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2010 Environment Strategy

Analytical Background Papers

Gender and Environment
Issues Paper

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List of Acronyms

Acronym	Full Name
AFR	Africa Regional Unit at the World Bank
CAS	Country Assistance Strategy
CBD	Convention on Biological Diversity
CFPIR	The Concessional Finance and Global Partnership - International Development Association Resource Mobilization Department
CIFOR	Center for International Forestry Research
DAC	Development Assistance Committee
DC	District of Columbia
DPL	Development Policy Loan
EAP	East Asia and Pacific Regional Unit of the World Bank
ECA	Europe and Central Asia Regional Unit of the World Bank
ENRM	Environment and Natural Resources
FAO	Food and Agriculture Organization of the United Nations
FCCC	Framework Convention on Climate Change
FY	Fiscal Year
GEF	Global Environment Facility
HRW	Human Rights Watch
IBRD	International Bank for Reconstruction and Development
ICR	Implementation Completion Report
ICRW	International Center for Research on Women
ICWE	International Conference on Water and the Environment
IDA	International Development Association
IEG	International Evaluation Group
IFAD	International Fund for Agricultural Development
IFC	International Finance Corporation
IPCC	Intergovernmental Panel on Climate Change
IFPRI	International Food Policy Research Institute
IFRC	International Federation of Red Cross and Red Crescent Societies
ILO	International Labour Office
IRC	International Red Cross
IUCN	International Union for Conservation of Nature
LCR	Latin America and Caribbean Regional Unit of the World Bank
MDG	Millennium Development Goal
MENA	Middle East and North Africa Regional Unit at the World Bank
M & E	Monitoring and Evaluation
MSF	Médecins sans Frontières
NGO	Non-Governmental Organization
OECD	Organisation for Economic Co-operation and Development
OMS	Operational Manual Statement
OP	Operational Policy

OSCE	Organisation for Security and Cooperation in Europe
PREM	Poverty Reduction and Economic Management Network
PSIA	Poverty and Social Impact Assessment
SAR	South Asia Region
SDN	Sustainable Development Network
SEA	Strategic Environmental Assessment
SIL	Sector Investment Loan
TAL	Technical Assistance Loan
TTL	Task Team Leader (World Bank)
UN	United Nations
UNCCD	United Nations Convention to Combat Desertification
UNCED	United Nations Conference on Environment and Development
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
UNICEF	United Nations Children's Fund
UNIFEM	United Nations Fund for Women
UNRISD	United Nations Research Institute for Social Development
USAID	United States Agency for International Development
WB	World Bank
WBG	World Bank Group
WDR	World Development Report
WHO	World Health Organization
WWAP	World Water Assessment Programme

Executive Summary

Background

The 2010 World Bank Environment Strategy is expected to focus on the Bank's support to client countries towards transformative economic growth and green development paths. An important aspect of this work is the need to focus on the nexus of environment and gender equality, defined as equality of access to and control over natural resources and development benefits; and equality of access to decision-making and representation for environmental and natural resources management process. Over the years, the WBG has made commitments to gender equality that focus on women's empowerment, through land/resource ownership, access to resources, services and enterprises; and institutional representation at local, regional and national levels. Actions and commitments include the 2001 Gender Strategy, 2003 Operational Policy 4.20 and 2006 *Gender Equality as Smart Economics: Gender Action Plan for WBG*.

Key Findings

Emerging realities point to three sets of gender and environment issues that are closely linked with the goals of 2010 Environment Strategy (a) gender equitable access to resources, (b) inclusive environmental governance, and (c) resilience strategies that can contribute to more sustainable and equitable natural resource-based growth; manage environmental risks and transform the growth path by promoting inclusive governance. In the area of access to resources, there is a need to spell out how to improve poor men and women's access to, use and ownership of the resources needed for household livelihood, health, and well-being. Inclusive environmental governance will be an important area, as the new Environment Strategy provides many linkages to expand women's access to opportunities which influence environmental governance at local, national and global levels through inclusive institutions and decision-making processes. The third set of gender issues is the resilience strategies that recognize the growing importance of climate change and large-scale natural disasters and the gender based impacts; and addresses how to enhance the success of household and community strategies for coping with environmental changes.

For the new Environment Strategy, together with global and national level programs, a targeted focus should be retained on local-level poverty reduction because it provides an important entry point for addressing key gender inequalities at the household level through enhancing livelihoods, preventing and reducing environmental health risks related to air, water and sanitation, improving access to governance, and reducing people's vulnerability to environmental hazards including natural disasters and climate change. It would be important develop programs that enable both women and men benefit socially and economically from transformative economic growth and new green development approaches, participate in environment/ natural resource decision-making at all levels and have the capacity and resources to cope with environmental risks and hazards.

A portfolio review of projects coded as Environment and Natural Resources Management (ENRM) during the FY02-09 period found uneven gender integration over the years. However, the trend is increasing and 36 percent ENRM projects were found gender responsive in 2009. Impact evaluations indicate that gender responsive programs not only enhanced social and economic opportunities for poor women, but also contributed to improved outcomes and development effectiveness. Various gender-responsive activities were undertaken by ENRM portfolio, for example, within the forestry, land and water management, the focus is on women's participation in the design, implementation and decision-making, and in environmental governance projects include activities to assist women build social capital and enhancing opportunities for women's representation in implementing and decision making bodies.

Thematic Recommendations:

Gender Equitable Resource Access

1. **Expand women's opportunities to own land**, together with improved access to productive inputs and environmentally-friendly (green) enterprises, and clean technology solutions.
2. **Formalize sustainable usufruct rights** for other natural resources on common property and publicly-owned lands for both women and men.
3. **Expand men's and women's knowledge and participation** in reducing exposure to environmental hazards.

Inclusive Environmental Governance

- **Strengthen gender mainstreaming efforts at the national policy level** through support to linkage and capacity development activities among environment and women's ministries, and specialized bodies such as those working on climate change as part of UNFCCC processes, especially the NAPA, Climate Investment Funds (CIF), PPCR, REDD etc.
- **Improve women's participation** at national, regional and local levels by including representatives from a range of women's organizations to environmental governance bodies and processes. **Build capacity** to help individual women, women leaders, women's organization and gender-focused NGOs become more effective participants. **Reduce logistical barriers to women's participation** by convenient meeting locations, schedules and transport; overcoming language barriers; and awareness and support of men in these activities.
- **Expand women's involvement in demand-side accountability** mechanisms for environmental governance (e.g gender audits; citizen report cards).
- **Quotas for women's representation** are relevant in some situations but need to be coupled with gender training to ensure men's support.

Strengthening and Expanding Resilience Strategies

1. **Expand women’s opportunities to participate** in disaster planning and recovery governance activities; and climate-related capacity building.
2. **Ensure gender-equitable access** to community-based REDD initiatives and carbon markets incentives and benefits.
3. **Expand the availability and affordability of pro-poor, accessible insurance products.**

Table 1: Thematic Gender Indicators

Gender Issue	Indicator
Outcome Indicator for Access to Resources	<ul style="list-style-type: none">• Changes in resource ownership or user access for project clients, disaggregated by sex or sex of head of client households (e.g av. no. of hectares of land owned; water source ownership; livestock ownership),
Outcome Indicator for Access to Resources and Resilience Strategies	<ul style="list-style-type: none">• Changes in access to services and facilities, disaggregated by male-headed and female-headed households (e.g irrigation, electrification, water supply, public and private sanitation, transportation) or men and women clients /beneficiaries.
Outcome Indicator for Access to Resources	<ul style="list-style-type: none">• Changes in income from improved resource management practices (e.g fishing, aquaculture, forest-related products), disaggregated by male-headed and female-headed households or men and women clients/beneficiaries.
Outcome Indicator for Access to Environmental Governance	<ul style="list-style-type: none">• Percentage of women and men who are active members of on-going environmental decision-making bodies at the national, regional and local levels; and for project or program activities.

Operational Recommendations:

1. **Establish gender targets, management oversight and expertise in the Environment Department**, and provide regular gender and environment training to staff.
2. **Increase budget allocations** for gender mainstreaming in the design and implementation of projects.
3. **Develop a Guidance Note** on mainstreaming gender equality in environmental programming.
4. **Utilize gender analysis** to develop gender-responsive design; use of gender-responsive monitoring, evaluation, supervision and reporting to ensure that proposed actions are implemented and monitored.
5. **Monitor sex-disaggregated indicators WBG environmental programming** on the three key changes in women’s status (i.e. women’s access to resources, access to environmental governance and adoption of resilience strategies) and progress towards targets given in Table 1 and 2 respectively.

1. Introduction

The 2010 World Bank Environment Strategy is expected to focus on the Bank's support to client countries in their drive to address sustainable development challenges, particularly for transformative economic growth and green development paths, and to harmonize with existing World Bank commitments to that end. An important aspect of this work is the need to focus on the nexus of environment and gender equality¹, defined as equality of control over, access to natural resources and development benefits; and equality of access to decision-making and representation for environmental and natural resources management process. . In this regard, the Bank's environmental programming should be designed to ensure that both women and men benefit from transformative economic growth and green development approaches, participate in environment/natural resource decision-making at all levels, and have the capacity and resources to cope with environmental risks and hazards.

As an input to the new Environment Strategy, this Gender and Environment Issues Paper has been undertaken to help guide recommendations for gender mainstreaming strategies which can improve the Strategy's effectiveness and sustainability, and has three specific objectives:

- Review timely and critical gender issues, related to women's economic and governance roles in both rural and urban areas.
- Review some strategic donor-funded and WBG environmental activities (FY02-09) for operational lessons learned and good practices which enhance gender-responsive environmental activities.
- Identify and recommend how the priorities and actions of the 2010 Environmental Strategy can better harmonize with gender-related strategies, action plans and other commitments of the WBG.

In the paper, these objectives are explored through a scan of the relevant World Bank portfolio of projects and operational work incorporating gender and environment experience, followed by an analysis of three sets of gender and environment issues that are closely linked with the goals of 2010 Environment Strategy:

- **Equitable access to resources:** Improving poor men and women's access to, use, and ownership of the resources they need for family livelihoods, health, and well-being.
- **Inclusive environmental governance:** Expanding women's access to opportunities for influencing environmental governance at local, national and global levels.
- **Resilience strategies:** Encapsulating the growing importance of climate change and other large-scale natural disasters and enhancing the success of household and community strategies for coping with environmental changes.

This analysis is followed by thematic and operational recommendations to help shape the Environment Strategy.

¹ The World Bank has defined "Gender equality" in terms of "equality under the law, equality of opportunity (including equality of rewards for work and equality in access to human capital and other productive resources that enable opportunity) and equality of voice (the ability to influence and contribute to the development process) (World Bank 2001).

2. Rationale and Context

It is now widely recognized that sustainable development, which is based on the “triple bottom line” of social inclusion, environmental sustainability, and economic growth, must include gender equality as an essential aspect. Environmental policies, programs and institutions are shown to be more efficient, effective and sustainable when they have taken into account the knowledge, needs and priorities of women who are the half of the world’s resource managers and users. Evidence now clearly shows that the costs of not addressing gender-based needs, constraints and exclusion in environmental programming are quite significant. The 2000 United Nations Millennium Declaration identifies gender equality and the empowerment of women and girls as among the most effective ways to “combat poverty, hunger and disease and to stimulate development that is truly sustainable.”², particularly as seen through Goal 3 of the associated Millennium Development Goals (MDGs). This understanding now features prominently as an organizing principle in the mandate of the Bank’s Sustainable Development Network (SDN).³

At the Bank, gender inequalities in rights, resources and voice have been associated with increased poverty and lower economic growth.⁴ Tackling gender inequality, therefore, is seen to have a bi-directional impact, contributing to reduction of poverty-related environmental degradation. Changing the nature of environmental decision-making and improving environmental management and quality can have a positive impact on women’s status and gender relations, if gender is addressed (Box 1 below).

In this light, gender-based differences in needs, constraints, priorities and choices need to be identified and addressed when developing environment policy, strategy and projects. However, evidence shows that most of these activities are done without appropriate gender analysis or consultations with men and women to identify their differential needs. Because environmental funding is likely to be in short supply for the foreseeable future, it is increasingly important to maximize the impacts achieved with limited available resources. Developed and developing countries alike will increase the sustainability of their environmental investments if they routinely and systematically address gender issues in their environmental operations and policy activities.

Furthermore, infrastructure investments that fail to consider gender and environment issues up-front can lead to environmental degradation, social exclusion and gender gaps. To mitigate this, there needs to be more cross-sectoral synergy in program development. With appropriate environment, social and gender analyses and consultations with women and men, measures to address needs, risks, constraints and priorities can be included in the design of operations that will lead to socially and environmentally sustainable development.

² UN General Assembly. 2000. UN Millennium Declaration, para. 20. UN Doc. A/RES/55/2. UN, New York.

³ The triple bottom line in the private sector refers to integration of financial, environmental and social goals for a sustainable outcome. Prieto, Bob. 2008. The Triple Bottom line Opportunity for Our Cities. Fluor Corporation, Prepared for the WB SDN.

⁴ International Development Association (IDA). 2010. Special Themes for IDA16. IDA Resource Mobilization Department (CFPIR), IDA, Washington, DC.

Box 1: Poverty, Gender and Environment Links

- *Poverty drives dependence on natural resources for survival. Yet increasingly wealthier groups, sometimes facilitated by state policies, are gaining control over and degrading resources for profit, leaving the poor with diminishing options.*[1].
- *Natural resource collection tasks have an opportunity cost and reduce girls' and women's available time for education, skill development, social, economic and governance activities; and they are caught in the vicious cycle of poverty.* In developing countries, women spend between two to nine hours per day on fuelwood and fodder collection and cooking activities [2]. Asian and African women typically walk six kilometers per day to collect water [3].
- *Natural resource collection tasks often have a negative impact on women's health and their economic productivity.* To transport firewood, fodder or water, Asian and African women often carry 20 kilogram loads on their heads [4]. Water shortages often lead to an abandonment of hygienic practices due to other pressing water needs. This results in increased incidence of diarrheal diseases and more demands on women and girls for family health caretaking duties [6][7]. As of 2000, indoor air pollution, which disproportionately affects women and children, accounted for up to two million excess deaths per year in developing countries, from cancer, respiratory infections and lung diseases [8].
- *Loss of biodiversity exacerbates poverty for women and their families.* Many rural women and their families depend upon non-timber forest products (NTFPs) for income, traditional medicines, nutrition, and seed sources [9].

1. Agarwal, Bina. 1995. *Gender, Environment and Poverty: Interlinks in India*. UNRISD.

2. World Bank. 2001. *Engendering Development: Through Gender Equality in Rights, Resources, and Voice*. Oxford: Oxford University Press and World Bank.

3. Blagborough, V., (ed.). 2001. *Looking Back: The Long-term Impacts of Water and Sanitation Projects*. WaterAid, London.

4. Bamberger, M. and A. S. C. Davis. 2001. *Women in Rural Transport and Development*. Rural Travel and Transport Program. World Bank, Washington, DC.

5. Curtis, V. 1986. *Women and the Transport of Water*. Intermediate Technology Publications, London. Cairo Water and Wastewater Economic Benefit Assessment. United State Agency for International Development, Cairo, and also Bolt, E. 1994. *Together for Water and Sanitation: Tools to Apply a Gender Approach*. IRC International Water and Sanitation Center, The Hague.

6. Ahmed, H. 2000. *The Benefits of Water Improvement Program (sic) to Women*. A Literature Review. Staff Paper #2000-20. Department of Agricultural Economics, Michigan State University, East Lansing.

7. World Health Organization (WHO) and UNICEF. 2005. *Water for Life: Making it Happen 2005-2015*. WHO, Geneva; UNICEF, New York.

8. Ezzati M and D.M. Kammen DM. 2002. *The Health Impacts of Exposure to Indoor Air Pollution from Solid Fuels in Developing Countries: Knowledge, Gaps, and Data Needs*. "Environmental Health Perspectives. 110 (11): 1057-68.

9. Food and Agriculture Organization (FAO). 1998. *Rural Women and Food Security: Current Situation and Perspectives*. FAO, Rome; R.

Dellink and A. Ruijs (eds.). 2008. *Economics of Poverty, Environment and Natural-Resource Use*, Springer, New York; and International Fund for Agricultural Development (IFAD). 2008. *Gender and Non-Timber Forest Products: Promoting Food Security and Economic Empowerment*. IFAD, Rome.

For World Bank programming, the business case for gender mainstreaming has been made over the past fifteen years and is encapsulated in the WBG's Gender Action Plan for Fiscal Years 2007-2010 ("*Gender Equality as Smart Economics*"), which points out that both the rate of growth and poverty reduction can be increased through greater attention to women's economic empowerment. A brief review of the Bank work incorporating gender experience follows.

3. World Bank Environment and Gender Experience

The World Bank has been mainstreaming gender since the 1970s, with a number of important policy and operational milestones. Nevertheless, the institution's overall record for gender integration has been inconsistent. There are a number of reasons for this. There has been low demand for gender mainstreaming interventions from client countries facing many competing priorities for constrained finances. Gender analyses are most often incorporated in social and environmental assessments that are conducted by client countries during project preparation and appraisal, particularly when social and environmental safeguard policies are triggered. There has also been under-investment in helping client countries build their capacity to integrate gender and monitor results. Across the Bank, there are too few social scientists and gender experts for design and supervision tasks, and they are not always able to respond to unpredictable demands for their services. Furthermore, limited project supervision funds reduce the possibility of their ongoing involvement with projects.

Project Portfolio Review

In tandem, the record for the Bank has also been inconsistent with respect to gender mainstreaming in environmental programs. A rapid portfolio analysis of 444 WBG Environment and Natural Resource Management (ENRM) projects (FY02-09), which was conducted in preparation for this paper,⁵ reviewed the inclusion of one or more of the four gender integration methods used in project appraisal documents: gender analysis, gender inclusive consultations, gender-responsive design and gender-responsive M&E (see Figs. 1 and 2).

The ENRM projects were sorted by their dominant theme coding. Overall, as indicated in Figure 1.1, between 2002 to 2009, on the average, 14 percent ENRM projects integrated gender. However, the trend of gender integration in ENRM is increasing and reached 36 percent in 2009. Nearly 40 percent of IDA projects integrated gender while IBRD projects lag behind. Greater progress was made for biodiversity conservation, environmental policies and institutions, water resources management and land administration and management projects. Gender integration progress has been negligible for climate change, pollution management and environmental health and projects categorized as "other" ENRM.

With respect to gender mainstreaming for ENRM projects across the regions, Fig. 3 indicates that. Africa region (AFR) and the Middle East and North Africa (MNA) have the highest percentage of projects with gender mainstreaming. Fig. 4 details the source of funding and it indicates that although East Asia (EAP) and MNA implemented few IDA projects, all of them integrated

⁵ SDV, with support from GAP funds, conducted a May 2010 review of 444 environmental and natural resource management (ENRM) projects. All of the projects with gender aspects came from a data subset consisting of IBRD/IDA (PE) and Bank/GEF projects. The review used available and relevant documentation (i.e. Project Appraisal Documents, Environmental Management Plans, Environment and Social Management Framework, Resettlement Action Plans and Indigenous Peoples Development Plans, Project Papers, Program Papers, or Project Briefs). . The analysis identified which gender mainstreaming methods (i.e. gender analysis, gender-inclusive consultation, gender-responsive activities in the project design and gender-responsive monitoring and evaluation) were used in the projects. Projects were identified by name, country, region, environmental coding and gender issue set.

gender in their analyses and design, and nearly half of IDA projects in AFR included gender. One third of IBRD projects in EAP integrated gender, while it is negligible in other regions.

Figure 1: Gender integration of ENRM projects by theme and funding source (FY02 – 09)

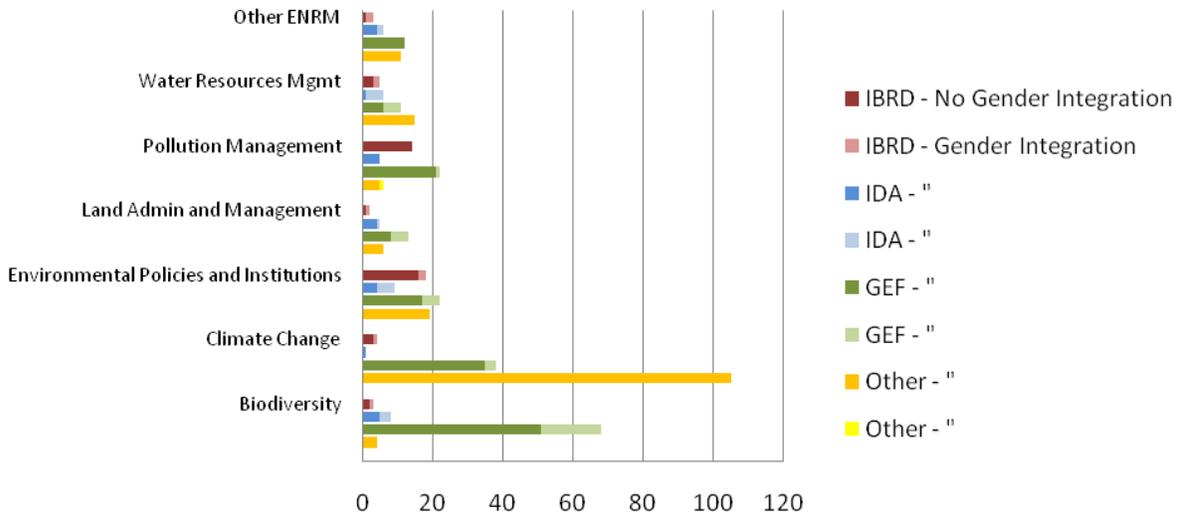


Figure 2: ENRM projects with gender integration, by dominant theme (FY02 – 09)

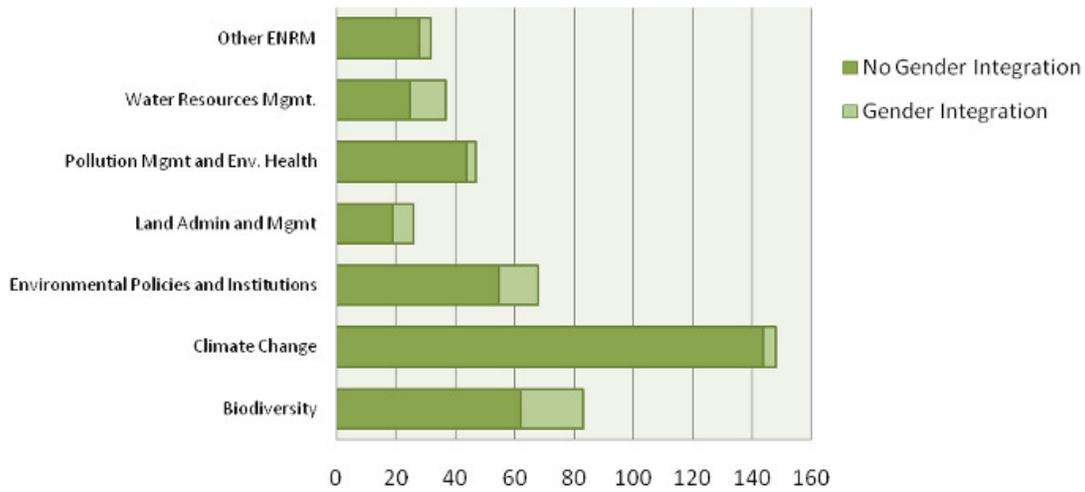


Figure 3: ENRM projects with gender integration, by region (FY02 – 09)

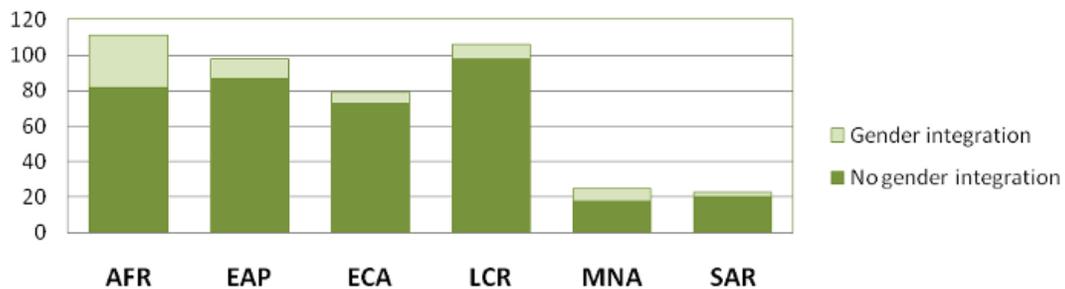
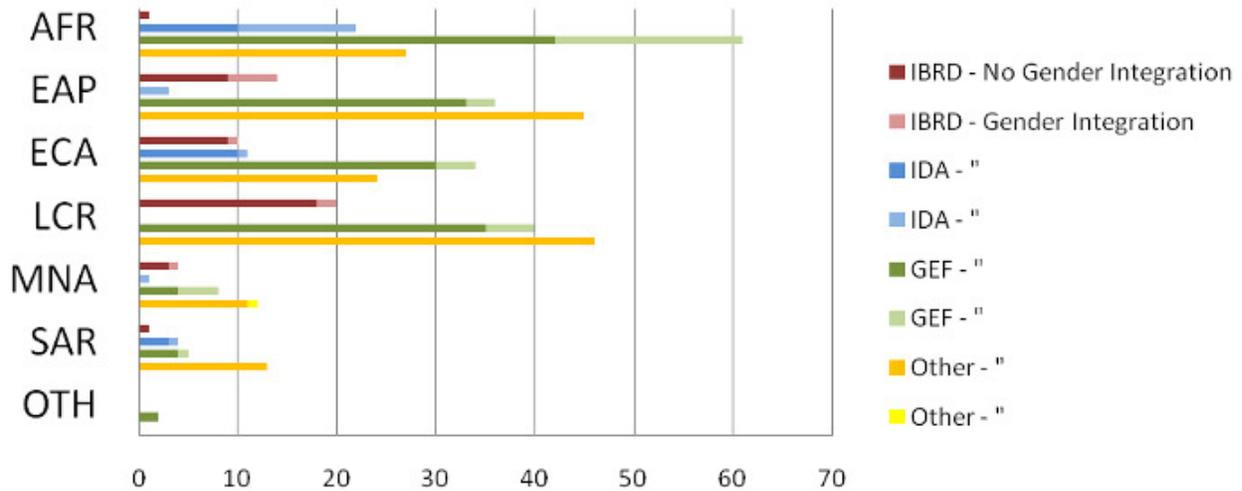


Figure 4: ENRM projects with gender integration, by region and funding source (FY02 – 09)



The portfolio review indicated that diverse gender-responsive activities were incorporated and carried out during implementation. The gender integration in operations has improved over the years. Completion reports of gender-responsive projects indicated sustainable outcomes.

In the **Indigenous Management of Protected Areas in the Peruvian Amazon project**, the Implementation Completion Report (ICR) reported substantial empowerment of the Indigenous women, facilitated by the project. The project initiated affirmative action in women’s representation in project committees for decision making and management, skill development and gender equitable composition within indigenous grassroots organizations. Women became treasurers of most project committees and were recognized for their talent in managing funds in an efficient, fair and transparent manner.

The **Jordan Conservation of Medicinal and Herbal Plants project** included a participatory and gender inclusive approach and ensured that information relating to project activities reached both men and women. The project also provided skill development to enable both women and men to participate fully in the resource management process. The project also targeted women in the communities, as well as women's organizations, for education and awareness on biodiversity and medicinal plant conservation and safe use; supported women’s conservation of existing plant species through cultivation; promoted mechanisms for the active and full participation of women; and targeted them for access to micro-credit facilities and grower's and producer's organizations.

In the **Integrated Silvopastoral Approaches to Ecosystem Management project** in Colombia, Costa Rica and Nicaragua, gender analysis during preparation indicated that participation of women was only 30 percent in farm decision making activities. In response, the project promoted women’s full participation in project activities and helped women build their capacity to strategically direct knowledge and income to improve family livelihoods and human capacity. The project also provided technical assistance to local NGOs and associations to support

ecosystem conservation activities carried out by small landowners, rural women's organizations and young people groups. The ICR concluded that women's and girls' participation had increased, especially in monitoring of water resources.

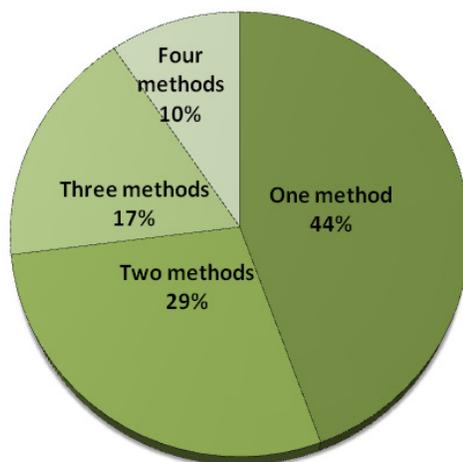
Among the ongoing projects, various gender-responsive activities are undertaken. Within the forestry, land and water management, the focus is on women's participation in the design, implementation and decision-making.

- The **Vietnam Land Administration project** includes targeted consultations and activities aimed at promoting women's land rights, especially provision of joint-land title to husband and wife. **Fishery/Livelihood** projects focus on enhancing women's asset and economic opportunities.
- The **Senegal Sustainable Management of Fish Resources project** conducted consultations with women and men, and designed a technical assistance program for training/capacity building of women and men in alternate livelihoods.
- The **Mozambique Market Led Rural Development, Rwanda Integrated Ecosystem Management, Nigeria Ecosystem Management, Namibia Ecosystem Management, and Ghana Environmental Governance projects** include activities to help women build social capital in agribusiness and enhance opportunities for women's representation in implementing and decision-making bodies.
- The **China Eco-Farming project** included components to promote access of households to biogas to free up working time spent by women on collecting traditional fuels, and reducing emission and improving health. The **China Mainstreaming Climate Change Adaptation project** includes targeted climate adaptation training to women farmers to improve their resilience.
- The **Gaza-West Bank Solid Waste Management project** includes a component to provide training for waste pickers and for women in their households in recycling businesses.
- The **Bangladesh Clean Air and Sustainable Environment project** targets improvement of urban transport, in particular, to enhance the mobility and security of working women and ensure their access to decision-making. Many of these projects include indicators to monitor progress toward gender equality.

For the 63 ENRM projects with some level of gender integration, attention to gender was inconsistent across the four main gender integration methods (i.e. gender-inclusive consultation, gender analysis, gender-responsive actions and gender-responsive monitoring and evaluation). Fig. 5 indicates that about 76 percent of the projects used one or two gender integration methods

in the design. Only ten percent had included all four gender integration methods. A GEF gender review also found similar results.⁶

Figure 5: Level of gender integration by ENRM projects (FY02 – 09), by the number of gender-integration methods used (n=63)



Key Operational Issues at the Bank

The success of gender mainstreaming in the Environment Strategy will depend on building on Bank gender-related assets and overcoming limitations. In addition to findings described in the operational portfolio, assets include institutional gender plans and strategies, Operational Policies and Bank Procedures related to gender and social analysis, social analytical capacities, staff with expertise for gender mainstreaming, and some dedicated gender funding. There are also useful gender lessons available from water and sanitation and other infrastructure projects, work with indigenous peoples, and the Bank’s GEF portfolio.

Of particular significance is the Business Plan (BP) for Accelerating Gender Integration into SDN Operational Work during FY11-14 now being drafted by the Sustainable Development Network (SDN), together with the Gender Department. The BP will be implemented by SDN units including Agriculture and Rural Development, Environment, Energy and Mining, Information and Communication Technologies, Transport, Water, Social Development and Urban Development. The Plan will establish a gender-responsive monitoring framework, indicators, and targets, and suggest an accountability and monitoring framework for gender. The Business Plan is being articulated around: Gender in SDN Policy and Planning, to ensure that gender

⁶ About one in five GEF projects had completed a gender analysis (18 percent), included women and men during project consultations (17 percent) or identified gender-responsive project components or activities (21 percent). The only projects adopting gender-responsive monitoring and evaluation were those coded as Biodiversity, Land Management and Multi-Focal Area (multiple sub-sectors) projects. Just a few projects had dedicated budget for gender activities and/or staff but only one of 172 reviewed GEF projects had adopted gender-responsive objectives. The reviewed GEF portfolio included mostly UNDP, WBG and UNEP projects with a small number from the other GEF partners. Of the UNDP and the WBG projects reviewed, just over one-third included a gender-responsive action (38 percent and 35 percent, respectively); for UNEP, only 12 percent of their reviewed GEF projects included a gender-responsive action.

informs global instruments and sector strategies; Technical Support to Operations, with pipeline review and Guidance Notes to facilitate gender integration in the core investments; Building Gender Technical Skills in SDN, and SDN Sector Performance Monitoring, by providing a foundation for measuring progress against gender performance benchmarks.

An Approach for Monitoring Progress in Gender Integration in Operations was developed that established a gender baseline for FY07-09. SDN Sector Boards agreed to monitor progress of gender integration in operations using the following indicators and targets:

- Percent increase in number of operations with “gender analysis and/or gender inclusive consultations” from a baseline to FY14.
- Percent increase in number of operations with “gender-responsive design” from a baseline to FY14.
- Percent increase in number of operations with “gender-responsive M&E” from a baseline to FY14.

Table 2 below sets out the Baseline for Gender Indicators in IDA and IBRD Operations in the Environment sector recorded under the Environment Sector Board, progress in FY10, and agreed targets for FY12-14. The baseline data includes all SIL, DPL and TAL. While IDA targets were agreed, IBRD targets will be endorsed during FY11.

Table 2: Baseline for Gender Indicators in IDA and IBRD Operations

Operations	07-09 Baseline (%)*Gender responsive			FY10 Gender responsive			Agreed FY12-14 gender Targets (%)		
	Analysis and/or Consultations	Design	M&E	Analysis and/or Consultations	Design	M&E	Analysis and/or Consultations	Design	M&E
SDN Sector									
IDA-Environment	36	27	9	67	67	33	100	50	30
IBRD-Environment	0	0	0	33	33	0			

Nevertheless, there are institutional limitations to be addressed, including limited attention to gender issues in environmental analytical work, with insufficient funding for gender-related analyses or experts to provide technical assistance in operations. For the primary analytics used for environment, the collection of gender-related environmental information has been inconsistent. Terms of References do not consistently require gender analysis; Bank supervision of gender aspects is sometimes weak; differences among women (farmers versus pastoralists, variations in gender relations among indigenous groups) are missed; and when safeguards are triggered, they do not consistently address gender issues.

At the country and project level, gender focal points are typically pressed for time and often lack gender training.⁷ Gender mainstreaming has often had to rely on gender champions on project and country teams. Project-level gender analyses have usually been included in social assessments, environmental and social assessments, vulnerability assessments, or occasionally in poverty and social impact assessments (Box 8); however, while some Task Team Leaders (TTLs) recognize that social and gender analysis is an integral part of how the Bank conducts its business, others view it as a time-consuming and potentially costly add-on. More attention is given to gender concerns during project preparation and appraisal rather than during implementation and supervision, and there is a lack of specificity in monitoring indicators and a failure to integrate gender indicators into the project results framework.

Beyond the local level, the Bank has some comparative advantages for expanding opportunities for women representatives at trans-boundary, regional and international levels of environmental governance. While some progress has been made since 1992 for including gender issues in Agenda 21 issues, women and gender issues have not had much impact on climate change dialogue, despite the need for women's perspectives to expand the climate resilience of economies, communities and households and ensure equitable distribution of climate co-benefits.

At present, few of the Bank's environmental projects appear to consistently track and report on sex-disaggregated outcomes. At the national level, gender-related data is highly inconsistent and often of low relevance for environmental projects, programs and policies. In some countries, a small amount of additional resources for gender-related statistics analyses goes a long way. There is a need to bolster internal and country-level monitoring systems for the collection and reporting of sex-disaggregated, environmentally related data from project, sub-national and national levels. There are plans to strengthen the Results Framework for Gender for IDA 16, building on indicators collected for the Annual Gender Mainstreaming Monitoring Report, or as part of a specific sector strategy or action plan.

⁷ In 2005, Zuckerman and Qing estimated that a majority of the 115 staff and consultants engaged in gender work were largely untrained Gender Focal Points who were taking on these duties on top of their existing work load. Accounting for far less than one percent since the 1980s, the growth of gender expertise at the Bank has not kept pace with environment staff, which comprised about seven percent of all Bank staff and consultants in 2005. (Zuckerman, E. and W. Qing. 2003. *Reforming the World Bank: Will the New Gender Strategy Make a Difference? A Study with China Case Examples*. Gender Action, Washington, DC and the Heinrich Böll Foundation, Berlin)

4. Gender and Environment Priority Areas for the New Environment Strategy

As indicated in the introduction, to inform and guide the 2010 Environment Strategy this paper presents an analytical framework through three sets of gender and environment issues that are closely linked with the Strategy's goals: equitable access to resources; inclusive environmental governance; and resilience strategies.

This analytical framework corresponds with the World Bank's three-part analysis of poverty that includes economic opportunity, access to the levers of power (voice/empowerment), and relative vulnerability to risk (security).⁸ It is also consistent with the World Bank's approach to gender issues for agriculture and natural resources, as elaborated in its extensive and recent World Bank Gender in Agriculture Sourcebook.⁹

a. Equitable Access to Resources

As long as women's access to resources is impeded by gender inequalities, there is likely to be less progress with changing environmental management practices and improving environmental quality and health. Those who have insecure access to and/or lack ownership of natural resources, either through private or group rights, are less likely to invest in improvements or change practices.¹⁰ Without land as collateral for credit, households are less likely to be able to start or expand off-farm businesses that can take pressure off of natural resources. For poor households, particularly those headed by women, land, credit and other resources remain elusive and environmental degradation is more likely.

At a local level, numerous gender analyses, conducted through Bank and other support, have clarified the gender dimensions of resource use and benefits and highlighted the need to address these differences in design of environmental policies, programs and projects. The gender literature has been influenced by asset-based approaches which address the elements of well-being, including human, built and financial capital, as well as natural and social capital. Gender inequality is seen as part of larger patterns of power differences which lead to conflict among resource users and can result in environmental degradation.

Gender Inequalities for Natural Resources

Natural resources form a crucial safety net, particularly for women with fewer employment and migration options. Poor households, particularly women-headed households, are often highly dependent on natural resources for survival and livelihoods. There is considerable of women's reduced access to natural resources and related livelihood opportunities:

⁸ World Bank. 2001. World Development Report 2000/2001 Overview – Attacking Poverty: Opportunity, Empowerment and Security. World Bank, Washington, DC.

⁹ World Bank. 2009. Gender in Agriculture Sourcebook. World Bank, Washington, DC.

¹⁰ Many have made the case for the positive relationship between titling and increased agricultural productivity and access to credit with land collateral. See for example, Deininger, K. 2003. Land Policies for Growth and Poverty Reduction. World Bank, Washington, DC and Oxford University Press, Oxford.

- **Land and Property.** Women own less than two percent of all property. In many countries, less than ten percent of women hold title to their land¹¹, which limits their access to resources and credit, including in times of crisis. Women, primarily on small farms, provide up to 80 percent of agricultural labor and produce 45-90 percent of domestically consumed food, depending on the region.¹² Women are the world's principal food producers and providers, and are assuming an increasing role in agriculture, in part because of the rural-to-urban migration of men. However, there is little recognition of women's labor in agriculture. Many studies agree that national economies would significantly improve if policies enabled women to contribute in a larger proportion to its agricultural production.¹³ Women's tenure security can be improved by individual title, joint titling, and agreements under group rights arrangements as illustrated in Box 2.

Box 2: Expanding Women's Access and Options through Individual Plot Allocations

Recent research from Burkina Faso found that allocating smaller, separate plots to men and women rather than larger plots to men household heads produced higher yields and social benefits. Total combined household productivity, of land and labor was higher when men and women had separate irrigated plots than those households where only men had irrigated plots. Women proved to be equally good or even better irrigation farmers than men. When women had individual plots, it significantly improved their bargaining position within their households. With increasing economic independence, women were able to help support their relatives and accumulate wealth via livestock purchases.

[Source: World Water Assessment Programme (WWAP) example cited by: OECD/DAC. 1998. Guidelines for Gender Equality and Women's Empowerment in Development Cooperation. OECD, Paris]

- **Forests.** The World Bank estimates that roughly a quarter of the world's poor and 90 percent of the poorest depend substantially on forests for their livelihoods.¹⁴ Beyond wood for cooking and building, people use forests for food, medicinal plants, and compost for agriculture. Of the 340 million people living in forested regions, there are about 50-60 million people who are indigenous peoples and they tend to be among the poorest people in the world.¹⁵ Women in forest-dependent communities not only collect subsistence and market goods from forests but also derive paid employment. Women are often the primary users and caretakers, particularly in Africa and Asia. Women and men have different knowledge about the use of forest plants and animals. Women also face different hurdles than men with respect to accessing forests (e.g. sexual harassment by forest guards) and transporting forest products (e.g fewer bikes owned and ridden by women).
- **Water.** Current estimates suggest that 1.2 billion people lack access to safe water. For many societies, water is central to women's traditional responsibilities such as water collection and storage, cooking, cleaning and family care, tasks that consume considerable amounts of

¹¹ International Fund for Agricultural Development (IFAD). 2001. Rural Poverty Report 2001: The Challenge of Ending Rural Poverty. Oxford University Press, Oxford.

¹² International Fund for Agricultural Development (IFAD). 2001. Rural Poverty Report 2001: The Challenge of Ending Rural Poverty. Oxford University Press, Oxford.

¹³ Women and Water (www.wateryear2003.org/en/ev.php-URL_ID=2543&URL_DO=DO_TOPIC&URL_SECTION=201.html)

¹⁴ World Bank. 2001. Recommended Revisions to OP 4.36: Proposals for Discussion. The World Bank: Washington, DC.

¹⁵ Kaimowitz, D. Forests and the Millennium Development Goals. EFRN News 47/48. CIFOR, Bogor.

women's time. Increasing access to clean water close to home can free women's and girls' time for economic and educational activities. Women also often have less access than men to irrigation systems for agriculture, and must rely on social networks for water access or must purchase these rights from men; women's access is often irregular, seasonal and insecure. Women can be excluded when new irrigation schemes favor men's crops or when credit is required for land purchases or land rights. Irrigated land is often highly contested and women have less influence due to reduced social and political power. In some places, group membership is a prerequisite for irrigation access but women are excluded due to time availability or discriminatory practices.¹⁶

- **Fisheries.** In coastal fishing communities around the world, women are involved as workers, both paid and unpaid, who engage in collecting and fishing as processors, traders, inland fishers and aquaculturists, and members of fishers' organizations. In many fishing households, women's incomes from gleaning, seaweed farming and other non-fisheries work supplement men's erratic and seasonal incomes from fishing. However, women are often excluded from fisheries projects focused on the fishing end of the fisheries value chain.
- **Air Quality.** In developing countries, about 2.5 billion people rely on biomass, such as fuelwood, charcoal and animal dung, to meet their cooking energy needs. Eighty percent of the population in Sub-Saharan Africa and over half of the population in India and China rely on traditional biomass for cooking.¹⁷ For the poorer households in both rural and urban areas, women and children are particularly vulnerable to the indoor air pollution resulting from cooking and heating with traditional fuels. Beyond lung and other diseases, indoor air pollution claims the lives of 1.5 million people each year and more than half of them below the age of five. This number exceeds the total deaths from malaria and rivals the number of deaths from tuberculosis.¹⁸

Gender Inequalities for Other Types of Resources

In addition to natural resources, women and the poor in general need a range of financial, social, legal and other assets to secure livelihoods and well-being of their households.

- **Credit, Inputs and Extension Services.** Women small-scale farmers in five African countries received less than ten percent of the credit awarded to men smallholders.¹⁹ Women tend to have more access to micro-credit rather than the amounts needed for small, medium and large enterprises.²⁰ Women's time commitments at home, exacerbated by poor quality farm-to-market roads and lack of transport, are barriers to accessing formal credit and savings institutions in larger market or urban centers. With respect to inputs, women's access to improved seeds, fertilizers and pesticides is more limited because they are often not members

¹⁶ International Fund for Agricultural Development (IFAD). 2001. Rural Poverty Report 2001: The Challenge of Ending Rural Poverty. Oxford University Press, Oxford.

¹⁷ United Nations. 2007. Millennium Development Goals Report. 2007. United Nations, New York.

¹⁸ United Nations. 2007. Millennium Development Goals Report. 2007. United Nations, New York.

¹⁹ Food and Agriculture Organization (FAO). 1998. Rural Women and Food Security: Current Situation and Perspectives. FAO, Rome.

²⁰ Sharma, R. 2010. Finance: Getting Women from Micro to Mezzo. Viewpoint. Bloomberg Business Week, May 4, 2010.

of the distributing cooperatives or are not reached directly by extension agents.²¹ Figures show that only five percent of extension services have been addressed to rural women,²² and no more than 15 percent of the world's extension agents are women.²³ Training access is often limited by women's lower literacy levels.²⁴ (Box 3)

Box 3: Expand Women's Access to More than One Resource to Maximize Productivity and Income

"In Bangladesh, studies found that women's access to irrigation water was not useful if they did not also have access to other resources such as land, credit, seeds and fertilizer. When women were provided with these and other resources, their income from irrigation increased by as much as ten times as what they would have earned in wage labor or other traditional activities. This comprehensive program focused on women's empowerment, which not only gave them access to water but access to several resources, decreasing women's dependence on male intermediaries."

Source: *Lancet and University College of London Institute for Global Health Commission. 2009. Managing the Health Effects of Climate Change. Lancet 373: 1693-733*

- **Transportation.** For women to market their own products and retain the returns, they need improved transportation. While African men use bicycles to transport goods, women, particularly poorer women, rely on head-loading, which limits the distances they can cover and the amount of goods they can market. Hiring truckers is expensive, particularly if roads are in poor condition. In Sao Tome and Principe, women fish traders estimate that half their cash expenditure goes to paying for transport.²⁵ Lack of transportation to health care is also a key contributing factor for maternal mortality due to childbirth complications.²⁶
- **Access to Association and Social Capital Formation.** Group or association membership is often a prerequisite which enables producers and vendors to obtain goods and services, including extension services, inputs, credit, irrigated lands, transport to markets, market information, etc. Women's membership and relative power in mixed-sex producer cooperatives has always been less than men's. For example, in Asia, the percentage of women cooperative members ranges only from two to seven and one-half percent, with only a few exceptions such as Malaysia with about 31 percent women.²⁷ There is also growing evidence that groups with both men and women perform better. Women, with or without external support, have formed women-only cooperatives, including cooperative banks, consumer stores, and vendors for a variety of products. In India, the women's cooperative SEWA and Self Help Group (SHG) has had enormous success in mobilizing poor women, improving their access to markets and formal banking system and bargaining power.

²¹ Quisumbing, A., L. R. Brown, H. Sims Feldstein, L. Haddad, and C. Pena. 1995. "Women: the Key to Food Security," International Food Policy Research Institute.

²² Dunn, K. 1995. The busiest people in the world. *Ceres*, 27(4): 48-52.

²³ Dunn, K. 1995. The busiest people in the world. *Ceres*, 27(4): 48-52.

²⁴ Jiggins, J., Samanta, R.K., and J.E. Olawoye. 1998. Improving Women Farmers' Access to Extension Services. In: Swanson, B.E., Bentz, R.P. and A.J. Sofranko (eds.). 1998. Improving Agricultural Extension. FAO, Rome.

²⁵ International Fund for Agricultural Development (IFAD). 2001. Rural Poverty Report 2001: The Challenge of Ending Rural Poverty. Oxford University Press. February.

²⁶ Babinard, Julie and Peter Roberts. 2006. Maternal and Child Mortality Development Goals: What can the Transport Sector Do? World Bank Sector Board Paper TP-12.

²⁷ Prakash, Daman. 2003. Rural women, food security and agricultural cooperatives. Rural Development Management Centre, New Delhi.

- **Information and Communication Technology (ICT).** Increasingly, producers are gaining access to clients and market information via mobile phones and Internet. In some developing countries, women have less access to mobile phones and internet or do not have the money, time or transport to travel to centralized call centers. However, targeted ICT services to women in South Asia and Sub-Saharan Africa are making a major difference in their access to market information and improved profit of their produce.²⁸
- **Appropriate Technologies.** For production, women have had little access to the benefits of research and innovation, especially in the domain of food crops.²⁹ Promotion of improved cookstove efforts have often failed due to inadequate consultation with women, and progress for biogas adoption has been slowed due to the access to credit needed.
- **Employment Opportunities and Enterprise Services.** Landless or land-poor rural people rely on earning some income, at least seasonally, in agricultural labor markets. Women generally earn less than men, and domestic obligations and cost of transport reduce their opportunities to earn income.³⁰ With increasing urbanization and male migration from rural areas, the demand for rural women's labor is likely to increase. Efforts have been made to expand women's environmentally related livelihood alternatives in protected area management and eco-tourism employment or enterprise development, but these efforts often reinforce gender stereotypes for division of labor, and there is still a significant gender pay gap (30 to 40 percent in some countries in 2006.³¹)

With the advent of more environmentally technologies and a new "green" economy, it will be important to include rural and urban women. New green jobs and enterprises for women could include eco-tourism jobs and production, sales and service of renewable energy and water technologies at household and community levels. These new business opportunities can expand training and marketing partnerships with new "green" and socially responsible firms in the private sector and target credit to more environmentally sustainable enterprises. Enterprise schemes for women need to move beyond traditional gender-assigned skills to more lucrative non-traditional and environmentally friendly businesses and jobs. In Jordan, women have been taught how to repair residential plumbing systems, as well as market and install simple, inexpensive water-saving devices in their neighborhoods.³² In Bangladesh, women were trained and established enterprises for manufacturing solar home systems and energy services provision and maintenance in a remote coastal island with no electricity.³³

²⁸ Melhem, S (2009) Information and Communication Technologies for Women's Socio-economic Empowerment, WBG Working paper Series (June 2009)

²⁹ Jiggins, J. 1986. Gender-related Impacts and the Work of the International Agricultural Research Centres." CGIAR Study Paper No. 17. World Bank, Washington, DC.

³⁰ International Fund for Agricultural Development (IFAD). 2001. Rural Poverty Report 2001: The Challenge of Ending Rural Poverty. Oxford University Press. February.

³¹ International Labour Office (ILO). 2006. Facts of Promoting Gender Equality in the World of Work. ILO, Geneva. (Available from: www.ilo.org/public/english/bureau/inf/download/ecosoc/gender.pdf)

³² USAID. 2007. Jordanian Women Help Conserve Country's Water Supply Partnership for a Better Life. USAID/Jordan Success Story. USAID/Jordan, Amman. (Available in Success Stories section of www.usaid.gov)

³³ Ahmad, N (2004) Opportunities for Women in renewable Energy Technology, ESMAP

b. Inclusive Environmental Governance

The international community has long recognized that, at all levels, women are not equitably represented in environmental governance processes³⁴ and decision-making institutions and environmental priorities are being set without sufficient gender analyses. Effective and democratic institutions of governance require the representation of all segments of the population; especially women, as it would lead to more efficient and equitable outcomes³⁵. Gender relations determine women's access to environmental decision-making as participants and leaders. Without participation and influence on environmental priority setting, women are less likely to feel ownership for decisions and this influences the success of environmental policy implementation. The failure to include women and analyze gender issues for environmental decision-making increases the likelihood of negative impacts on women, including less secure access to or ownership of natural resources, displacement, higher time or labor costs borne by women, fewer opportunities for employment or enterprise services and gender-differentiated environmental health impacts in neighborhoods or workplaces. With less policy ownership by women and fewer incentives to change unsustainable environmental practices, gender inequalities in access to governance contribute to environmental degradation.

Approaches to improve the gender aspect of governance focus on the demand side, strengthening community and individual capacity, and the supply side, strengthening officials' and service providers' capacity. Such approaches aim to: 1) increase decision-makers' understanding of the differences in men's and women's needs and priorities and potential impacts of policy alternatives); 2) provide better social information for environmental decision-making ; 3) empower women by expanding economic and political opportunities and information; and 4) work with women and men to transform gender relations by changing discriminatory social norms.

Until recently, most WBG and other development agency environmental projects have worked at a local level to address practical needs of women and men, including governance activities focused on resource planning and management, production and marketing of goods or broader social and economic development outcomes, and cultural identity and advancement. There is an extensive body of literature and lessons learned from rural community-based and decentralized natural resource management, conservation, indigenous resource management and water and sanitation activities in rural and urban municipal areas. Although this research shows that there has been more progress at the local level than higher levels, women's ascendancy to community-based leadership positions and environmental priority setting is still inadequate in many places.

There is a growing trend in approaching environmental governance at the national, regional and international level through various types of development policy loans (DPLs) and other policy

³⁴ In this paper, the term environmental governance refers to the institutions and processes for environmental decision-making and implementation at local, sub-national, national, trans-boundary, regional and global levels. It refers to multiple actors including government, civil society and the private sector, at multiple levels.

³⁵ Agarwal, B (2010), *Gender and Green Governance: A Political Economy of Women's Presence within and beyond Community Forestry*, Oxford University Press, U. K.

based agreements.³⁶ At these higher levels, there has been much less experience with addressing gender issues and ensuring women's adequate participation and representation. These levels are critical to ensuring that women's strategic priorities, needs and rights are addressed.³⁷ Toward this end, it is important to engage with non-governmental organizations (NGOs) on gender and environmental policy issues. However, many gender advocacy NGOs operating at national levels lack environmental expertise. There are international gender and environment advocacy NGOs but they may lack local constituencies.

The dialogue about gender and environmental governance has often been sidetracked away from fundamental outcomes related to who benefits and who loses from environmental decisions. Gender issues for environmental governance are more than "bean-counting" of the number of women participants. Often, any woman present in environmental governance meetings, regardless of her stakeholder interests, has been seen as capable of representing the diversity of women's interests. Decision-makers have sometimes marginalized concerns about family education and health as "women's issues" and these issues are then viewed as peripheral rather than central to environmental planning and policy-making.

Gender Differences and Environmental Governance

There are both formal and informal environmental governance systems for planning, allocating and managing resources. People gain access to resources through their families and informal social networks, as well as more formal groups and institutions; however, poor women in developing countries lack information and have less access to formal institutions. The discussion below focuses on the gender dimensions of the latter set of groups and institutions. Four sets of gender differences shape women's access to environmental governance and ultimately, the nature of environmental priority setting and decision-making.

- **Needs, priorities and budgets.** There are also gender-based differences in environmental needs and priorities influenced by social variables such as age, ethnicity, and migration status, not only between men and women but among men and among women. These differences have been identified via gender analyses, consultative processes and presented by stakeholder groups to those planning development activities (Box 4 below). Budgets and expenditures reflect societal priorities and gender relations. In the past decade, new tools have been piloted which analyze budgets and budget alternatives from a gender-related perspective. These tools identify who will benefit from various alternatives or selected priorities.³⁸ There are also some gender dimensions to the misuse or redirection of budget funds intended to benefit women's development; these funds may be more easily misappropriated because women tend to be less aware of their rights and less willing than men to demand that public authorities account for missing funds.³⁹

³⁶ Acharya, A et al (2010) The Role of Environmental DPLs in Supporting Environmental Sustainability, Background report for the 2010 Environment Strategy

³⁷ Moser, C.O.N. 1993. Gender Planning and Development: Theory, Practice, and Training. Routledge, New York.

³⁸ Balmori, H. H. 2003. Gender and Budgets: Overview Report. BRIDGE. Institute of Development Studies, University of Sussex, Brighton. (Available from: www.bridge.ids.ac.uk)

³⁹ World Bank. 2009. Gender in Agriculture Sourcebook. The World Bank, Washington, DC.

Box 4: Differences in Gendered Environment and Development Priorities in the Philippines

By first adapting to women's primary interests, a watershed management project in Mindanao, Philippines had greater success with achieving its environmental objectives and building up a larger local environmental constituency. In a cloud forest area, there was extensive lake siltation due to deforestation and soil erosion and this interfered with electricity generation. Initially, the project invited young men in the community to conduct water monitoring for soil levels. However, the men were not consistent monitors. The project then tried to involve women farmers in water monitoring but had little success. Local women were more interested in health issues than in soil loss. With this information, the project shifted its approach and taught the women about the links between water quality and family health. When it expanded water monitoring to include *E. coli* bacteria contamination, women's monitoring participation increased. Once they had begun to monitor the water, the women got involved in a wider range of environmental activities and adopted soil and conservation techniques.

Source: Diamond, N. et al. 1997. A Working Session on Communities, Institutions and Policies: Moving from Environmental Research to Results. WIDTECH (funded by the U.S. Agency for International Development), Washington, DC

- **Access to processes for, and information about planning and policy formulation.** Processes for environmental decision-making are often structured in logistical ways that create barriers to women's participation. Information about meetings, decisions and changes in rights is not always made widely available or targeted to women. When new opportunities or expanded rights are being discussed, women may be expected to exchange sexual services in lieu of money bribes for access to opportunities.⁴⁰ At national levels, it may not occur to those who organize national development strategies and plans, or environmental strategies and plans, to reach out to those with gender expertise or groups which represent women stakeholders. At all levels, gender relations also influence a women's ability to leave behind family responsibilities, travel without their husbands, and speak out in public meetings (Box 5).

Box 5: Inclusive participation leads to sustainable development

In Luzira, Uganda, a gender-sensitive urban sanitation project made important strides in improving urban environmental and health conditions through the inclusion of both women and men in all stages of activities. The Luzira Parish Anglican Church initiated a pilot project which focused on construction of improved latrines, identifying locations for refuse disposal, improving drainage systems, training households on provision of safe drinking water and its storage, and improving household hygienic practices. Beyond the initial gender sensitivity used to identify informants and participants for a situational analysis and participatory project planning workshops, this project ensured that during implementation, both women and men were represented in the project management committee. Reinforced by Uganda's national affirmative action policies, the project required that the community identify two women in each of the five priority zones to serve on the project management committee, in addition to have a woman vice-chair and treasurer. Both women and men were involved in decision-making, formulating action plans and work plans, assigning responsibilities, making budgets, working as Trainers of Trainers and community environmental educators and developing strategies for monitoring project performance and evaluation. To adapt to women's schedules and family responsibilities, trainings and meetings were carried out within the village and on weekends and evenings. The consensus building achieved among men and women and across different stakeholder groups helped to develop a sense of ownership and commitment, more efficient implementation with a higher likelihood of sustainability.

Source: Sustainable Cities Programme. 2000. Integrating Gender Responsiveness in Environment Planning and Management. EPM Sourcebook Series #4, UN-HABITAT, Nairobi, Kenya

⁴⁰ World Bank. 2009. Gender in Agriculture Sourcebook. The World Bank, Washington, DC.

- **Constraints on women stakeholder participation in environmental governance.** Creating opportunities for the representation and voice of active women leaders in decision-making bodies such as watershed and forest management committees consistently leads to different outcomes from those obtained when women are excluded. But processes for environmental governance may be structured in ways that are intimidating to women. At a local level, gender norms may limit women's comfort with speaking up in large or mixed-sex meetings, particularly when there are few women present. Ageism can inhibit the participation of younger women; illiteracy has sometimes been used to shame women and discount their contributions in meetings. While local women and men can offer gendered traditional knowledge about resource management, they may be intimidated by formal environmental information which is highly technical and/or in languages that they do not speak or read, particularly when they have low levels of literacy and education. In national and higher level fora for environmental governance, representatives of women's organizations (i.e. NGOs and private sector) may be generalists who lack knowledge on particular environmental topics and are less able to make effective technical contributions or provide sub-sector specific gender analyses. They may also be elites with limited understanding of local women's needs, priorities and knowledge of the local environment.
- **Representation of women's interests and women office holders.** Ideally, women are represented in environmental governance by civil society actors (i.e. women's and mixed-sex self-help groups and federations, resource user groups and gender advocacy NGOs) and private sector actors (e.g. business associations and cooperatives) (Box 6 below), as well as their elected government representatives. In theory, both women and men representatives should understand and promote the diverse priorities of both women and men constituents.

In reality, this does not often happen unless women constituents and members have organized themselves to demand better representation or women step up to leadership positions or men representatives are sensitized to gender issues. While women have organized into self-help enterprise groups or organized vendors associations and federations for market activities, these groups have not been a consistent presence in environmental governance. Apart from all-women's self-help groups, women are under-represented as leaders of mixed-sex groups and elected positions; reasons for their under-representation include gender norms, family responsibilities, inadequate financing for campaigns and political party support, and sometimes violence against women. Even when women do become elected leaders or representatives, they are often expected, unfairly, to assume responsibility for gender issues, understand the needs of diverse women and act as gender experts simply because they are women. Elected women leaders are often more likely to be elites or those who represent dominant societal interests and cannot legitimately speak as representatives of poorer women. Women leaders often face gender stereotypes, (e.g. assumptions that women are less logical and more emotional than men), or expectations that they will or should leave their positions when they start families.

Box 6: Local Organizations Representing Women in Environmental Governance

Natural Resource Management Committees or Associations and Women's Subgroups. These may be traditional groups for collective management of common property resources or may be externally catalyzed by projects for the management of natural resources. They are mainly oriented toward carrying out soil and water conservation measures, reforestation and forest conservation, training, and conflict resolution and may have specific functions like water users committees, forest protection committees, fodder development committees, or seed distribution committees.

Producer or Trader Associations and Cooperatives are businesses which are owned and often managed by producers and traders to transform, package, distribute, and market their goods or services. They can focus on crops, livestock, fish, value-added food products or handicrafts. In urban areas and at the national level, chambers of commerce and value chain cluster groups provide service to entrepreneur members.

Demonstration farmer groups are formed to promote learning about production technologies or to contribute to the development of innovations.

Self-help groups are voluntary associations of ten to 20 members, typically from among the poor, who use mutual help to solve common problems. A variant of the self-help group are rotating savings and credit associations in which small groups of individuals, regularly contributes funds which are then lent to members in rotation.

Indigenous people organizations and federations are of varying sizes and scales are entities which promote social and economic development, as well as cultural identity. Women can be involved as general members or in parallel subgroups.

Women's subgroups in village development associations are vehicles for mobilizing local resources, especially labor, for projects such as the construction of bridges and community halls, renovation of school buildings and health centers, digging and maintenance of earthen roads, irrigation, soil conservation works, and the provision of piped water.

Adapted from: World Bank. 2009. Gender in Agriculture Sourcebook, World Bank, Washington, DC

While women's numbers are increasing for those elected to local government and environmental decision-making bodies, their presence in national government and international fora is still quite low. Across countries, the total women's representation was 17 percent of all parliamentarians, 14 percent of ministers, and 7 percent as heads of government in 2006⁴¹. At the national level, there are many issues competing for their attention and the extent of environmental expertise is low in many countries. At these levels, there is weak capacity among men and women representatives to bring relevant gender concepts to bear on national environmental governance and also be able to effectively represent these linkages in international environmental diplomacy.

c. Resilience Strategies

Climate change both exacerbates existing vulnerabilities and creates new ones. Some of the main gender-related costs of environmental degradation induced by climate change are increasing workloads for women, disease and death rates, and displacement.⁴² Households in arid, mountainous, low-lying and coastal areas are long accustomed to changes such as scarcities and surpluses of water, declining soil fertility and saline intrusion. Households with long histories in

⁴¹ Inter-Parliamentary Union. 2006. Women in Politics: 60 Years in Retrospect. Data Sheet No. 4, IPU, Geneva.

⁴² Lambrou, Y. 2005. Gender Perspectives on the Conventions: Biodiversity, Climate Change and Desertification. FAO, Rome. (Available from: www.fao.org/sd/dim_pe1/pe1_050301a1_en.htm)

these areas have survived if the rate of change is not too great or long-lasting and if migration is an option. However, more recent poor migrants have had greater difficulty in coping and have contributed to further environmental degradation in their new location. One key to survival has been the use of gender-based resilience strategies, including women's and men's traditional knowledge and skills. Resilience strategies are particularly critical for the poorest communities and households, including women-headed households and the landless. Gender and other social variables influence people's abilities to adapt to climate change. However, it appears that at the international and national level, gender blindness is widespread and many mistakenly assume that climate change mitigation and adaptation strategies and co-benefits are gender-neutral.

Natural disasters, desertification and conflicts are expected to be exacerbated by climate change. The extreme weather effects of climate change, such as flooding, landslides, and storms, often affect women and men differently, depending on the means at the disposal of each to ensure their own safety and to re-establish their lives after disasters. Between 2004 and 2006, 70 percent of natural disasters occurred where the majority of the world's most vulnerable populations reside — Asia, the Pacific region, Africa and the Middle East.⁴³ The challenges from repeated natural disasters disproportionately affect Bangladesh, China, the Philippines, Vietnam, Ethiopia, Iran, and India.⁴⁴ One-third of the world's populations are particularly vulnerable to rising sea levels because they live within 60 miles of a shoreline.⁴⁵ Ninety-six percent of all deaths from natural disasters occur in developing countries.⁴⁶ Women are up to 14 times more likely than men to die from natural disasters.⁴⁷ Desertification alone has directly affected over 250 million people and put another one billion people at risk in over one hundred countries, including many of the world's poorest, most marginalized, and politically weak citizens.⁴⁸ Water wars have long been part of history and are expected to increase as water becomes more degraded or scarce.

Migration, including voluntary and forced migration, is expected to increase with climate change. About half of all types of migrants are women.⁴⁹ At least 144 million people per year have been estimated to be displaced, either temporarily or permanently, by natural disasters.⁵⁰ In 1998, there were an estimated ten million environmental migrants, who moved internally within their

⁴³ International Federation of Red Cross and Red Crescent Societies (IFRC). 2008. World Disasters Report (2008). IFRC, Geneva.

⁴⁴ Ibid.

⁴⁵ The Lancet and University College of London Institute for Global Health Commission. 2009. Managing the Health Effects of Climate Change. The Lancet, London and University College, London; International Institute for Environment and Development. 2007. Climate Change: Study Maps Those at Greatest Risk From Cyclones and Rising Seas. IIED, London; Intergovernmental Panel on Climate Change (IPCC). 2008. Climate Change and Water: IPCC Technical Paper VI. IPCC, Geneva.

⁴⁶ International Federation of The Red Cross And Red Crescent Societies. 1999. World Disasters Report 20. International Federation of The Red Cross And Red Crescent Societies, Geneva.

⁴⁷ Neumayer, E. and T. Plumper (authors). 2007. The Gendered Nature of Natural Disasters: The Impact of Catastrophic Events on the Gender Gap in Life Expectancy, 1981-2002. London School of Economics and Political Science, London, with University of Essex, Essex and Max-Planck Institute of Economics, Munich; Peterson K. 2007. Reaching out to Women when Disaster Strikes: Soroptomist White Paper. Soroptomist International of the Americas, Philadelphia.

⁴⁸ United Nations Convention to Combat Desertification (UNCCD). Fact Sheet 1: An Introduction to the United Nations Convention to Combat Desertification. UNCCD Secretariat, Bonn. (www.unccd.int)

⁴⁹ Zlotnick, H. 2003. The Global Dimension of Female Migration. In: Migration Policy Institute. Special Source Issue: Women and Migration. March 2003. Migration Information Source. Migration Policy Institute, Washington, DC. (Available from: www.migrationinformation.org)

⁵⁰ Federation of The Red Cross And Red Crescent Societies. 1999. World Disasters Report 20. International Federation of The Red Cross And Red Crescent Societies, Geneva.

country or internationally and the 2010 projection has been expected to be 50 million.^{51,52,53} Conflicts have displaced an estimated 35 million people worldwide⁵⁴ and the majority are women and children.⁵⁵ Migrating women and children are often subjected to a horrifying array of misfortune including disease, rape and trauma and can face social disapproval and isolation if and when they are able to return to their homes. When women are left behind by husbands who are environmental migrants, the gender division of labor dramatically shifts within households and fields, further increasing women's workload and changing gender relations. The wives of men who leave Northeastern Brazil during droughts are known as "widows of drought."⁵⁶

Gender Differences in Vulnerabilities and Resilience Strategies

- **Food, Asset and Livelihood Security.** Climate change requires adaptation of agricultural practices and can reduce food security. Opportunities and constraints on such adaptation differ for men and women. There are gender differences in the traditional knowledge that rural people learn about managing natural resources, food crops and animals, and water. For example, gender relations influence the differences in the landscape niches used by men and women and in many areas, their knowledge is different with respect to the location and uses of wild plants. Women are more likely to be allocated poor quality lands, as well as those subject to flooding.

Besides being the world's main producers of the world's staple crops (rice, wheat, maize) through irrigated and rain-fed cultivation,⁵⁷ poor women help their families survive by providing daily water and collecting wood and fodder, supplemented by the provision of wild foods and medicines from inland and coastal areas. Women have considerable knowledge about water resources, including quality and reliability, restrictions and acceptable storage methods, and they are key to the success of water resources development and irrigation policies and programs. Without secure access to private or common land, water resources and capital, poor women producers and collectors are particularly vulnerable to climate change. If women need to spend increased time on collection tasks due to climate change, agricultural productivity and food security will decline. In Africa, estimates regarding the proportion of women who are expected to be affected by climate-related crop changes range from 73 percent in the Congo to 48 percent in Burkina Faso.⁵⁸

⁵¹ In 1985, El-Hinnawi identified a new class of persons known as "environmental refugees." He defined environmental refugees as "those people who have been forced to leave their traditional habitat, temporarily or permanently, because of a marked environmental disruption (natural and/or triggered by people) that jeopardized their existence and/or seriously affected the quality of their life." Cited in: Keane, D. 2004. Environmental Causes and Consequences of Migration: A Search for the Meaning of Environmental Refugees. Georgetown International Environmental Law Review. Winter 2004. Georgetown University, Washington, DC.

⁵² Jacobson, J. 1988. Environmental Refugees: A Yardstick of Habitability. WorldWatch Paper No. 86. World Watch Institute, Washington, DC.

⁵³ Myers, N. (2005) Environmental Refugees: An Emergent Security Issue, Organisation for Security and Cooperation in Europe. OSCE, Vienna. (www.osce.org/documents/eea/2005/05/14488_en.pdf)

⁵⁴ US Committee for Refugees. 2003. World Refugee Survey 2003. US Committee for Refugees, Washington, DC.

⁵⁵ Forbes Martin, S. and J.Tirman (eds.) 2009. Women, Migration and Conflict: Breaking a Deadly Cycle. Springer, New York.

⁵⁶ Branco, A.M. 2000. Women of the Drought: Struggle and Visibiity in the Face of a Disaster Situation. Editora Universitara, Jollo Pessoa.

⁵⁷ World Bank. 2009. Gender in Agriculture Sourcebook. World Bank, Washington, DC.

⁵⁸ International Union for Conservation of Nature (IUCN). 2009. Gender and Climate Change Manual. IUCN, Gland.

Climate change and natural disasters such as tsunamis put land, property and valuables at risk and there are insufficient insurance options, particularly for the poor. Rural women also have less access to and less reliable employment than men, with work available principally in the agricultural sector, so that any reduction in agriculture is likely to further limit their ability to earn employment income. More women than men have home-based enterprises and these are likely to be disrupted in the event of natural disasters.

- **Workloads.** The demand on women's labor for household food production and domestic tasks results in "time poverty" that constrains their participation in income earning, education, and governance activities⁵⁹ and limits their ability to adapt to climate change. In Africa, women are responsible for 70 per cent of food production, 50 per cent of domestic food storage, 100 per cent of food processing, 50 per cent of animal husbandry and 60 per cent of agricultural marketing. On average, water and fuelwood trips can take up to five hours per day; in arid, wood-scarce parts of Africa, the time needed is eight hours per day.⁶⁰ Head loads of fuelwood average about 20 kilograms per load.⁶¹ It has been calculated that in South Africa alone, women collectively walk the equivalent distance of 16 times to the moon and back per day gathering water for families.⁶² Women and female children spend more than ten million person-years carrying water from distant sources every year.⁶³ Shortages of firewood or other biomass due to climate change-related floods or drought will add to women's workload, as will greater difficulty with water collection. The economic value of women's unpaid labor for these collection tasks is enormous.
- **Health and Safety.** The health impacts of climate change are wide-ranging and appear to be more significant for women than men. Because of their roles in ensuring the household water supply and other domestic chores, women are more exposed to diseases such as diarrhea and cholera. It is expected that as temperatures rise, diseases such as these are also expected to increase in prevalence. In some regions, the estimated risk of diarrhea will be up to ten percent higher by 2030, and temperature increases of two to three degrees Celsius may increase the risk of malaria by three to five percent.⁶⁴ Reduced rainfall in India has been more strongly associated with deaths among girls than boys.⁶⁵ In areas with limited access to

⁵⁹ Blackden, Mark and Quentin Woden (eds). 2006. *Gender, Time use and Poverty in Sub-Saharan Africa*. World Bank.

⁶⁰ Estimates of fuelwood collection time vary widely but were estimated to be an average of 2.5 hours per day, globally, by a World Bank Independent Evaluation Group Report (2008). *The Welfare Impact of Rural Electrification: A Reassessment of Costs and Benefits*. The World Bank, Washington, DC. Estimates for water collection time also vary but are two hours or more in drier regions (UNDP. 2006 *Human Development Report 2006, Beyond Scarcity: Power, Poverty and the Global Water Crisis*. UNDP, New York).

⁶¹ Estimates vary by country and by product carried. For water, both vessel weight (plastic or earthen jug) need to be taken into account. The 15-liter average volume is cited frequently, e.g. For wood, Keith Openshaw's survey found headloads ranging in weight from 20 to 26 kilograms (Annex III in FAO. 1983. *Wood Fuel Surveys*. FAO, Rome).

⁶² Barlow, M. and T. Clark 2002. *Water Apartheid*. *The Nation*, Aug. 15, 2002.

⁶³ Toepfer, K. 1999. Remarks for World Water Day, March 22, 1999. Joint News Release for UNEP and United Nations University.

⁶⁴ World Health Organization (WHO). 2003. *Climate Change and Human Health: Risks and Responses*. WHO, Geneva.

⁶⁵ United Nations Development Programme (UNDP). 2007. *Human Development Report (2007)*. UNDP, New York.

water, blindness from trachoma is common; trachoma-related blindness is two to four times higher in women than men.⁶⁶

- **Access to Services, Planning Activities and Incentives.** Women have had less access than men to the information, technology and practices that use water and fuel more efficiently and relieve transportation challenges (e.g bicycles, carts, motor vehicles), a critical problem in times of crisis. In many places, women still lack essential disaster survival skills due to culturally conservative gender norms. In societies with a high degree of sex-segregation, women's spaces have sometimes been situated in less safe locations in times of disaster.⁶⁷ Despite their knowledge about coping with disasters and climate change, women have not consistently been included in planning activities related to disaster preparedness, post-disaster recovery and climate change adaptation.⁶⁸ Further, new incentives for adopting sustainable technologies and practices do not yet have clear rules for the distribution of benefits at the community level, including gender-equitable distributions, and it is not clear if women and women-headed households will gain a fair share of these new resources.

⁶⁶ Courtright, P. and S.K. West. 2004. Contribution of Sex-linked Biology and Gender Roles to Disparities with Trachoma. International Conference on Women and Infectious Diseases, Atlanta, GA, February 27–28, 2004.

⁶⁷ Oxfam International. 2005. The Tsumani's Impact on Women. Oxfam Briefing Note. Oxfam, UK.

⁶⁸ Enarson, E. 2000. Gender and Natural Disasters. InFocus Programme on Crisis Response and Reconstruction. Working Paper No. 1. ILO, Rome.; United Nations Development Programme (UNDP). nd. Resource Guide on Gender and Climate Change. UNDP, New York; Hunter, L. M. and E. David. 2009. Climate Change and Migration: Considering the Gender Dimensions. IBS Population Program Working Paper (November 2009). University of Colorado, Boulder.

5. Recommendations for the New Environment Strategy

a. Thematic Recommendations

Expand Women's Resource Access

1. **Expand women's opportunities to own land and gain access to business development support services for environmentally-friendly enterprises.** Ensure streamlined and decentralized titling procedures, and access to inputs such as labor, credit, extension services, market information, technologies, planting material, and fertilizers. Alternative energy, solar system, improved cookstoves and water conservation technology sales and maintenance enterprises are particularly promising for women entrepreneurs. Larger scale green enterprises can provide non-traditional employment opportunities for larger numbers of women.⁶⁹
2. **Formalize sustainable usufruct rights for natural resources on common property and publicly-owned lands for both women and men.** These rights are related to plants (i.e. collecting, cutting, planting, managing), animal hunting, as well as riverine and coastal fishing and gleaning rights. Where possible, women's rights to resources and to representation in community resource management bodies, within a community rights framework, should be spelled out in legal reforms at the national level.
3. **Expand men's and women's involvement in reducing exposure to environmental hazards at the local level.** To reduce family exposure to indoor air pollution, drinkable water and hygienic practices for sanitation, both women and men need access to information, new technologies and credit for technology purchases or construction. For community-level water and air pollution, both men and women need to be involved in hazard monitoring, as well as planning decisions about industrial development.

Expand Women's Access to Environmental Governance

1. **Strengthen gender mainstreaming efforts at the national policy level** through support to linkage and capacity development activities among environment and women's ministries, and specialized bodies such as those working on climate change as part of UNFCCC processes, especially the NAPA, Climate Investment Funds (CIF), PPCR, REDD etc. Ensure participation of women's organization and NGO participation in the fora and decision making bodies.
2. **Improve women's participation** at national, regional and local levels by including representatives from a range of women's organizations to environmental governance bodies and processes. **Build capacity** to help individual women, women leaders, women's organization and gender-focused NGOs become more effective participants. **Reduce logistical barriers to women's participation** by convenient meeting locations, schedules and

⁶⁹ Stevens, C. 2009. Green Jobs and Women Workers: Employment, Equity, Equality. Draft Report. International Labour Foundation for Sustainable Development (Sustainlabour), Madrid.

transport; overcoming language barriers; and awareness and support of men in these activities.

3. **Expand women's involvement in demand-side accountability** mechanisms for environmental governance (e.g. gender audits; citizen report cards). For environmental projects engaged in environmental governance, there is a need to balance men's and women's representation in bodies involved in information dissemination, procurement, resource expenditures and benefit distribution.
4. **Quotas for women's representation are relevant in some situations but need to be coupled with gender training to ensure men's support.** Quotas are important for creating the necessary space in many settings for the participation of women in environmental governance. To counter resistance from men, gender training can be helpful to demonstrate the value of inclusion of community diversity and also for enhancing women's capacity to be effective and confident participants.

Strengthen and Expand Resilience Strategies for Women and Women-Headed Households

1. **Expand women's opportunities and build capacity to participate in disaster planning and recovery governance activities.** Women's participation in disaster planning has helped to provide a more relevant array of goods and services, as well as a more equitable distribution of goods and services.⁷⁰ Women can make important contributions to climate change adaptation and disaster preparedness planning by working with national and local partners to incorporate women's knowledge, experience and priorities into decision-making and preparations. Women need equitable access to information and capacity building about resilience strategies used elsewhere. It is especially important to ensure that disaster warnings are provided using channels and media that reach women as well as men.
2. **Expand the availability and affordability of pro-poor, accessible insurance products and social protection measures.** Considerable global attention has been devoted to securing land rights but far less attention has been given to the development of insurance product lines for land, crops and other property by financial service providers. Gender-equitable titling programs, combined with gender-equitable credit and insurance options are needed, that women as well as men will be able to reclaim prior assets in the face of disaster or climate-related disruptions.
3. **Ensure gender-equitable access to community-based REDD and carbon markets incentives and benefits.** Women and men, supported by women's organizations, NGOs, government agencies need to receive information about various opportunities for climate-related funding. In addition, as legal and contractual norms are being developed, at the global and national

⁷⁰ Hannan, C. 2002. Mainstreaming gender perspectives in environmental management and mitigation of natural disasters. Presented at the Roundtable Panel and Discussion organized by The United Nations Division for the Advancement of Women and The NGO Committee on the Status of Women. United Nations, New York.

levels, attention is needed to the distributional questions for benefits and costs, particularly those affecting the activities and well-being of women and men.

4. **Incorporate gender analysis into vulnerability assessment tools.** Consistent use of gender and social analyses can help to capture useful traditional gender-specific knowledge and environmental management practices, as well as improve the ability of climate or disaster plans to address gender differences in needs and priorities. Gender analysis should be a routine part of Vulnerability Assessment tools promoted by the WBG. Both women’s and men’s best practices for resilience strategies should be disseminated more widely or exchanged directly by those in similar environments who are affected by similar problems.

Table 3: Shortlist of Possible Gender Indicators for the New Environment Strategy

Gender Issue	Indicator
Outcome Indicator for Access to Resources	<ul style="list-style-type: none"> • Changes in resource ownership or user access for project clients, disaggregated by sex or sex of head of client households (e.g av. no. of hectares of land owned; water source ownership; livestock ownership),⁷¹
Outcome Indicator for Access to Resources and Resilience Strategies	<ul style="list-style-type: none"> • Changes in access to services and facilities, disaggregated by male-headed and female-headed households (e.g irrigation, electrification, water supply, public and private sanitation, transportation) or men and women clients /beneficiaries.
Outcome Indicator for Access to Resources	<ul style="list-style-type: none"> • Changes in income from improved resource management practices (e.g fishing, aquaculture, forest-related products), disaggregated by male-headed and female-headed households or men and women clients/beneficiaries.
Outcome Indicator for Access to Environmental Governance	<ul style="list-style-type: none"> • Percentage of women and men who are active members of on-going environmental decision-making bodies at the national, regional and local levels; and for project or program activities.

b. Operational Recommendations

1. Establish gender targets, management oversight and gender expertise in the Environment Department and identify a gender focal point. It is very important to assign a qualified gender focal point with gender and environment expertise, and consider adding one or more dedicated social and gender staff members to the Environment Department, who have the necessary expertise to provide monitoring oversight and technical support to task teams. Another option is to establish expert SWAT teams consisting of Bank and consultant experts in gender and environment at global, regional and local levels to provide technical support.⁷² **Provide gender and environment training to staff.** The gender training should be tailored by sub-sectors and WBG operational realities. **Increase budget allocations for gender mainstreaming assistance** for the design and implementation of environmental projects.

⁷¹ For example: Asset (average number of hectares of land owned; water source ownership; livestock ownership) ratio of number of irrigated farms managed by women and men; ratio of number of men and women with access to credit based on land rights; number of women with individual or joint titles; number of lawsuits concerning women’s access to land under new Land Act, water source ownership, livestock ownership and other property ownership)

⁷² The SWAT team approach has been successfully applied by the Bank in the water sector.

2. Develop a Guidance Note on mainstreaming gender equality in environmental programming by documenting lessons/good practices from the WBG's and other agencies environment portfolio.

3. Utilize gender analysis to inform project design. Gender and social analysis is needed during project preparation and appraisal, usually in the context of environmental and social impact assessment. The project design would incorporate actions to address gender-related constraints, risks or needs identified and include adequate budget for the necessary gender-responsive activities.

4. Make use of gender-informed monitoring, evaluation, supervision and reporting to ensure that proposed actions are implemented and monitor progress. All beneficiary data needs to be sex-disaggregated and where relevant, gender indicators developed to measure progress toward gender equality. The gender-related activities and gender-informed monitoring and evaluation requirements need to be spelled out in gender-responsive project operational manuals and TORs for baseline studies. Supervision aid memoires, ISRs and midterm reviews need to include gender progress and any difficulties encountered in implementing gender and environment related activities.

5. Improve the environmentally related sex-disaggregated information and data on gender relations, as well as important local gender and environmental differences in analytical work.

6. Sex-disaggregated indicators and targets for WBG environmental programming should focus on the three key changes in women's status (women's access to resources, access to environmental governance, and adoption of resilience strategies) (Table 1). Annex 2 includes other project-level options for gender-related environmental indicators.

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Annex 2: Options for Gender-responsive Environmental Indicators⁷³

1. Gender-related Operational Changes for Environmental Portfolios and Projects

- Formulation and approval of gender strategies for the environmental sub-sector at international, national, regional, and local levels
- Changes in collection and use of gender data in project planning and/or operations
- Changes in number of measurable gender-sensitive targets formulated in annual work plans.
- Changes in adoption and implementation of strategies involving female-headed households.
- Change in the gender-sensitivity of evaluations and annual and semiannual progress reports, including gender-sensitive indicators and monitoring.
- Number of gender mainstreaming lessons learned fed back into program/project operations.
- Changes in percentage of service-providing staff that are aware of, and implementing program/project gender strategies.
- Changes in percentage of women environmental service providers.
- Number and percentage of women and men service providers receiving training on topics relevant to environmental management or governance (i.e. technical, social, political, managerial, financing, and hygiene topics]
- Change in service provider knowledge and awareness related to environmental management or governance topics, disaggregated by sex.
- Changes in gender sensitivity of service providers involved in extension methodologies and technology promotion.
- Community satisfaction (disaggregated by gender, class, caste, etc.) with project and program processes and implementers.

2. Cross-cutting Gender Changes

- Number and percentage of women and men clients receiving training on topics relevant to environmental management or governance (i.e. technical, social, political, managerial, financing, and hygiene topics]
- Changes in the frequency of representations and mentions of women and men in training and awareness-raising materials.
- Change in men's and women's knowledge and awareness related to environmental management or governance topics, for clients or service providers.
- Change in men's and women's perceptions about the importance of conservation and resource management objectives.
- Changes in adoption of recommended practices and technologies, disaggregated by sex.

⁷³ Adapted from: World Bank. 2009. Gender in Agriculture Sourcebook. World Bank, Washington, DC; Aguilar, L. 2007, Presentation at WEDO-CWWL Roundtable, September 21: How a Changing Climate Impacts Women. WEDO, New York. Food and Agriculture Organization (FAO). 2007. People-Centred Climate Change Adaptation: Integrating Gender Issues. FAO, Rome.

- Changes in relevant dimensions of well-being, disaggregated by gender and wealth group (e.g food and other products, household income, labor and other costs for water conveyance, water quality for drinking, and water quantity for hygiene).
- Changes in percentages of men and women with increased awareness of women's rights (e.g land).

3. Resource Rights

- Changes in asset ownership for project clients, disaggregated by sex or sex of head of household
(i.e. Average number of hectares of land owned; ratio of number of irrigated farms managed by women and men; ratio of number of men and women with access to credit based on land rights; number of women with individual or joint titles; number of lawsuits concerning women's access to land under new Land Act, water source ownership, livestock ownership and other property ownership).
- Changes in other asset rights for percentages of men and women project clients (or couple- and women-headed households). (i.e. security of rights, land titling procedures, common property rights, rights to higher value lands, access to irrigation schemes, rights to potable water, access to extension and business services, access to inputs, access to training, access to markets and market information, access to credit products)
- Changes in asset productivity (women-owned, men-owned) (i.e. crops, forests and rangelands, coastal areas)
- Changes in behaviors, disaggregated by sex (e.g service –seeking behaviors, land use practices, adoption of technology, involvement in production and marketing groups)
- Changes related to new green incentives, disaggregated by sex of recipient, owner or user
 - Number of households headed by men, women, or couples benefiting from intellectual property rights
 - Number of women and men receiving environmental services payments for protecting watersheds or areas of high biodiversity
 - Percentage of men and women owning and using energy-efficient technologies or low-carbon practices
- Time-Related Changes:
 - Change in the number of hours of labor required by men and women with the introduction of technology or inputs (e.g irrigation, equipment, fertilizer).
 - Changes in average time taken daily to collect natural resources, disaggregated by sex and age (e.g cooking biomass, water, medicinal and wild food)
 - Changes in the number of men' and women's productive hours spent earning income from value-added activities for agriculture, fisheries or forest products.

- Reduction of women's workload as a result of introduced practices or new technologies.
- Changes in the distribution of the workload between men and women in households, disaggregated by age.
- Changes for enterprises and employment, per year, disaggregated by sex
 - Number of newly registered businesses started per year, disaggregated by sex of owner.
 - Percentage of new sustainable natural resource-producing or consuming enterprises initiated by men and women.
 - Percentage of green businesses based on new technologies owned by women and by men.
 - Participation in training in specific green construction skills, disaggregated by gender.
 - Number of women and men with employment in environmentally related jobs.
 - New and total employment generated by new natural resource enterprises.
 - Differences in wage and employment conditions, if any, between women and other disadvantaged groups, and men for positions of comparable content and responsibility.
- Income-related changes by male-headed and women-headed households or men and women:
 - Income changes from specific resource management practices (e.g fishing, aquaculture, forest-related products).
 - Income changes from men- and women-controlled crops.
 - Income changes for women from homestead gardening
 - Proportion of annual household income (or consumption) derived from a specific type of resource management.
 - Proportion of producers, engaged in environmentally destructive activities, who have become involved with new environmentally friendly livelihood activities.
 - Increased women's control over income from sales of natural resource products.
 - Changes in the sex composition of market traders per year
 - Changes in environmentally friendly investments, disaggregated by sex.
- Changes in the satisfaction of community members, disaggregated by sex:
 - Satisfaction levels with resource access after management or governance decisions.
 - Satisfaction levels with results of adopting of new practices, livelihood options or technology.
 - Satisfaction with type, quality and level of services (e.g extension, training, business).
 - Satisfaction with changes in justice procedures and outcomes (e.g total of disputes resolved in favor of women's vs. men's land rights).
- Changes in gender-related norms and conflicts (household or community level)
 - Changes in the annual number of conflicts over women-controlled natural resources.
 - Changes in norms regarding women's access, control and roles (e.g legal norms about land)

4. Governance

a. Environmental Decision-Making Bodies

- Percentage and number of women and men consulted during program and project planning.
- Percentage of women and men who are active participants in sessions to develop specific resource management or conservation plans (e.g forest management plans, protected area plans, watershed management plans, coastal management plans).
- Percentage of women and men who are active members of on-going environmental decision-making bodies at local, provincial and national levels (e.g resource management committees including water user associations, producer and/or marketing associations, indigenous peoples organizations or federations)
- Percentage of women and men in leadership positions in natural resource management groups.
- Percentage of women and men holding treasurer positions and/or bank account signatory roles in natural resource management groups.
- Number of women and men trained in group and committee operations, including budgets.

b. Resource Management Planning Processes & Implementation

- Number of women and men actively involved in management (i.e. protection or conservation or production) of protected areas or reserves based on a management framework or plan
- Compliance, by sex, with access rules set up by environmental governance committee.
- Compliance, by sex, with user and maintenance fees set up by governance committee.

c. Environmental Policy Development and Implementation

- Participation of gender specialists and organizations in environmental policy development or other policies affecting women's resource rights.
- Number and depth of gender analyses used to evaluate policy options.
- Number and type of policies approved which increase the security of women's resource rights (e.g Land Acts which address women's inheritance and ownership of land) or their access to governance.
- Percentage of budgets earmarked and spent on activities benefiting women.
- Numbers of men and women reached by information campaigns on women's improved rights.
- Percentage of men and women involved in participatory M & E system for policy implementation.
- Percentages of staff in key institutions with gender mainstreaming capacities for implementation.
- Impacts of policies/decisions on men's and women's access to resources and governance and their relative social status.

5. Resilience Strategies

a. Resilience Skills and Resources

- Percentage and number of men and women owning and using energy-efficient technologies (e.g low-fuel stoves, pumps, new forms of transport, and use of ICT).
- Percentage and number of men and women using renewable energy technologies.
- Percentage and number of men and women involved in sustainable forest management
- Percentage and number of women and men with access to insurance packages .

b. Preparedness and Planning for Disasters and Environmental Change

- Number and percentage of women and men receiving disaster preparedness training and assistance (e.g swimming, tree-climbing)
- Percentage of women serving on committees for disaster preparedness or climate change adaptation (i.e. community-based and higher level committees).
- Percentage of women and men receiving regular and emergency weather bulletins.
- Participation of women in climate change–planning institutions, processes, and research as professionals or lay persons.

c. Post-Disaster/Migration Services

- Percentage of women & men actively participating in committees (i.e. distribution, reconstruction).
- Changes in the roles of women and men members in committees. (i.e. distribution, reconstruction).
- Percentage of women and men involved in decision-making regarding levels of local contribution.
- Percentage of aid targeted to the different needs of affected men and women.
- Percentage and number of women and men who received emergency project relief.
- Percentage of women & men receiving livelihood recovery resources (e.g land, water, credit, etc.).
- Percentage of affected women and men with restored/replaced livelihoods.
- Percentage of women and men participating in livelihood training and services.
- Changes in access to services and facilities for couple- and women-headed households (e.g irrigation, electrification, water supply, public and private sanitation, transportation).
- Changes in daily time/distance required to collect natural resources, disaggregated by sex and age.
- Changes in women’s and men’s satisfaction levels with post-disaster resource allocation, management, services and reconstruction (e.g irrigation, potable water).

Annex 3: United Nations Commitments on Gender and Environment

Gender and environment linkages have been specifically addressed in several United Nations conventions and the Millennium Development Goal commitments since the early 1990s (details given in Annex ---). As noted in Agenda 21 and the Rio Declaration (1992 United Nations Conference on Environment and Development/ UNCED), the 1992 Convention on Biological Diversity (CBD)⁷⁴ and the 1995 Convention to Combat Desertification, women make essential economic, social and environmental contributions to environmentally sound management, decision making and sustainable development. Taking women's contributions into account, these agreements recommended more support to expand women's capacities and roles in national, regional and international decision-making.^{75,76, 77,78}

Gender and water linkages have been increasingly highlighted in international water meetings and agreements, including in one of the four principles of the 1992 Dublin Statement on Water and Sustainable Development⁷⁹ and in the Ministerial Declaration of the 2001 International Conference on Freshwater in Bonn.⁸⁰ The Programme of Action from the UN International Conference on Population and Development (Cairo, 1994) and the Plan of Implementation for the World Summit on Sustainable Development (Johannesburg, 2002) encourage women's empowerment for sustainable development, through expanded rights, resources and voice.⁸¹

The Beijing Platform for Action from the 1995 United Nations Fourth World Conference on Women prioritizes advancing women's active involvement in environmental decision-making at all levels, integrating gender concerns and perspectives in policies and programs for sustainable development, and strengthening or establishing mechanisms at the national, regional, and international levels to assess the impact of development and environmental policies on women.⁸² Furthermore, Goal 3 of the eight Millennium Development Goals (2001)

⁷⁴ With support from a variety of bilateral donors and the International Union for the Conservation of Nature and Natural Resources, the Conference of the Parties for the CBD supported the development of a Gender Plan of Action and the elaboration of *Guidelines for Mainstreaming Gender into the National Biodiversity Strategies and Action Plans.*, the establishment of a full-time Gender Programme Officer, and expanded women's participation in the ninth COP meeting.

⁷⁵ Chioma, Filomina. Introduction. In: UNIFEM. Agenda 21: An Easy Reference to Specific Recommendations on Women. UNIFEM, NY. (Available from: www.gdrc.org/gender/a21/agenda1.html)

⁷⁶ Principle 20 of the Rio Declaration and also Chapter 24 and other references in the Agenda 21 document.

⁷⁷ Lambrou, Y. 2005. Gender Perspectives on the Conventions: Biodiversity, Climate Change and Desertification. FAO, Rome. (Available from: www.fao.org/sd/dim_pe1/pe1_050301a1_en.htm)

⁷⁸ As per Lambrou (*Op. cit.*), the Framework Convention on Climate Change (FCCC) does not adopt a gender perspective and does not consider women and men as specific stakeholders in the Convention.

⁷⁹ International Conference on Water and the Environment (ICWE). 1992. The Dublin Statement on Water and Development. ICWE, Dublin.

⁸⁰ International Conference on Freshwater. 2001. The Bonn Recommendations for Action. ICF, Bonn.

⁸¹ International Conference on Population and Development. 1994. Programme of Action for the International Conference on Population and Development. September 5-13, 1994, Cairo. United Nations - ICPD, Cairo; World Summit on Sustainable Development. 2002. Johannesburg Plan of Implementation. August 28 – September 2, 2002, Johannesburg. United Nations – WSSD, Johannesburg.

⁸² Fourth World Conference on Women. 1995 (September) Platform for Action. United Nations, New York. (Available from: www.un.org/womenwatch/daw/beijing/platform/index.html)

focuses attention and development resources on promoting gender equality and empowering women, specifically in the areas of girls' education, women's livelihoods and governance.⁸³

Since the late 1980s, there has been considerable project-related and academic documentation of gender and environment linkages. This social science work builds upon a long history of household and community studies from anthropology and rural sociology, gender and development literature dating to 1970⁸⁴ and gender and agriculture literature in the 1980s. By 1992, the United Nations Environmental Program (UNEP) had compiled more than 200 "success stories" of women's roles in environmental management to support NGO gender recommendations for Agenda 21.⁸⁵

Since that time, the gender literature has expanded to include many more gender analyses which examine the site-specific gender issues which have been relevant to environment project design and implementation. However, gender analyses and mainstreaming are still far from routine or accepted as standard operating procedures. There is also a considerable body of knowledge documenting the impacts of environmental projects on women's status and gender relations and collected sex-disaggregated data about access to productive resources, the adoption of environmentally sustainable practices and decision-making processes. There has been an absence of rigorous studies which compare changes in the bio-physical environment from gender-integrated environmental projects to those which are gender-blind.

⁸³ The indicators for the livelihood and governance aspects of MDG 3 are "Share of women in wage employment in the non-agricultural sectors" and "Proportion of seats held by women in national parliament."

⁸⁴ Boserup, E. 1970. Women's role in economic development. Earthscan, London.

⁸⁵ Martin-Brown, J. 1993. The Greenbook: A Manual to Support Organizing a National Assembly of Women and the Environment. UNEP, New York.

Annex 4: World Bank Environment and Gender Experience

Two WBG strategies outline existing institutional commitments related to gender and environment:

- The 2001 WBG Environment Strategy took a strong pro-poor approach. The 2001 strategy's quality of life objective focused on enhancing livelihoods, primarily through better natural resources management, preventing and reducing environmental health risks related to air, water and sanitation and reducing people's vulnerability to environmental hazards from natural disasters and climate change. The focus on local-level poverty reduction should be retained in the new Environment Strategy, in addition to national level poverty reduction and economic growth, because it provides an important opening for addressing gender inequalities at the household and grassroots level.
- The World Bank Group's commitments to gender equality focus on women's empowerment, via land ownership/access, enterprises and representation. Actions and commitments include the 2001 endorsement of a Gender Strategy (*Integrating Gender into the World Bank's Work: A Strategy for Action*), revisions in 2003 to gender-related policies and procedures for gender integration (i.e. Operational Policy 4.20 and Bank Procedure 4.20). These policies were implemented through gender-related inputs into Country Assistance Strategies (CASs), analytical work and financial support in coordination with client countries and other development partners.
- In 2006, the WBG launched a Gender Action Plan (GAP) for Fiscal Years 2007-2010 (*Gender Equality as Smart Economics*) which emphasized increasing gender integration in the economic sectors.^{86, 87} The Bank Gender Department mobilized GAP resources and allocated \$65 million in grants for mainstreaming gender in the economic sectors. However, the Infrastructure sector received only four percent, and Agriculture and Rural Development (including land) received 11 percent.⁸⁸ More than 64 percent of the initiatives funded by GAP trust funds were carried out in IDA countries and 72 percent of the GAP funds have been spent on IDA country operations or analysis.⁸⁹ In addition, in 2008, the WBG President provided high-level support for six specific commitments by the end of 2010, including gender-responsive actions for the design of at least half of the Bank's rural projects in Africa, as well as actions to help women obtain title to their land as loan collateral and IFC commercial credit lines of at least \$100 million for women entrepreneurs.

⁸⁶ The GAP was developed to advance women's economic empowerment in client countries, targeting sectors where the mainstreaming strategy's track record was weaker, namely, in Agriculture and Rural Development, Economic Policy, Financial Management, Private Sector Development, Public Sector Governance and Infrastructure (referred to as the 'economic sectors' above). See *IDA 15 Mid-term Review, World Bank Group Gender Action Plan: Implementation Status Report, October 2009*.

⁸⁷ Proposal to improve performance on gender and development that draws on the lessons from the implementation of the GAP will be discussed with the Board of Executive Directors before end-FY11.

⁸⁸ GAP Three Year Progress Report, May 2010

⁸⁹ This does not include the Adolescent Girls Initiative (18.5 million) which is implemented in five IDA countries, or strategic regional or cross-country initiatives often benefit both IDA and IBRD countries.

- After a recent Internal Evaluation Group’s evaluation of the Bank’s implementation of the 2001 Gender Strategy between 2002 and 2008, WB Management: (a) developed a Guidance Note on Bank’s Gender Policy (OP4.20), (b) strengthened senior management accountability for Bank performance on gender, (c) enhanced gender monitoring and evaluation, and (d) improved the integration of gender in analytical work (i.e. CASs, gender diagnostics at the country level, gender assessments and other core analytical work).⁹⁰ GAP funds will end in December 2010, but the Gender Department has drafted a GAP Transition Plan (2011-2013) and is mobilizing resources to continue to provide adequate gender integration funding and incentives for enhanced gender integration in WBG activities.

There are plans to strengthen the Results Framework for Gender for IDA 16. It builds upon indicators collected for the Annual Gender Mainstreaming Monitoring Report, or as part of a specific sector strategy or action plan. At the country level (Tier 1), the added indicator will be: Share of women in wage employment in the non-agricultural sector. At Tier 2 (sectoral), IDA investment lending operations approved after July 1, 2009 are expected to capture data on the total number and percentages, disaggregated by sex, of direct beneficiaries.⁹¹ In addition, during the IDA16 replenishment period, IDA management will also track four indicators to measure IDA’s support to gender-based country outcomes (i.e. percentage of IDA CASs informed by country-specific gender diagnostics; percentage of safety nets projects with gender-informed design, monitoring and evaluation to mitigate risk and vulnerability for women and girls; percentage-increase target (set by the World Bank Sector) in infrastructure, agriculture and rural development operations with gender-informed design, monitoring and evaluation; and percentage of health projects that address high fertility, maternal mortality and high adolescent fertility.

Gender Analytical Work: Learning from Experience. As noted in the World Bank’s 2002 Gender Strategy⁹², one of the Bank’s most important comparative advantages “lies in analytical work and dialogue with client countries about economic and sectoral policies, based on its global expertise”. However, lessons learned and best practices from gender mainstreaming in environmental activities have not yet been adequately captured in the analytical activities and operations.

The primary locus for gender analysis at the World Bank was to be the country-led Country Gender Assessments, which were intended to identify “critical areas in which gender-responsive actions are likely to enhance growth, poverty reduction, and well-being in a particular country context, ” to inform the Country Assistance Strategy (CAS). The methods for carrying out these

⁹⁰ Independent Evaluations Group. 2010. Gender and Development: An Evaluation of World Bank Support, 2002-2008. The World Bank, Washington, DC.

⁹¹ The Social Development Network (SDN) has defined more extensive sets of sector-specific targets and indicators for gender-coverage. SDN will screen all IDA16 projects to determine whether any sex-differentiated impact is expected. For most operations gender analysis will be part of the social assessment which will provide the basis for gender-responsive design. Gender-responsive design may not be warranted when the project has minimal engagement with citizens (e.g. the replacement of electricity generation equipment). The project documents would indicate whether gender analysis has taken place and, if a gender-responsive design has been found to be warranted, will report on this analysis.

⁹² World Bank. 2002. Integrating Gender into the World Bank’s Work: A Strategy for Action. World Bank, Washington, DC.

assessments were intended to be flexible (i.e. stand-alone documents or sections of country poverty or economic analyses, original analyses or work produced by collaboratively with others) and updated about once every five years. In reality, many of these have been quite general documents with a strong economic focus which have informed some of the Country Assistance Strategies. However, country assessments have not been completed for all borrower countries, few assessments have included enough specificity to inform for environmental and sectoral program and project planning, and few updates have been conducted.

In preparation for the Sixteenth Tranche of IDA funding, new steps will be taken to ensure closer adherence to Operational Policy 4.20 which specifies that all CASs should draw from and discuss findings from periodical gender assessments. The Gender Department issued a Guidance Note on the Bank's gender policy, and plans to provide training on how to mainstream gender issues in CAS work, and enhance its efforts to monitor the adequacy of gender analysis informing CASs.

The WBG is focusing the 2012 World Development Report (WDR) on Gender and Development. International Development Association (IDA) funded programs are increasing commitments to improve the effectiveness of gender mainstreaming to achieve the Millennium Development Goals.⁹³ During the sixteenth IDA replenishment (IDA16), WBG's gender-related efforts will focus on four areas: (a) articulating and disseminating the business case for gender mainstreaming around the 2012 WDR on development and gender; (b) scaling up gender mainstreaming and efforts on gender-related MDGs including an action plan; (c) strengthening the results framework for gender; and (d) intensifying capacity-building efforts. WBG management has added a sex disaggregated labor force participation indicator at the country-level where data are available in IDA countries and added core sector indicators to measure WBG support to gender-responsive outcomes in IDA countries. There have been improvements in performance reporting, including the review of the Annual Gender Mainstreaming Progress Report, to inform gender integration oversight by the Managing Directors.

Despite the formal policy and institutional commitments, the overall record for gender integration at the WBG has been inconsistent. There are a number of reasons for this. As noted by the IEG 2009 evaluation and other portfolio review reports,⁹⁴ client demand has been one of the strongest levers for influencing Bank operations and analytical work and there has been low demand for gender mainstreaming interventions from client countries facing many competing priorities for constrained finances. Gender analyses are most often incorporated in social and environmental assessments that are conducted by the client countries during project preparation and appraisal, particularly when social and environmental safeguard policies are triggered. While there has been considerable attention to project appraisal analyses. However, there has been less emphasis on supervision regarding these issues during project implementation, supervision and reporting on monitoring indicators for projects. There has also been underinvestment in

⁹³ International Development Association (IDA). 2010. Special Themes for IDA16. IDA Resource Mobilization Department (CFPIR), IDA, Washington, DC.

⁹⁴ World Bank (2010) Making Infrastructure Work for Women and Men: A Fifteen Year Portfolio Review of World Bank Infrastructure Projects

building the capacity of clients to monitor results.⁹⁵ Across the Bank, there are too few social scientists and gender experts for design and supervision tasks, they are not always able to respond to unpredictable demands for their services and insufficient project funds are devoted to their on-going involvement with projects.⁹⁶

Below is a brief description of the four gender integration methods used to conduct the gender review of the projects⁹⁷. Each provides a useful tool for integrating gender into the design, delivery, or performance monitoring and evaluation of projects.

- *Consultation* refers to a public meeting held with local women and men directly affected by the project during preparation and appraisal phases. In countries where women are segregated from men who are not close kinsmen, the preferred approach is to conduct consultations separately with women and female facilitators because women are unlikely to speak freely if men are present.
- *Gender analysis* is conducted in the context of social and/or environmental or other assessments, or reported as separate studies. In a few cases, projects were informed by existing analysis from country gender assessments or other analytic work.
- *Gender activities* are either gender-responsive or specific gender targeted activities designed in the projects to reduce potential gender based inequalities in access to services, risks, benefits and opportunities, and in some cases, to empower women directly to better their lives.
- *Monitoring and evaluation* (M&E) requires early planning to include gender responsive indicators to monitor progress towards gender equality of benefits in project outcomes and to collect gender-disaggregated data.

The ENRM projects were sorted by their dominant theme coding (e.g. biodiversity). Overall, there are still very few ENRM projects with any level of gender integration – only 63 out of a total of 444 projects or 14 percent. However, the trend of gender integration in ENRM is increasing and reached 36 percent in 2009. Nearly 40 percent of IDA projects integrated gender while IBRD projects lag in gender integration. Greater progress was made for biodiversity conservation, environmental policies and institutions, water resources management and land administration and management projects. Gender integration progress has been negligible for climate change, pollution management and environmental health and projects categorized as “other” ENRM. Given that the highest number of ENRM projects was categorized with a Climate Change dominant theme, the lack of gender mainstreaming is a concern with respect to sustainability and gender equality.

⁹⁵ World Bank. 2010 (draft). Safeguards and Sustainability Policies in a Changing World: An Independent Evaluation of World Bank Group Experience. World Bank, Washington, DC.

⁹⁶ Staff Interviews.

⁹⁷ This methodology is being used in the SDN for gender desk review of portfolio.

A separate 2009 evaluation of gender mainstreaming for 172 GEF projects (FY02-FY08) confirmed these results as well. Overall, the project areas with the most experience in gender mainstreaming were Biodiversity, Land Management and Multi-Focal Area projects (which included land management activities). For the area of International Waters, there was limited experience with gender mainstreaming. Climate Change had almost no experience. For Persistent Organic Pollutants and Ozone projects, the GEF project samples were too small to be conclusive.

With respect to gender mainstreaming for ENRM projects across the regions, the Africa region has the most ENRM projects with gender mainstreaming elements and South Asia has the fewest projects. AFR and MNA have the highest percentage of projects with gender mainstreaming. Fig. 4 details the source of funding and it indicates that although East Asia and Middle-East and North Africa integrated gender implemented few IDA projects, all of them integrated gender in their analyses and design, and nearly half of IDA projects in Africa included gender. One third of IBRD projects in East Asia integrated gender, while it is negligible in other regions.

The GEF gender review found similar results but explored additional criteria.⁹⁸ About one in five GEF projects had completed a gender analysis (18 percent), included women and men during project consultations (17 percent) or identified gender-responsive project components or activities (21 percent). The only projects adopting gender-responsive monitoring and evaluation were those coded as Biodiversity, Land Management and Multi-Focal Area (multiple sub-sectors) projects. Just a few projects had dedicated budget for gender activities and/or staff but only one of 172 reviewed GEF projects had adopted gender-responsive objectives. To put the ENRM results into a bigger perspective, a similar gender review of WB infrastructure projects, which was drawn from a much larger sample (1,246 projects) over a 15-year period, revealed a similar rate of gender-sensitive consultation (17 percent average for 15 years) but lower rates of adoption for other gender mainstreaming methods. However, the trend is increasing and gender integration in infrastructure reached 39 percent in 2009.⁹⁹

⁹⁸ The reviewed GEF portfolio included mostly UNDP, WBG and UNEP projects with a small number from the other GEF partners. Of the UNDP and the WBG projects reviewed, just over one-third included a gender-responsive action (38 percent and 35 percent, respectively); for UNEP, only 12 percent of their reviewed GEF projects included a gender-responsive action.

⁹⁹ World Bank. 2010). Making infrastructure work for women and men: A fifteen-year portfolio review of World Bank infrastructure projects. Social Development Department, Sustainable Development Network. World Bank, Washington, DC.

Annex 5: Operationalizing Gender Mainstreaming in the 2011 Environmental Strategy

Key Operational Issues

The success of improved gender mainstreaming efforts for the new Environment Strategy will depend upon building upon WBG gender-related assets and overcoming limitations. Assets include existing institutional commitments to gender equality in the form of gender plans and strategies, the Operational Policies and Bank Procedures related to gender and social analysis, social analytical capacities, staff with expertise for gender mainstreaming and some dedicated gender funding. In addition, the Global Environment Facility has articulated strong support for gender mainstreaming and recently reviewed its experiences. In addition to the GEF experiences with gender mainstreaming, there are also useful gender lessons available from water and sanitation projects from infrastructure and some work with indigenous peoples. To aid in mainstreaming, there are several social scientists among the TTLs managing environmental activities and others who are supportive of gender mainstreaming.

Gender Expertise, Interest and Oversight. The structural limitations for gender mainstreaming in other Bank activities also limited attention to gender issues in environmental activities planned and implemented after the first Environment Strategy. First, there has been a lack of sufficient funding for gender-related activities and analyses. Second, there has been an inadequate number of internal gender experts who could provide sector-specific technical assistance; most of the Bank's core gender experts have been involved with analytical work (e.g. Country Gender Assessments or gender initiatives) and were not available or experienced with providing direct technical assistance to economic sector projects. Third, the country-based gender focal points are typically pressed for time and many have lacked gender training.¹⁰⁰ Fourth, gender mainstreaming has been slow unless an individual TTL or country institution had a strong personal interest or professional exposure to, or expertise in gender issues, as well as access to gender experts with sectoral-relevant expertise. While some of these limitations require higher-level reforms, the Environment Department at the WB can make some structural changes.

Analytical Work: Learning from Experience. As noted in the World Bank's 2002 Gender Strategy¹⁰¹, one of the Bank's most important comparative advantages "lies in analytical work and dialogue with client countries about economic and sectoral policies, based on its global expertise." The Gender Strategy envisioned gender dimensions being a more consistent and comprehensive element of the work of the Quality Assurance Group. However, this has not

¹⁰⁰ In 2005, Zuckerman and Qing estimated that a majority of the 115 staff and consultants engaged in gender work were largely untrained Gender Focal Points who were taking on these duties on top of their existing work load. Accounting for far less than one percent since the 1980s, the growth of gender expertise at the Bank has not kept pace with environment staff, which comprised about seven percent of all Bank staff and consultants in 2005. (Zuckerman, E. and W. Qing. 2003. Reforming the World Bank: Will the New Gender Strategy Make a Difference? A Study with China Case Examples. Gender Action, Washington, DC and the Heinrich Böll Foundation, Berlin)

¹⁰¹ World Bank. 2002. Integrating Gender into the World Bank's Work: A Strategy for Action. World Bank, Washington, DC.

always been the case and there are still lessons learned and best practices from gender mainstreaming in environmental activities which have not yet been captured.

The primary locus for gender analysis at the WB was to be the country-directed Country Gender Analyses, which were intended to identify “critical areas in which gender-responsive actions are likely to enhance growth, poverty reduction, and well-being in a particular country context.” The methods for carrying out these assessments was to be flexible (i.e. stand-alone documents or sections of country poverty or economic analyses, original analyses or work produced by collaboratively with others) and updated about once every five years. In reality, many of these have been quite general documents which have informed the Country Assistance Strategies (CAS) but they have not always included enough specificity for environmental and sectoral project planning. In planning for the Sixteenth Tranche of IDA funding, new steps will be taken to ensure closer adherence to Operational Policy 4.20 which specifies that all CASs should draw from and discuss findings from periodical gender assessments. Management plans to: 1) issue and widely disseminate a Guidance Note on the Bank’s gender policy; 2) provide training on how to mainstream gender issues in CAS work, and 3) ask the PREM Gender and Development department to enhance its efforts to monitor the adequacy of gender analysis in CASs.

Project Preparation Analyses and Consultation. Social, gender and environmental assessment is carried out during project preparation and findings included in the design. Key information is also taken from Country Environmental Analysis, Country Social Analysis, Country Gender Assessment and Poverty Assessments. When project-level gender analyses (Box 1) have been conducted, the findings can influence the project design. While some Task Leaders have seen social and gender issues as a fundamental part of how the WBG conducts its business, others view social and gender dimensions as add-ons. The safeguards approach placed more emphasis on project appraisal but key environmental and social/gender concerns get limited supervisory attention during project design, implementation and reporting. There has been a lack of specificity of monitoring indicators; underinvestment in client’s monitoring capacity and poor follow-up during supervision.¹⁰² In host countries and within the Bank, there are too few gender experts who have the relevant technical areas of environmental expertise and are available to provide design and supervision support.

¹⁰² World Bank. 2010 (draft). Safeguards and Sustainability Policies in a Changing World: An Independent Evaluation of World Bank Group Experience. World Bank, Washington, DC.

Box 1: Types and Elements of Gender Analyses

The term, gender analysis, refers to a variety of conceptual frameworks and socio-economic research methodologies that are used to formulate projects, programs and policies. These analyses identify the *rules of the game*, in terms of formal and informal rules which determine differences in men's and women's rights, roles, resources, responsibilities and needs, as well as how culturally specific *gender relations* between men and women influence sex-based opportunities and constraints. In addition to looking at differences between men and women, gender analyses also identify other social differences, such as age, socio-economic class, ethnicity, religion, household headship, etc. which influence differences among women and among men. Gender differences and relations are considered within their broader social, political, economic and environmental context. The information from gender analyses is used to design gender mainstreaming strategies that advance sectoral aims through improving gender equality and women's status, tapping gender-related opportunities, reducing gender-related barriers and minimizing negative gender impacts.

Gender analyses vary considerably. They can be stand-alone documents but are more often part of other types of analytical documents focused on policy and institutions, economics and budgets, sectors, subsectors or strategic environmental analyses. They can be undertaken for institutions and activities at a global or national scale, as well as at the community level. Gender analyses use qualitative or quantitative research methods or a mixture of both. There are both general and specialized gender analyses such as gendered cost-benefit analyses, gender budget analyses, institutional gender audits, gendered value chain analyses and gender-sensitive community-level participatory rural appraisals (e.g. gender division of labor, asset use and ownership, resource use mapping, mobility mapping, income and expenditures). Gender analyses involve a mixture of secondary and primary data with the latter including a balance of men and women informants. Gender analyses are appropriate for project design, implementation and completion stages. When conducted at the design stage, gender analyses can help to identify appropriate sex-disaggregated indicators and establish baseline values for future impact monitoring.

For the primary analytics which have been used for environment, i.e. Environmental Assessment, Country Environmental Assessments, I-SEAs, there have been two main problems. First, the collection of gender-related environmental information has been inconsistent. All too often, it depends upon the individual interests of a Task Leader or the availability of a gender-interested or gender-experienced social scientist in country (i.e. World Bank offices or the consulting firms hired to conduct these analyses) or in Washington. Terms of References have inconsistent requirements about including gender analyses; gender competency varies among consultant groups, particularly those hired for environmental expertise; and Bank supervision of gender aspects is sometimes weak. Second, when women informants are included, there are often fewer women than men and generalizations are made about the needs and priorities of all women based on small sample. The differences among women are missed (e.g. farmers versus pastoralists, variations in gender relations among indigenous groups). Third, when the Indigenous Peoples and Resettlement safeguards are triggered, they do not consistently address gender issues or capture other important social and gender risks and potential impacts.

Limited consultation could also make similar mistakes (Box 2). If only few women stakeholders are consulted, and findings over-generalized about all women from the opinions provided by some types of women, this can lead to incorrect design. Projects have sometimes failed to engage with civil society and women's organizations, including both advocacy and/or membership NGOs and CBOs, during preparation phase, and missed opportunities to make these partners, allies and capacity builders for staff later in the projects.

Box 2: Gender and Project Consultations

Understanding gendered social norms. For one World Bank project in India, new compost pits which were located outside the target villages went unused. Local women continued to deposit waste near their homes - even when fined for doing so - because they did not wish to be seen carrying loads of refuse to the outskirts of the village. Consultation with women could have helped to avoid this problem.

Source: Narayan, D. (1995). The Contribution of People's Participation: Evidence from 121 Rural Water Supply Projects. Environmentally Sustainable Development Occasional Paper Series No. 1. World Bank, Washington, DC

Addressing information barriers. A careful communication strategy is needed to ensure that women, particularly the poorest, are provided with full information. In Cape Verde, India, and Peru, IFAD planners observed that information can ensure that women; 1) know what goods and services they can choose, 2) are able to make informed choices, 3) know where to go to obtain the necessary forms, 4) are able to prepare and present acceptable proposals or seek help to produce these, 5) understand their responsibilities, and 6) know what to do with the goods and services once provided, to gain full benefits. Meetings need to be convenient and women need confidence to speak up. Class, caste, and other non-gender aspects of identity also affect women's ability to participate and the issues that motivate them.

Source: IFAD. 2004. Land and Water Governance Innovation Mainstreaming Initiative: Restoring Land Use through Local Water Governance and Technology in High Andes Communities, Peru. IFAD, Rome

Project Design and Implementation: Community based Projects. For environmental programming, most of the experience with gender mainstreaming, within and outside the World Bank, has been with community-based resource management and/or water and sanitation projects at the local or watershed level. The results of including the participation of women, as participants, beneficiaries, monitors, staff and/or advisors, has generally had positive social and environmental outcomes. For example, a 2001 study by the International Water and Sanitation Centre (IRC) of community water supply and sanitation projects in 88 communities in 15 countries found that projects designed and run with the full participation of women were more sustainable and effective than those that did not involve women as full partners.¹⁰³ The GEF Small Grants Program has taken pro-active measures to engage women as participants, beneficiaries, monitors, staff and advisors to environmental activities. Some key strategies are highlighted in Box 3.

¹⁰³ Van Wijk-Sijbesma, C.A. 2001. The best of two worlds?: Methodology for participatory assessment of community water services. TP 38. IRC - International Water and Sanitation Centre, The Netherlands.

Box 3: Examples of Gender Mainstreaming Strategies for Project Design

Overcoming participation barriers. In Tanzania, gender strategies were adjusted during project implementation and achieved positive environmental and social outcomes. In Tanga District in Northern Tanzania, coastal households used a mixed livelihood strategy which combined fishing and cash crop, coconut and cashew farming by men, as well as shrimp farming and rice growing by women. Women had little ownership and control over resources up to 1996. Initially, women did not attend the mixed-sex meetings to plan sustainable livelihood options and protect mangroves and the project planners went to the women to explore their reservations. Once women were assured that the project planners would take into consideration their time constraints and logistical needs, directly provide information to them and ensure that local men would listen to women's viewpoints, the women became active participants. They got involved in planning, monitoring and evaluation activities. They actively participated in the formulation of a fisheries management agreement, local environmental patrols/enforcement and a voluntary mangrove replanting and weeding program. Women participated in training courses, workshops, and study tours. Besides achieving changes in environmental practices (i.e. reductions in illegal mangrove cutting and destructive fishing practices), the gender composition of local environmental committees and village management committees became more balanced and women's self-confidence has increased are more gender balanced. Levels of gender awareness, participation and motivation have increased.

Source: Van Ingen, T. van and Kawau, C. Undated. Involvement of Women in Planning and Management in Tanga, Region, Tanzania. IUCN, Gland

Engaging women in technology and design choices and contractor oversight. In a Sewukan community in Java, Indonesia, gender relations changed when women were included in the evaluation of eleven community water systems. Women were able to identify more specific, technical design errors and quality problems for local water systems than the men, despite initial reluctance on the part of the local leader about seeing women's opinions. The women were able to change the agenda for the new water supply to include better distribution of domestic water and the addition of sanitation to the project. They redirected the focus for a new water supply to potable water rather than irrigation. The participatory evaluation process enabled the women to recognize that their common interests and work together on an environmental issue. They gained support from men for setting up committees in each of the six community neighborhoods to participate in the design of the new water supply and monitor the contractors on their quality of construction.

Source: Van Wijk-Sijbesma, C. 2001 The Best of Two Worlds? Methodology for Participatory Assessment of Community Water Services. Technical Paper Series 38, International Water and Sanitation Centre, The Hague

Adopting empowerment measures to increase poor women's bargaining power and their participation in civic environmental decisions. Peruvian women in the Southern Highlands Project who participated in natural resources management demonstrated higher levels of self-esteem and more active participation in community decision making through various approaches, including gender mainstreaming and affirmative action, gender sensitization and training for both men and women, and the creation of a special fund for support of economic activities undertaken by women.

Source: IFAD. 2004. Land and Water Governance Innovation Mainstreaming Initiative: Restoring Land Use through Local Water Governance and Technology in High Andes Communities, Peru. IFAD, Rome

Expanding women's roles and membership rights. The Philippines Communal Irrigation Development Project exceeded physical development targets and appraisal estimates of irrigation intensity and paddy yields because of gender mainstreaming activities which ensured the full participation of the men and women beneficiaries, as well as local gender relations that supported women's independent land rights and gave women control of family finances. Gender mainstreaming elements of the project's approach included recruitment of a cadre of community organizers which was two-thirds women; ensuring membership of both spouses in water user associations (which also helped to ensure fee payment); and actively encouraging women to assume leadership roles.

Source: Van Wijk-Sijbesma, C. 2001 The Best of Two Worlds? Methodology for Participatory Assessment of Community Water Services. Technical Paper Series 38, International Water and Sanitation Centre, The Hague.

Strengthening the gender mainstreaming capacity of service providers to respond to the needs of poor women. IFAD projects in India and Peru demonstrated that better results were achieved when service providers better understood gender issues and strategies, while simultaneously building client women's leadership and capacity.

Source: IFAD. 2004. Land and Water Governance Innovation Mainstreaming Initiative: Restoring Land Use through Local Water Governance and Technology in High Andes Communities, Peru. IFAD, Rome.

Project Design and Implementation: Environmental Policy Projects (i.e. Sector and Development Policy Loans and Global Public Goods Activities). The Environment Strategy Concept Note highlights the importance of examining “mechanisms for engaging weak and vulnerable stakeholders in decision-making, ensuring access to information and accountability among different stakeholders, effective enforcement, conflict resolution mechanisms and recourse to justice...” This priority potentially provides many opportunities for women, both the disenfranchised and those with more status in society, to participate in environmental governance. However, there has been less experience and attention given to gender analyses and women’s participation for WB environmental policy activities, beyond the local level, and in dialogues about global environment public goods.

Under the new Environment Strategy, it is likely that the WBG will increase its sectoral support via Development Policy Loans (DPLs). These loans are opportunities to reform formal rules, develop national plans for environmental sectors, change policy-making processes and strengthen government capacities. Accordingly, the WBG should also be looking for opportunities to institutionalize gender-sensitive impact analyses, as well as gendered budget analyses, to improve DPL design including the sectoral coverage, reform sequencing (in programmatic loans), and choice of prior actions. The DPLs can be vehicles to increase gender-equitable participation in planning and governance and recruitment of staff, particularly when new environmental ministries and departments or new public participation and disclosure processes are established. For activities which engage civil society participation, the WBG can help to encourage the expansion of the participation of women’s civil society organizations in environmental policies and programs. When activities are focused on environmental enforcement and compliance, more effective strategies can be developed beyond regulatory approaches by soliciting ideas and involvement by both women and men stakeholders. When there are accompanying Technical Assistance Loan to help countries cope with implementing new environmental policies and reforms, a gender perspective can help to ensure that both women and men benefit from capacity building opportunities.

Global public goods activities will continue under the new Environment Strategy. While expanding women’s participation in local level environmental governance is critical, the World Bank also has some comparative advantages for expanding opportunities for women representatives at transboundary, regional and international levels of environmental governance. While some progress has been made since 1992 for including gender issues in Agenda 21 issues, women and gender issues have not made much impact on climate change dialogue, despite the need for women’s perspectives to expand the climate resilience of economies, communities and households and ensure equitable distribution of climate co-benefits.

Monitoring and Evaluation. The efficient use of environmental support depends upon reliable project data on both social and environmental impacts. Gender outcomes rely on data, strategies, sex-disaggregated indicator, monitoring and evaluation with feedback loops. Even when gender analysis has been undertaken, good gender-related intentions during project design have sometimes foundered due to inadequate oversight and monitoring of gender mainstreaming during project implementation.

At present, few of the World Bank's environmental projects appear to consistently track and report on sex-disaggregated outcomes. At the national level, gender-related data is highly inconsistent and often of low relevance for environmental projects, programs and policies. The United Nations found that in 2008, most countries were unable to report on their progress toward the sex-disaggregated Millennium Development Goals for water and sanitation.¹⁰⁴ In some countries, a small amount of additional resources for gender-related statistics analyses goes a long way. There is a great need to bolster internal and country-level monitoring systems for the collection and reporting of sex-disaggregated, environmentally related data from project, sub-national and national levels.

There are plans to strengthen the Results Framework for Gender for IDA 16. It builds upon indicators collected for the Annual Gender Mainstreaming Monitoring Report, or as part of a specific sector strategy or action plan. At the country level (Tier 1), the added indicator is proposed to be: Share of women in wage employment in the non-agricultural sector. At Tier 2 (sectoral), IDA investment lending operations approved after July 1, 2009 are expected to capture data on the total number and percentages, disaggregated by sex, of direct beneficiaries.¹⁰⁵ In addition, during the IDA16 replenishment period, it is proposed that IDA management will also track four indicators to measure IDA's support to gender-based country outcomes (i.e. percentage of IDA CASs informed by country-specific gender diagnostics; percentage of safety nets projects with gender-informed design, monitoring and evaluation to mitigate risk and vulnerability for women and girls; percentage-increase target (set by the World Bank Sector) in agriculture and rural development operations with gender-informed design, monitoring and evaluation; and percentage of health projects that address high fertility, maternal mortality and high adolescent fertility.

A comprehensive menu of gender indicators for environmental activities is provided in Annex 2. Many are adapted from the recent comprehensive World Bank Women in Agriculture Sourcebook and several other sources. The indicators selected for the WBG Environment Strategy should be time-bound, from a baseline time X to time Y after project initiation. The selected indicators should be Specific, Measurable, Attributable, Realistic, and Targeted. Most of the gender-related indicators should be disaggregated by sex, as well as any other targeted client (or service provider) group; others measure changes in gender relations. The focus should be on outcome indicators (e.g. "percentage change in the number of women in local decision-making bodies in the targeted communities") rather than outputs.

¹⁰⁴ Seager, J. 2009. Editorial. Gender and Water: Good Rhetoric but It Doesn't Count." *Geoforum* 41 (2010):1-3.

¹⁰⁵ The Social Development Network (SDN) has defined more extensive sets of sector-specific targets and indicators for gender-coverage. SDN will screen all IDA16 projects to determine whether any sex-differentiated impact is expected. For most operations gender analysis will be part of the social assessment which will provide the basis for gender-responsive design. Gender-responsive design may not be warranted when the project has minimal engagement with citizens (e.g. the replacement of electricity generation equipment). The project documents would indicate whether gender analysis has taken place and, if a gender-responsive design has been found to be warranted, will report on this analysis.