capturing food security in all its complexity. In a multidimensional measure, the key domains of food security need to be defined, agreement on the specific indicators that would reflect each dimension need to be reached, and decisions need to be taken as to the specific cut-offs and weights. Such a multidimensional measurement tool could be developed to focus the global accounting mechanism and green economy on food and nutrition security, which might include issues such as access to food and assets—including intra-household distribution and access over time—as well as gendered analyses of agricultural production, nutrition, stability, intergenerational equality, participation in organizations, decision-making, and social protection. ■

CONTRIBUTORS

BINA AGARWAL

Bina Agarwal is Professor of Economics, and Director of the Institute of Economic Growth, Delhi University, India. A well-known economist, she has served on Sarkozy's commission on the measurement of economic performance and social progress. Her research has linked sustainability to gender equality issues and security for women and has placed women's land rights centrally on the agenda of governments, civil society groups, and international agencies. In her most recent book, *Gender and Green Governance*, Agarwal explores the impact of women's presence on forest governance and conservation.

SABINA ALKIRE

Sabina Alkire directs the Oxford Poverty and Human Development Initiative, a research centre in the University of Oxford that supported the creation of the Multidimensional Poverty Index (used by UNDP's Human Development Reports), and undertakes research improving the data for and measurement of multidimensional poverty. Alkire holds a Doctor of Philosophy in Economics from the University of Oxford.

CHRISTINA ARCHER

Christina Archer, a socio-economist working for the L'Oreal group, specializes in managing corporate social responsibility programmes and pro-poor and ethical supply chains. She is currently responsible for the development, management and impact monitoring of supply chains of fairly traded ingredients from smallholders to The Body Shop and other entities within the L'Oreal group. Her career began at the University of Leeds, designing participatory research studies of the livelihoods and food security of post-war Eritrean farmers. Prior to entering the corporate sector, most of her career was with Save the Children UK, where she provided country programmes and emergency response initiatives with technical support on a range of issues, including child rights, impact assessments and livelihoods to.

AGNES BABUGURA

Agnes Babugura is currently a lecturer in the department of Geography and Environmental Science at Monash University South Africa. She holds a PhD in Environmental science with specific focus on social vulnerability to climate variability and change. Her key

areas of expertise include gender and climate change, food security and agriculture, social vulnerability and adaptation, poverty and development and project evaluation. She has conducted research and undertaken various consultancy assignments in southern Africa and beyond on the various issues mentioned above. As a consultant (regional gender expert), she works with the UNDP gender team to provide technical support to facilitate and strengthen national capacities for African countries to integrate gender perspectives into national climate change adaptation programmes.

SUSAN BAZILLI

Susan Bazilli is the Director of the International Women's Rights Project in Canada and South Africa. She is an international human rights lawyer who has worked globally for 30 years on women's rights issues.

ITZÁ CASTAÑEDA CAMEY

Itzá Castañeda is a biologist and holds a Master's degree in environment and development as well as a diploma in environmental policy with a gender concentration. Itzá boasts almost 20 years of experience working for a number of international and national organizations as a researcher and consultant-adviser, while also teaching and training on topics including gender equality and sustainable development in Mexico and Latin America. From 2001 to 2004, she was the Director of Gender Equity with Mexico's Secretariat of Environment and Natural Resources, and she held the position of Senior Gender Adviser for the United Nations Development Programme from 2004 to 2011. Itzá is co-author of ten books and numerous guides and articles. She has also served as the keynote speaker at national and international conferences and congresses, and is a member of the Global Gender and Climate Alliance and the Gender and Environment Network of Mexico.

BLERTA CELA

Blerta Cella is currently working with UNDP Bangladesh as assistant country director. Prior to that, she was the acting Practice Manager, policy specialist and the manager of the UNDP Gender Thematic Trust Fund with the Gender Team, Bureau for Development Policy. She also managed the pilot phase and the UNDP and wider UN system implementation of the Gender Marker, which has since been highlighted as a

good practice by the Secretary General. Blerta has also been in charge of reporting to the UNDP Executive Board and for overall monitoring and evaluation of gender equality results in UNDP. She has managed several multi-partner projects in such areas as property and inheritance rights, unpaid work in the context of HIV and AIDS, governance of HIV and AIDS responses, financing for gender equality in post-conflict reconstruction, and work related to Rio+20 and the post-2015 sustainable development framework. A native of Albania, Blerta has also worked with human rights and legal organizations, including the American Bar Association's Eastern European Law Initiative, Human Rights First, Organization for Security and Cooperation in Europe and various civil society and grassroots networks and organizations (e.g. the Huairou Commission and Groots International). She worked in Kosovo, including in the refugee camps, to promote rule of law and access to justice.

IRENE DANKELMAN

Irene Dankelman, an ecologist by background, is a lecturer at the Radboud University of Nijmegen (Netherlands) and is director/consultant at IRDANA advice. She was founder and board member of many organizations, including the Women's Environment and Development Organization, International Union for Conservation of Nature – Netherlands, Women in Europe for a Common Future, Both ENDS (Environment and Development Service for non-governmental organizations) and its Joke Waller-Hunter Initiative. She has worked for almost 35 years in the area of environment and sustainable development for national and international organizations, academia and the United Nations. Specializing in the area of gender and environment, she has worked worldwide and has been published extensively on the subject.

SONIA MARIA DIAS

Sonia Maria Dias, based in Belo Horizonte, Brazil, is a sector specialist at Women in Informal Employment: Globalizing and Organizing, and a visiting scholar at the Federal University of Minas Gerais (Brazil). She holds a PhD in Political Science. She is a sociologist by training and a garbageologist with specialization in Solid Waste Management by the University of Kitakyushu, Japan. She has been active in the waste management field in Brazil since 1985, with a focus on promoting the integration of social inclusion aspects into the technical planning of waste collection and recycling.

DIANE ELSON

Diane Elson is Emeritus Professor of Sociology at the University of Essex, UK, and is a member of the university's Centre for Research in Economic Sociology and Innovation and the Essex Human Rights Centre. Her academic degrees include a BA in philosophy, politics and economics from the University of Oxford and a PhD in economics from the University of Manchester. She is a past Vice President of the International Association for Feminist Economics. She has served as an advisor to the United Nations Development Fund for Women and UNDP and has been appointed a member of the United Nations Committee for Development Policy 2013-15.

JEANMARIE FENRICH

Jeanmarie Fenrich is the Director of Special Projects/Africa for the Leitner Center for International Law and Justice at Fordham Law School. She graduated magna cum laude from Fordham Law School, where she served as editor-in-chief of the Fordham Law Review. She has conducted field research and authored publications on issues related to domestic violence, discrimination faced by women with HIV/AIDS, women's property rights, and women in customary-law marriage under domestic and international human rights law. She is a co-editor of the recently published *The Future of African Customary Law* (Cambridge University Press 2011).

LUCIA FERNANDEZ

Lucia Fernandez has been the waste pickers' global coordinator for Women in Informal Employment: Globalizing and Organizing since 2008. She is an architect with two Masters degrees focused on spontaneous recycling dynamics. She graduated from the Architectural School of Grenoble, and from the Philosophy Faculty of Lyon. She is currently based in Boston where she has a research affiliation with CoLab, at the Department of Urban Studies and Planning at the Massachusetts Institute of Technology. Lucia has worked with several waste picker organizations since 2003, ranging from assisting small cooperatives and trade unions in her native country, Uruguay, to large-scale networking, creation and support of the Latin-American Network of Waste Pickers and international coordination of the nascent Global Alliance.

PAOLO GALIZZI

Paolo Galizzi is Clinical Professor of Law and Director of the Sustainable Development Legal Initiative at the Leitner Center for International Law and Justice, Fordham Law School. Professor Galizzi joined Fordham from Imperial College, University of London, where he was Lecturer in Environmental Law and later Marie Curie Fellow in Law. His research interests lie in international environmental and sustainable development law. He has published extensively in these areas, including *The Future of African Customary Law* (co-edited with Jeanmarie Fenrich and Tracy Higgins, Cambridge University Press: 2011) and *The Role of the Environment in Poverty Alleviation* (Fordham: 2008).

DONNA GOODMAN

Donna L. Goodman is the Founder and Executive Director of the Earth Child Institute (ECI), an international non-governmental organization dedicated to the world's children and environment, headquartered in New York, USA; Rio de Janeiro, Brazil; and Accra, Ghana. ECI is accredited with Special Consultative Status to the United Nations Economic and Social Council, advocates for children to the UNFCCC as a Civil Society Observer and Forest Community Schools as a pro-active social strategy for mitigating leakage in REDD+. From 2004 to 2009, she served as Programme Advisor on Climate Change and Environment for UNICEF, authoring a number of publications and policy frameworks, including *Climate Change and Children: A Human Security Challenge* and the UNEP/WHO *Healthy Environments for Healthy Children*, as well as initiating development of UNICEF's forthcoming resource manual on *Climate Change Adaptation and Disaster Risk Reduction in the Education Sector*. Goodman has been an advocate for the rights and participation of children and young people in the environment sector for more than 25 years, in dozens of countries worldwide.

SURANJANA GUPTA

Suranjana Gupta contributed to the development of the Huairou Commission's Community Disaster Resilience Fund and the Community Practitioners' Platform. At the Huairou Commission, she has worked on fund-raising, strategic planning, policy advocacy promoting grass-roots women's leadership facilitating transfer of effective practice and alliance building. In addition to working for GROOTS and the Huairou Commission, Suranjana taught at the New School University's Graduate Program of International Affairs from 2002 to 2004. From 1995 to 2000, Suranjana worked for

Swayam Shikshan Prayog in India, facilitating and documenting women's empowerment processes in the context of credit, livelihoods, governance and post-disaster recovery. Suranjana Gupta holds an MSc in Development Studies from the London School of Economics and an MA in Sociology from the University of Mumbai.

ALENA HERKLOTZ

Alena Herklotz is Adjunct Professor and Sustainable Development Legal Initiative Fellow at the Leitner Center for International Law and Justice, Fordham Law School, where she teaches in the International Law and Development in Africa Clinic and international environmental law curriculum and supports many capacity building, research and scholarship activities. She has written in the fields of sustainable development and international environmental law and is the Associate Editor of *The Role of the Environment in Poverty Alleviation* (Fordham: 2008).

TRACY HIGGINS

Tracy Higgins co-founded the Leitner Center for International Law and Justice at Fordham Law School, where she is a co-director and a law professor. She is a former editor of the *Harvard Law Review*, a Women's Law and Public Policy Fellow, and an Adjunct Professor at the Georgetown University Law Center. Higgins has published numerous academic articles focusing on feminist jurisprudence, international human rights, and constitutional law in many of the nation's leading law journals. She is a co-editor of the recently published *The Future of African Customary Law* (Cambridge University Press 2011).

GAIL KARLSSON

Gail Karlsson is an attorney specializing in international environmental law, energy policy and sustainable development. She is a Senior Policy Advisor to the ENERGIA International Network on Gender and Sustainable Energy regarding international advocacy, including engagement with the June 2012 UN Conference on Environment and Development and prior meetings of the UN Commission on Sustainable Development, the UN Commission on the Status of Women, and the UN Framework Convention on Climate Change. She has also worked on a number of projects for the United Nations Development Programme on energy access, gender equality and sustainable development.

PRABHA KHOLSA

Prabha Khosla is an urbanist. One of her ongoing activities is to lobby for a critical feminist lens on cities. She works on women's rights, gender equality and urban issues—including planning, governance, sustainability, water and sanitation—and the development of capacity building materials and workshops on these issues. She is the founding member of the Toronto Women's City Alliance and the Riverdale Immigrant Women's Centre, Toronto. She is the author of numerous papers, articles and capacity building materials, including *Gender in Local Government: A Sourcebook for Trainers* and *A Training Package: Improving Gender Equality and Grassroots Participation through Good Land Governance*, both published by UN-HABITAT.

STEPHAN KLASSEN

Stephan Klasen is a professor of development economics at the University of Göttingen, Germany. He holds a PhD from Harvard University and has since held positions at the World Bank, King's College and the University of Munich. His research focuses on issues of poverty and inequality in development. A particular area of focus concerns causes, measurement, and consequences of gender bias in developing countries. In this capacity, he has also consulted for UNDP, the World Bank, the United Nations Educational, Scientific and Cultural Organization, and the Organisation for Economic Co-operation and Development.

GRAÇA MACHEL

Graça Machel is a member of the Africa Progress Panel and President of the Foundation for Community Development. Machel, spouse of President Nelson Mandela and former first lady and minister of education of Mozambique, led the UN report on the impact of armed conflict on children, which laid the ground for the UN Convention on the Rights of the Child. She set up the Foundation for Community Development and worked to help rebuild and develop Mozambique after the civil war. The Foundation for Community Development is an important social and economic development foundation in Mozambique, which has created service delivery systems in education, health and disaster recovery. The Secretary-General appointed Machel to the High-Level Panel on Post-2015 Development Agenda. Machel has received many humanitarian awards and serves on several boards of international organizations.

DIANE MACEACHERN

Diane MacEachern is an award-winning entrepreneur, one of America's leading green consumer advocates and the founder of Big Green Purse and Big Green Purse at Work. A best-selling author who recently received the Image of the Future Award from the World Communication Forum, MacEachern provides expert advice and consumer guidance to individuals, organizations and companies who want to protect themselves and their families, conserve our natural resources and achieve greater sustainability. Big Green Purse inspires consumers—especially women—to use their marketplace clout to secure their communities and families and to motivate companies to save energy, use safer ingredients, and reduce waste and pollution. She is launching an initiative to support the growing consumer movement in China by empowering local women activists and entrepreneurs. Big Green Purse at Work's dual purpose is to empower companies, government agencies and non-profit organizations to fulfill their environmental missions and to arm them with information and insights to enable them to rebuild sustainably in the wake of natural and man-made disasters.

OLIMAR MAISONET-GUZMAN

Olimar Maisonet-Guzman currently serves as water focal person for the UN Commission on Sustainable Development Major Group of Children and Youth and has participated as a youth delegate in the 6th World Water Forum, Stockholm+40, and Rio+20. She is a 2009 Truman Scholar and a 2010 Truman-Albright Fellow at the US State Department. Her Master's research focused on developing policy recommendations for improving the United States Water Working Group and the assessment of public-private partnerships in the Latin America. She's a contributor to the Stakeholders' Forum, the US Official Climate Conversations Blog, and Rio+Twenties. She holds a Bachelor's degree in political science and communications, and a minor in economics. She is completing her Master's Studies in Global Environmental Policy at American University in Washington, D.C.

PIEDAD MARTIN

Piedad Martin is an environmentalist specialized in economic development and sustainable management of natural resources in Spain, the UK and the US. Since 2004, Piedad has been dedicated to international cooperation for development in Colombia, the Mediterranean region, Mexico and the Palestinian Territories. She has been working with indigenous and vulnerable communities since then, and has been involved

in designing and applying strategies related to climate change adaptation, water management, sustainable agriculture and environmental governance. She is Director of the UN Coordination Office at the Organization of the United Nations in Mexico.

ROSE MENSAH-KUTTIN

Rose Mensah-Kutin is the Director of the Accra-based West African Regional Office of ABANTU for Development, a women's rights organization that works to promote gender responsiveness in policies in Ghana and Africa, and hosts the Gender Action on Climate Change for Equality and Sustainability. She has served as the Convenor of the Network for Women's Rights in Ghana, a membership organization that focuses on economic justice and women's land rights. She has a PhD in Gender and Energy Studies from the University of Birmingham, UK and an MA in Development Studies from the Institute of Social Studies, The Hague, The Netherlands.

ANITA NAYAR

Anita Nayar is a feminist activist and scholar engaged in research on the social and ecological consequences of the commercialization of indigenous medicine in India. She is an Executive Committee member of Development Alternatives with Women for a New Era, a network of feminist scholars, researchers and activists from the economic South. Anita has twenty years of experience working with a broad swath of women's movements, governments and UN agencies to bring a gender perspective on environmental, social and economic issues to bear on inter-governmental negotiations and agreements and national and local policies.

LIANE SCHALATEK

Liane Schalatek is the Associate Director of the Heinrich Böll Stiftung North America in Washington, D.C., where she coordinates the Foundation's work on climate change financing. A journalist by training, Liane has worked for over 15 years in the non-profit sector on development, climate and macroeconomic policy issues, with a special focus on their gender equity dimensions. She holds two master's degrees in political economy and international affairs and has published numerous articles in both German and English on those subjects.

GITA SEN

Gita Sen is Professor of Public Policy at the Indian Institute of Management in Bangalore, India, and Adjunct Professor of Global Health and Population, Harvard School of Public Health. She received her MA from the Delhi School of Economics, and her PhD from Stanford University. Her recent work includes research and policy advocacy on the gender dimensions of population policies, and the equity dimensions of health. Among a number of awards and honours, she received the Volvo Environment Prize in 1994, and honorary doctorates from the University of Sussex in 2012 and from the Open University (UK) in 2009, from the Karolinska Institute in Sweden in 2003, and from the University of East Anglia (UK) in 1998.

JEFFREY STERN

Jeffrey Stern has worked in the field of international policy for nearly two decades. With an extensive academic background in economics, environmental systems, philosophy (Columbia University), law and international environmental agreements (Georgetown University Law Center), Jeff has worked with a number of non-profit, government and development agencies. These range from small environmental concerns, such as The National Parks Trust, to the U.S. Department of Energy and several United Nations agencies, including UNDP, UNICEF and UN Women. As the principal and head of content development for 20-year-old communications firm Suazion, he has written, edited and contributed analytical, policy and legal expertise to numerous documents and publications, most recently managing the substantive editing of titles such as the UNDP 2011 *Ensuring Gender Equity in Climate Change Financing* and UN Women's contribution to Rio+20 discussions, *Future Women Want: Gender Equality and Sustainable Development* (2012).

CRISTINA TIRADO

Cristina Tirado is the director for the Public Health Institute's Center for Public Health and Climate Change. She has extensive international experience on health, food and environment international research programmes and policy making. She is adjunct professor at the University of California at Los Angeles School of Public Health, where she is associated with the Centers of Global Health and Immigrant Health and the Center of Public Health and Disasters and conducts research on climate change adaptation and mitigation strategies for health, water, food and nutrition security. She has worked with the United Nations, the World Health Organization, governmental and nongovernmental

organizations, and universities for 20 years in Europe, Central Asia, North Africa, the Middle East, South Asia and the Americas. Tirado has assisted the governments of more than 70 countries in the development of their food and nutrition programmes, emergency preparedness and response plans and the establishment of institutional and legal frameworks for biosecurity. She has been WHO Food Safety Regional Adviser for Europe where she developed and implemented the Food and Nutrition Actions Plans for 52 countries and contributed to development of the First European Union Environment and Health Strategy. Previously she coordinated the WHO's Surveillance Programme for Food-borne Diseases in Europe at the WHO/Food and Agriculture Organization Collaborating Centre at the Federal Institute for Risk Assessment in Berlin.

MARIAMA WILLIAMS

Mariama Williams, PhD, is a Senior Research Fellow with the South Centre. She is a director of the Institute of Law and Economics, Jamaica; co-editor of *Trading Stories: Experiences with Gender and Trade* (with Marilyn Carr, 2010); co-author of *Gender and Trade Action Guide: A Training Resource* (2007); and author, *Gender and Climate Finance* (2011) and *Gender Issues in the Multilateral Trading System* (2003). Williams facilitated training and consulted on gender and climate finance with the Global Gender and Climate Change Alliance and was the adviser on gender and trade with the Commonwealth Secretariat, London. She was also the research coordinator with the International Gender and Trade Network as well as co-research coordinator, the Political Economy of Globalization and Trade with Development Alternatives With Women for a New Era.



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Gender Equality, Economic Development
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FEATURING CONTRIBUTIONS BY

BINA AGARWAL
SABINA ALKIRE
CHRISTINA ARCHER
AGNES BABUGURA
SUSAN BAZILLI
ITZÁ CASTAÑEDA CAMEY
BLERTA CELA
IRENE DANKELMAN
SONIA MARIA DIAS
DIANE ELSON
JEANMARIE FENRICH
LUCIA FERNANDEZ
PAOLO GALIZZI
DONNA GOODMAN
SURANJANA GUPTA
ALENA HERKLOTZ

TRACY HIGGINS
GAIL KARLSSON
PRABHA KHOLSA
STEPHAN KLASEN
GRAÇA MACHEL
DIANE MACEACHERN
OLIMAR MAISONET-GUZMAN
PIEDAD MARTIN
ROSE MENSAH-KUTTIN
ANITA NAYAR
LIANE SCHALATEK
GITA SEN
JEFFREY STERN
CRISTINA TIRADO
MARIAMA WILLIAMS



United Nations Development Programme
220 East 42nd Street, New York, NY 12721, USA
www.undp.org/gender