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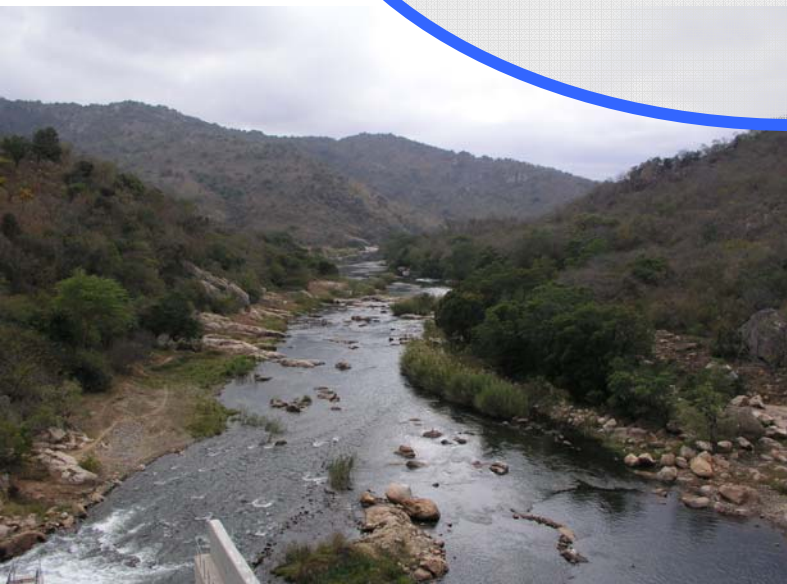


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***African Regional Workshop
on
Public Participation in International
Waters Management***

***13-16 November 2007
Maseru, Lesotho***





AFRICAN CENTRE FOR WATER RESEARCH



Internationale Weiterbildung und Entwicklung gGmbH

**African Regional Workshop on
Public Participation in International Waters Management
13 - 16 November 2007
Maseru, Lesotho**



On behalf of InWEnt-Capacity Building International, Germany and the Environmental Law Institute (ELI) under the banner of the Global Environment Facility International Waters Learning and Exchange Resource Network (GEF IW:LEARN), we have the pleasure to welcome you at the 2nd Pan-African IW:LEARN workshop on “Public Participation in International Waters Management.”

The Workshop is designed to provide participants with an opportunity to exchange experiences and to learn from regional and international experts in order to strengthen the capacity of their projects to more effectively engage the stakeholders and the public in international waters management. The Workshop will include projects at various stages of implementation: some projects are just starting up, others are developing their stakeholder involvement plans, and others have been completed. Moreover, there is a range of contexts – rivers, lakes, aquifers, and large marine ecosystems – that

provides opportunities for a broad range of experiences to be shared. Participants represent a diverse cross-section of stakeholder groups, including project managers, NGOs, representatives of the private sector, and regional and international experts.

The venue for the seminar, as well as the accommodation is the Maseru Sun Hotel. The phone number for the reception desk is: +266 22 31 2434

You have been booked on a full board basis. Please note that extra incidentals, such as laundry services, food or beverages outside of set meals, internet and phone calls will be for your own account.

The members of ACWR will be present at the workshop venue to assist you with any queries you might have.

In this workshop reader you will find a workshop programme as well as background reading materials related to stakeholder participation in international waters management. The ELI handbook on “Public Participation in International Waters Management” as well as the InWEnt case study reader on “Stakeholder participation in transboundary water management” are provided to you as separate files.

We hope you will enjoy your stay in Maseru and wish you fruitful deliberations at the workshop.

Best wishes

Anton Earle, Daniel Malzbender & Poziswa Manyase
African Centre for Water Research (ACWR)

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**AFRICAN REGIONAL WORKSHOP
ON
PUBLIC PARTICIPATION IN INTERNATIONAL WATERS MANAGEMENT**

November 13-16, 2007
Maseru, Lesotho

DRAFT AGENDA

	November 12, 2007
	<ul style="list-style-type: none"> • Participants arrive in Maseru • Registration • Welcome Dinner & briefing session, Maseru Sun Hotel
Day One	November 13, 2007
Inaugural Session 09.00 – 10.00 Hrs	OPENING OF THE WORKSHOP Chaired by Mr. Thomas Petermann, InWEnt Welcome Remarks by: <ul style="list-style-type: none"> • <i>Mr. Carl Bruch, Environmental Law Institute</i> • <i>Mr. Anton Earle, African Centre for Water Research</i> • <i>Mr. Dann Sklarew, Global Environment Facility IW:LEARN</i> Opening Address by Lesotho Government Representative Keynote Address by: <ul style="list-style-type: none"> • <i>Mr. Jose Neto Silva, fill in</i>
10.00 – 10.30 Hrs	TEA / COFFEE BREAK and GROUP PHOTO
10.30 – 11.30 Hrs	Participant Introductions
11.30 – 12.00 Hrs	Overview of the Workshop: Expectations and Introduction to the Materials by Ms. Jessica Troell and Mr. Anton Earle
Session 1 12.00 – 13.00 Hrs	BACKGROUND The Framework: The Strategic Role of Public Involvement in the GEF Cycle, IWRM, and Adaptive Management <ul style="list-style-type: none"> • Brief overview by Mr. Dann Sklarew, GEF- IW:LEARN • Mr. Benoit Bihamiriza
13.00 – 14.30 Hrs	LUNCH BREAK

Session 2 14.30 – 18.00 Hrs	INTERACTIVE LEARNING SESSION: STAKEHOLDER IDENTIFICATION & ANALYSIS and PLANNING FOR STAKEHOLDER INVOLVEMENT <ul style="list-style-type: none"> • <i>Ms. Barbara Tapela, University of Western Cape</i> • <i>Ms. Jessica Troell, ELI</i>
19.00 Hrs	RECEPTION AND WELCOME DINNER
Day Two	NOVEMBER 14, 2007
8.00 – 8.15 Hrs	Open Session: Review and Critique of Day One <i>Mr. Anton Earle, ACWR</i>
Session 3 8.15 – 9.15 Hrs	LEGAL and INSTITUTIONAL FRAMEWORKS FOR PUBLIC AND STAKEHOLDER INVOLVEMENT <ul style="list-style-type: none"> • Brief overview by <i>Mr. Carl Bruch, ELI</i> • Illustrative project case studies: <i>Mr. Felix Monggae, Okavango Basin</i> and <i>Mr. Langa Rovuma Basin</i>
Session 4 9.15 – 13.00 Hrs	AFRICAFÉ: Institutions for planning and implementing public participation
13.00 – 14.15 Hrs	LUNCH BREAK
14.15 – 15.00 Hrs	Dessert at Innovation Marketplace
Session 5 15.00 – 17.00 Hrs	ACCESS TO INFORMATION and STRATEGIC COMMUNICATIONS <ul style="list-style-type: none"> • Brief overview by <i>Mr. Dann Sklarew, GEF-IW:LEARN</i> • Illustrative project case studies: <i>Mr. Rean Van der Merwe, D-LIST Benguela</i> and <i>Ms. Dior Mbacke, Senegal River Basin</i> • Facilitated discussion
17.00 – 17.30 Hrs	TEA / COFFEE BREAK <ul style="list-style-type: none"> • Announcements
20.30 Hrs	Dessert at the Innovation Marketplace
DAY THREE	NOVEMBER 15, 2007
8.00 – 17.00 Hrs	ALL DAY CASE STUDY/SITE VISIT TO LESOTHO LOWLANDS WATER SUPPLY SCHEME
7.40 Hrs	Meet in Lobby of Hotel for 8 am departure
DAY FOUR	NOVEMBER 16, 2007
8.00 – 8.30 Hrs	Open Session: Review and Critique of Days Two and Three <i>Mr. Anton Earle, ACWR</i>
Session 6 8.30 – 10.00 Hrs	ISSUES OF REPRESENTIVITY: INCLUSION OF MARGINALIZED STAKEHOLDERS and GENDER MAINSTREAMING

	<ul style="list-style-type: none"> • Presented and Facilitated by Ms. Ethne Davey, Gender and Water Alliance, DWAF • Co-facilitated by Ms. Janot Mendler de Suarez, GEF-IW:LEARN
10.00 – 10.15 Hrs	TEA/COFFEE Break
Session 7 10.15 – 12.00 Hrs 12.00 – 13.30 Hrs	THE ROLE OF THE PRIVATE SECTOR IN PUBLIC PARTICIPATION Facilitated panel discussion: Chair: Mr. Daniel Malzbender, ACWR AFRICAFÉ: Engaging the Private Sector in Water Management Participant-selected Topics
13.30 – 15.00 Hrs	LUNCH
Session 8 15.00 – 15.30 Hrs	REPORT BACK FROM AFRICAFÉ FACILITATED DISCUSSION – Ms. Hajanarina Razafindrainibe, ASCLME
15.30 – 16.30 Hrs	WRAP UP: CONCLUSIONS AND NEXT STEPS (including time to complete evaluations) Facilitated discussion led by <i>Ms. Janot-Reine Mendler de Suarez, GEF-IW:LEARN and Ms. Jessica Troell, ELI</i>
19.00 -- ...wee Hrs	CLOSING DINNER and CULTURAL EVENT
	NOVEMBER 17, 2007
	Participants Depart

Plenary Session IV: Participation Mechanisms / Stakeholder Involvement in Decision-Making to Realise Benefits for the People in International Basins

Janot Mendler de Suarez

Acting Director

GEF-IW: LEARN (Global Environment Facility, International Waters Learning Exchange and Resource Network)

Boston, Massachusetts

Turning our focus to public participation in water governance is actually a turning point in this Round Table - and comes appropriately, perhaps, on the final day, so we will take this moment to look back on the process, where we have come, what challenges we face and where we are going. From Uschi Eid came a call for more champions for water, more people at every level who can advocate for the importance of water to vital (and more politically powerful) economic sectors, and effectively communicate the tangible benefits that integrated transboundary water resource management ("IWRM +") can bring to the wider social and economic development agenda.

It's interesting to note that in the session on stakeholder involvement, representatives from two significant bodies dedicated to participatory governance, civil society and parliamentarians, each articulated the feeling of being until now essentially left out of the transboundary water resource management processes and discussions. This plain fact highlights at once the serious gaps and degree of disenfranchisement with which we are still faced, and at the same time signals the wealth of latent opportunity for broader development benefits that can be realized through more comprehensive involvement of stakeholders in transboundary water governance. It also underscores the importance of significant and sustained support from governments, donors and other stakeholders for participation mechanisms.

An example of steps which have been taken to meet the challenges of participation and integration was articulated by Anta Seck from OMVS (Organisation pour la Mise en Valeur du fleuve Senegal) in her description of the shared vision process and over a decade of work in the Senegal River Basin. With many years of support from GEF and other donors, this stands as a model of horizontal and vertical integration of participatory processes in developing transboundary water governance institutions. It is certainly impressive to see in the Senegal River Basin how participatory frameworks which have now been established and set in place are functioning, from the participation of all the heads of state down to the local community level. Now we face the challenge to go the next step.

As pointed out by Melakou Tegegn, we must ask ourselves what is the reality on the ground, and to really look at how to empower public participation at every level we must deconstruct poverty and underdevelopment. This is where we can find the drivers, the keys, and the champions to leverage inclusion and participation of diverse stakeholder groups, especially of women and others who remain under-represented as stakeholders but are key agents for improved decision-making, management and benefit-sharing in transboundary water systems. Who better to define and implement practical and coordinated programs of measures and actions than the communities of people who stand to share in the benefits? Raising the knowledge, capacity and involvement of parliamentarians in water and natural resources management is an important key to water governance, to build agency with the poor and marginalized, with women and children, and to better understand and address the interlinkages and impacts of stress factors such as AIDs, violence, as well as the level of inclusion of civil society and the role of national legislators in water governance – and infrastructure investments. As the

presenter from SADC Parliamentary Forum reminds us, it is the legislators who hold the purse!

The need for massive and carefully planned investments in physical infrastructure has been made clear - for storage, resilience to climate variability and extreme events, hydropower, irrigation, water supply and sanitation, and maintaining environmental flows to sustain the aquatic ecosystem resources and services, etc. In unpacking what we mean by participation mechanisms for stakeholder involvement in decisionmaking, we come to an expanded definition of infrastructure needs. There is a profound need for information systems infrastructure to support the data collection, harmonization, sharing and analysis necessary to provide a scientific basis for decision-making. No less important is the related need for communications infrastructure to support access to information relevant to decisionmaking, and to facilitate consultative dialogue among geographically separated stakeholders within and among shared water systems. Equally important are the inclusion and networking systems and structures which enable stakeholders to effectively participate in and coordinate decisionmaking at multiple levels.

There is an extraordinarily well-conceived continental-scale architecture already emerging under the Africa Water Vision, which provides a context and a framework for an expanded mandate for infrastructure investments in shared water governance. Whether building to suit or building linkages to form functionally integrated information and communications systems, sustainable financing is needed to establish and maintain these critical support structures for stakeholder participation in water governance. Investing in participation mechanisms may bring added value in bolstering integration within and among regional economic communities, and could assist AMCOW in demonstrating the potential for increasing benefits to be shared through integration across sectors.

Despite vast differences between countries it is fair to say that all share a fundamental challenge: how can communities really be mobilized to achieve results at the scale which is needed? The results we seek are not exclusive to the traditional water sector...we heard from Margaret Catley-Carlson in an earlier session that we need a Copernican revolution. Of course there is a tendency for water resource managers to think - and it's not to say that this perspective is not in some ways valid - that water resource management is the axis about which all else turns. However, the objectives of shared water resource management are fundamentally environmentally sustainable development, and what we are all involved in *is* actually a global revolution. It's a transformation of the way that we do business, the way that we transact, the way that we interact with each other. We are trying to address the two big questions of our time: "How to get along better with each other so that we can envision and take action to change the global economy to allow equitable access to prosperity for all - and how at the same time to sustainably - and equitably - manage our natural endowment?" We have to believe that our goals go beyond poverty eradication, that we fundamentally believe that every human being is entitled to equity and equality in terms of standard of life. To achieve the Millennium Development Goals is only the first step. But to achieve these goals, putting water in the framework that our parliamentary representative Barney Karuuombe has shared with us - the larger context of transboundary natural resource management - water resource management forms the basis, of our life support system, of our natural and economic resource system. And unless we figure out how to also address the issues of participation that have been raised by Melakou Tegegn, and reiterated by Felix Monggae in this session - of unfreedom, of democracy - we will not achieve our goals.

So, when we talk about champions of water resource management - the champions are truly at every level, the champions are in the communities, in the watershed institutions and the transboundary management institutions, they are in the regional economic communities. There is harmony, there is continuity. We are grateful to Halifa Drammeh and Stephen Donkor for giving us a larger overview of the way that under the African Union, the African Ministerial Council on Water (AMCOW) is linked to the same process as the African Ministerial Council of Ministers of Environment (AMCEN), and these structures

are also connected to NEPAD. Regional institutional set-ups in Africa are young, so we can't expect them to achieve results immediately, but they are largely in place and functioning. Well-thought, studied and analysed participatory policy processes such as the **Africa Water Vision 2025** are underway which now require implementation and coordination support to establish fully-functioning information, management, physical and governance infrastructure for Africa's - adequate, and predominantly shared - water resource systems.

Climate change has, in a relatively brief period of time, added urgency to Africa's development goals. In recent months we have witnessed a global transformation in the perception of the importance of climate change. This reflects an understanding which Africans have had for many years – remember the president of Tanzania in Kyoto said "We are experiencing climate change now!" Now the scientists have caught up and the political community has caught up, and there's a fundamental inequity that we have referred to many times in this Round Table, that Africa is not one of the largest contributors by any means, but is preferentially impacted by climate change. No matter whether it's caused by human impact in terms of increased greenhouse gas emissions and our scientific tracking confirms anthropogenic linkages, is immaterial. Africa must still adapt – and the contributions transboundary water resources management processes to adaptation are critical.

So, I would say that one big message coming out of this Petersberg Round Table is that Africa's participatory transboundary water resources leadership, management and governance processes are building crucial foundations for equitable and sustainable development - and also for adaptation to climate variability and change. We recognize the need to do a better job of presenting water resource management in this context, and to attract and coordinate investments in all of levels of infrastructure necessary to support participation and achieve results, writ large. We are grateful to all of 6th Petersberg Round Table presenters for providing the detailed underpinnings that can be used to carry these messages more effectively to decision makers in larger fora, and perhaps to have some influence in addressing the underlying structural inequities in the global economy which constrain development.

GEF- IW:LEARN has been working with InWEnt to launch knowledge-sharing activities among GEF International Waters projects in Africa with a focus on IWRM and a November 2007 workshop on Public Participation hosted by the government of Lesotho. GEF and InWEnt are pleased to announce a GEF-UNDP Africa Water Governance Process project starting in conjunction with this Petersberg Round Table which will offer a means to act upon the outcomes. UNESCO-IHP is a supporting partner in the new project and will be coordinating activities on groundwater integration and climate, which has been discussed as one of the essential keys to adaptation, especially in Africa. The project is also supported by the United Nations University's International Network on Water Environment and Health (INWEH) to pioneer twinning between great lake systems; African Rift Lakes and North American lakes, working together developing science-policy linkages. We'll also be working with parliamentarians, in partnership with SADC Parliamentary Forum, also Nile Parliamentarians, and the Circle of Mediterranean Parliamentarians for Sustainable Development with help from Global Water Partnership. Stockholm International Water Institute (SIWI) and their partners will be developing the tools that Tony Turton has mentioned for helping to identify benefits that can be realized through transboundary cooperation. Alexandra Pres from InWEnt explains in her presentation with a bit more detail the new GEF project and the platform it offers to carry this process forward through targeted activities.

Water governance in Africa – key challenges

Discussion paper prepared for InWEnt and the "Petersberg Round Table 2007" by Daniel Malzbender & Anton Earle, African Centre for Water Research, Cape Town, South Africa.

Background:

Water is of strategic importance to most African economies, forming an input to various sectors, such as agriculture, industry, mining and power generation. In addition, water resources have the potential to be developed in such a way as to contribute to the achievement of food security and poverty eradication objectives.

At the same time most of the continent's water resources are shared between two or more countries, making the development of sound transboundary water governance frameworks essential. Where transboundary cooperation is lacking, there is an increased risk of conflict over water resources (quantity and quality) between states. At the same time, on an intra-state level, human security – often summarised in the catchphrase "freedom from fear, freedom from want and freedom from hazard impact" – is compromised as water resources tend to be developed and used in an inequitable and unsustainable manner. Furthermore, inefficient transboundary water governance regimes contribute to environmental degradation and vital ecosystems are being compromised.

Cooperation over shared water resources, which has historically been mostly on a bilateral basis, is now increasingly moving towards regional cooperation, with regional institutions being strengthened and SWCI being formed in more and more basins.

The following section, while not being exclusive, lists some of the key challenges for transboundary water resources management in Africa at present:

- **Strengthening regional water governance** – regional institutions (e.g. SADC Water Sector) are in place and basin-wide SWCI are established or in the process of being established in most shared basins. These institutions need to be strengthened and their roles and responsibilities be clearly defined. At present most SWCIs operate in an advisory capacity, providing technical advice on water management issues to national governments. This role needs to be strengthened and expanded to include responsibility for management aspects such as data collection, water quality monitoring, implementation of joint development projects and programmes and implementation of directives, amongst others. In effect this would mean national states having to relinquish a degree of sovereignty to the SWCI.
- **Lack of capacity of water management organisations** - this relates to both human as well as financial resources and includes organisations at the regional and basin levels (SWCIs) as well as national (departments of water), sub-national agencies (catchment councils etc) and the community levels.
- **Harmonisation of national water laws and policies** – Differences in national legislation potentially hinder cooperation between basin states, hence regional and basin-wide cooperation benefits from the harmonisation of national water laws and policies, both compared to each other as well as with international agreements governing transboundary water resources management (e.g. SADC Protocol on Shared Watercourses).
- **The need for infrastructure development** – Africa has, with a few notable exceptions, lagged behind in the construction of water storage and reticulation infrastructure. Most of the population in the region use water at very low per-capita rates – not because of water demand management (WDM) strategies, but caused

by a physical lack of access to the resource. With NEPAD and AMCOW being key drivers of the process there is currently a new drive towards developing major water infrastructure and it is important that the relevant financial, social and environmental safeguard mechanisms are developed as minimum “guidelines”.

- **Sustainable financing** – ensuring sustainable financing mechanisms for water management institutions as well as infrastructure development projects is critical for sustainable water resources management. Innovative and flexible financing mechanism need to be developed that take the current capacity constraints in Africa into account and at the same time aim at ensuring independence from external aid in the long-run.
- **Involvement of other stakeholders** - The management of shared watercourses has traditionally been the domain of national governments – operating with input from SWCIs. The private sector, local government, water user groups, local communities, traditional leaders, woman's groups, academia and research institutions all have a role to play in the management of shared watercourses in a sustainable manner. What needs to be determined is how, when and where to involve these various stakeholders and if there should be common minimum conditions for their participation amongst the various SWCIs. Current developments (under the AMCOW umbrella) take note of this and promote the development of effective engagement mechanisms between stakeholders and formal water management institutions.
- **Inter-sectoral water governance** - both on a national level as well as at regional level there is little communication or joint planning between various sectors which have an impact on or are impacted by water management decisions, such as health, agriculture, land use planning, housing, electricity, mining etc. A framework needs to be developed to link the planning and management activities of organisations engaged in these sectors into a harmonised approach to water management.
- **Implementation of IMWRM principles on the ground** – Most regional and national water policies and laws in Africa have adopted (or are in the process of doing so) IWRM as the underlying principle for water resources management. The implementation of IWRM in practice is required as a next step. Some countries (supported by GWP) are in the process of developing national IWRM plans – these activities need further support and expansion to other countries and regions on the continent.
- **Adaptation to climate change** – Climate change models predict with a relatively high degree of certainty that substantial changes in precipitation patterns will be experienced on the African continent. This has consequences for resource availability and development. The potential impacts need to be analysed and integrated into resource development plans and responses to climate change need to be included in national and regional water policies and laws.
- **Inclusion of groundwater in management regimes** – Groundwater resources are critical for water supply (particularly in rural areas) in large parts of the continent. Yet, the mandate of SWCI is limited to the management of shared surface water resources and the governance framework (policies, laws and institutions) for groundwater is underdeveloped. A lot of research needs to be done to understand the characteristics of groundwater resources in order to integrate them into water management frameworks.

What is Water Governance?

Water Governance	
refers to the range of political, social, economic, and administrative systems that are in place to	} System
develop and manage water resources and	} Management
the delivery of water services at different levels of society.	} Services
It comprises the mechanisms, processes, and institutions	} How?
through which all involved stakeholders, including citizens and interest groups,	} Who?
articulate their priorities, exercise their legal rights, meet their obligations and mediate their differences.	} Goal

“Good practice” guidelines for inter-sectoral Water Governance

Background

Water demand in southern Africa is growing rapidly and in many parts of the region water scarcity as well as deteriorating water quality is increasingly becoming a problem. With competition between different water use sectors over available water resources growing, it is essential to strengthen inter-sectoral cooperation in order to establish effectively functioning water governance regimes. This need for cooperation becomes even more important when the possible impacts of climatic change and variability are factored. The following are proposed guidelines for good inter-sectoral water governance¹.

Information sharing and awareness raising

Awareness raising

Good inter-sectoral water governance requires a high level of awareness of the water related needs and interests of the different sectors among all role-players, particularly at the management and political level. At present there is limited awareness of inter-sectoral needs in the region among the various role-players and awareness raising and capacity development at all levels is required.

Communication and information exchange

This needs to go hand in hand with improved communication within and between sectors as well as government and increased exchange of information and knowledge. Practical actions for raising awareness and improving information exchange would be the establishment of inter-sectoral learning and information exchange platforms and “implementers forums” where inter-sectoral water governance issues are discussed and lessons-learnt are exchanged.

Stakeholder participation

Awareness creation and improved information flow is likely to be enhanced by the involvement of stakeholders in decision-making processes, particularly at management level where water allocation decisions are made. The involvement of stakeholders should thus be promoted and linked to awareness raising activities.

Legal and institutional framework

Harmonised sector policies

Good inter-sectoral cooperation is hindered where the policies of different water use sectors are not harmonised; or even contradict each other. Countries need to ensure that a harmonised policy framework exists, in which the respective sector policies incorporate the water needs of other sectors and oblige the users of the respective sectors to cooperate.

¹ The guidelines were developed at the InWEnt, Waternet, Global Water Partnership-SA workshop on “Inter-sectoral Water Governance – towards Integrated Water Resources Management in the SADC region”, Maputo, 21-23 November 2006

Clear Legal framework

The harmonised policy framework needs to be complemented by a legal and institutional framework, in which institutional roles - within and between sectors as well as between government and users - are clearly defined. The legal framework needs to avoid gaps and overlapping responsibilities and provide the responsible authorities with the necessary means for implementation, monitoring and evaluation and enforcement of the applicable legal provisions.

Transparency

An effectively functioning governance framework requires that information is easily available and accessible. Legal provisions requiring transparency in decision-making and granting interest groups the right of access to information will greatly enhance monitoring and evaluating the implementation of the existing legal framework.

Improved planning and decision-making mechanisms

Strategic planning

The strategic planning between the different role-players needs to be improved. This requires the establishment of clear information flow channels and decision-making structures, both between governments and users (vertically) as well as between different user sectors (horizontally). This can be done through the establishment of inter-sectoral working groups at various levels (e.g. at sub-basin level, national level and transboundary level) where information is shared and water allocation and water quality related decisions are taken.

The decentralisation and devolution of management responsibilities to the lowest practical level is likely to improve inter-sectoral water governance at the local level. Yet, strategic planning and guidance at high political and managerial level is required in order to ensure a harmonised governance framework in which the activities at all levels tie into each other.

Mitigating power imbalances

A difficulty in achieving effective inter-sectoral water governance is the substantial power imbalances between the different water use sectors (e.g. international mining firms vs. small-scale farmers). An important pre-requisite for good inter-sectoral water governance is thus to create decision-making mechanisms that mitigate such power imbalances (e.g. water user councils or forums with mandated representations of less powerful stakeholders or sectors).

Benefit sharing

An important step in mitigating power imbalances would be to create incentives to move beyond narrowly defined sectoral interests (e.g. through the sharing of benefits – accruing from one activity with others).

Capacity building

The capacity to develop sustainable inter-sectoral water governance frameworks is currently underdeveloped in southern Africa – both within governments as well as within the different water use sectors. Training and capacity building activities for governments and water-use sectors needs to be extended in order to equip the responsible practitioners with the necessary skills to establish effectively functioning inter-sectoral water governance systems.

NATIONAL PERSPECTIVES ON WATER GOVERNANCE: LESSONS FROM IWRM PLANNING PROCESS IN MALAWI AND ZAMBIA

Alex Simalabwi (a.simalabwi@cgiar.org)

*Regional Project Manager –IWRM/WE Plans GWPSA,
141 Creswell, Wead P0127, Silverton, Pretoria, South Africa,*

*Paper prepared for the InWEnt-GWP-WaterNet regional workshop on
Intersectoral Water Governance, November 2006, Maputo*

ABSTRACT

At the Second World Water Forum in 2000, the problems relating to water around the world were described as a consequence of the lack of good governance in water. The Global Water Partnership defines water governance as the range of political, social, economic and administrative systems that are in place to develop and manage water resources, and delivery of water services, at different levels of society.

As a contribution to good water governance, GWPSA has been facilitating the development of Integrated Water Resources Management and Water Efficiency (IWRM/WE) Plans in Malawi and Zambia. Effective water governance is crucial for the implementation of IWRM. While the process is still ongoing, various lessons can be drawn in relation to water governance.

This paper argues that, while governance may be seen to be dependent on three key clusters; Government, Society and Science and the interactions among them, there are no distinct boundaries among the three clusters. Further, lessons from the IWRM/WE process highlight the importance of scale and power relations to water governance. IWRM Plans are being developed for river systems and natural resources at the national scale, confined to national boundaries. However, the transboundary nature of water resources requires effective interactions between and across the different scales. International conventions, protocols, declarations and targets such as the 2015 Millennium Development Goals (MDGs) are some of the factors at the international scale that have a strong influence on the IWRM Planning process at the national scale. Another important issue is that of power relations among players at a given scale and also between different scales. The way decisions and information is communicated from central government to local government and vice-versa or from the catchment to the sub-catchment scale is crucial to good water governance. These interactions and process are highlighted in this paper.

Key Words: Governance, IWRM Plans, and Scale

Introduction

At the Second World Water Forum in 2000, the problems relating to water around the world were described as a consequence of the lack of good governance in water (GWP, 2000). This fact was also confirmed in a presentation to the United Nations Secretary General high level Panel at WSSD in 2002 by his royal highness, HRH Prince Willem-Alexander of Netherlands(WSSD, 2002). The Prince echoed earlier sentiments at the second world water forum that the global water crisis is a crisis of water gov-

ernance. At the 2002 World Summit on Sustainable Development (WSSD) in Johannesburg, South Africa, the international community agreed that all countries should prepare IWRM/WE plans by the year 2005, with support to developing countries (WSSD, 2002) as a contribution to good water governance and ultimately sustainable development. The Plans are an important milestone to achievement of the 2015 MDGs and thus reduction of poverty and improvement of peoples' livelihoods. The IWRM/WE Plans are thus an important precursor to improved water governance with the overall goal of sustainable development through better management of water resources.

In response to the WSSD call, the Canadian Government through CIDA is supporting the development of IWRM plans in five African countries: Mali, Malawi, Zambia, Kenya and Senegal through an initiative called Partnership for Africa's Water Development (PAWD). The Global Water Partnership Southern Africa (GWP-SA) is coordinating the development of these Plans in Malawi and Zambia. The support is being facilitated through the Malawi Country Water Partnership (MWP) and Zambia Water Partnership (ZWP) respectively.

Through GWPSA facilitation, both Malawi and Zambia are designing strategies, policies and institutional frameworks that are socially acceptable and capable of assisting national governments to mobilize sufficient resources in support of their implementation. To ensure that the implementation of these strategies is achievable, the formulation process of IWRM/WE Plans involves a broad range of key stakeholders. The process involves a dynamic partnership between government, the market and civil society, and has generated experiences and lessons that can advance the theory of water governance.

This paper shares that experience and highlights the importance of scale and power relations as other factors important to water governance but not fully explicit in the proposed water governance dialogue model whose hypothesis is that, water governance involves three main clusters: Government, Society and Science.

1. Governance defined

Various definitions for water governance exist. The Global Water Partnership defines water governance as the range of political, social, economic and administrative systems that are in place to develop and manage water resources, and delivery of water services at different levels of society. The UNDP defines water governance as the exercise of economic, political and administrative authority to manage a country's affairs at all levels. It comprises processes and institutions through which citizens and groups articulate their interests, exercise rights, meet their obligations and mediate their differences (UNDP 2001).

While many other definitions exist on water governance, it is generally agreed that good governance requires the establishment of an enabling environment (GWP, 2000). Putting IWRM into practice depends on effective governance. Weak governance leads to government failure, market failure and system failure. Good water governance forms an important pillar of the IWRM/WE Plans and is about local change and reform, and strategies to ensure good water governance need to be developed as part of the IWRM Plans required under the WSSD Target.

1.1 Elements of governance

In both Malawi and Zambia, government and private stakeholders are actively engaged in the process of developing IWRM plans.. The interests and needs of the various stakeholders involved are largely dictating the course of the IWRM/WE planning process.

The Centre for Scientific and Industrial Research (CSIR) has proposed hypotheses that the degree to which governance is successful depends on six essential elements:

- Science Process
- Government Process
- Society Process
- An interface between society and science
- An interface between government and society, and
- An interface between government and science

The three main clusters, as proposed in the trialogue model, are Government, Science and Society.

Lessons from the IWRM/WE planning process show that these clusters, though not exclusively separate, are present. GWPSA has facilitated the establishment of responsive IWRM planning structures at country level that involves various stakeholders. Through participation at the national high-level steering committee, government ensures that national constitutional and statutory regulations are observed and adhered too. The water strategies must be consistent with national long-term policy and address national priorities. Participation by private sector representatives such as sugar estates, commerce, etc ensures that society's perspective is taken into consideration. The academic institutions also active in the planning process bring in an important scientific perspective to the process.

Two key issues not so obvious from the proposed trialogue model are the issues of scale and power. The way in which decisions and information is communicated from central government to local government and vice-versa or from the catchment to the sub-catchment scale is crucial to good water governance. This highlights the importance of scale and power. At the regional and international scale, various international agreements, protocols related to transboundary water management, commitments such as achievement of the MDGs, etc play an important role in the IWRM/WE planning process.

This Paper thus argues that water governance is not only dependent on the six elements of the "trialogue model" on good governance and scale as an important element to governance that is not so obvious in the proposed "trialogue" model. Further and indicated earlier, while the three main clusters exist, they are not exclusively separate, as in the proposed trialogue model, but overlap in various structures at different scales. The paper focuses on water governance as an integral part of ecosystem governance. The IWRM/WE Planning process being facilitated by GWPSA is taken as a case in point.

2. IWRM/WE Planning process

A National IWRM plan is a road map to guide a country on the changes needed to move from fragmented to integrated ways of developing, managing and using water resources and to accelerate actions towards those ends. It clearly outlines the actions and resources required by a country to move from managing and developing water resources in a disjointed and uncoordinated manner to well coordinated and harmonized manner, in order to maximize the social-economic benefits and improvement of people's livelihoods, now and in the future.

An IWRM/WE plan provides guidance to national governments in addressing a country's key water related development problems such as water for (food) agricultural productivity, water for people, water for energy, water for environment and helps to strike a balance between the use of resources for livelihoods and conservation of the resources to sustain its functions for future generations. It seeks to avoid the lives lost, the money wasted, and the natural capital depleted because of fragmented decisions that did not take into account the larger ramifications of sectoral actions and provides practical guidance of how institutions involved in the development and management of water resources; government agencies, civil society, private sector and cooperating partners, can operate in a coordinated and integrated manner for economic efficiency, environmental sustainability and social equity. Water as an integral part of the ecosystem is crucial for sustenance of biodiversity, and thus good water governance is important in ensuring ecosystem integrity. IWRM advocates for environmental efficiency and one of the objectives of IWRM/WE plans is to contribute to environmental sustainability and thus good ecosystem governance.

In order to secure the co-ordination of water management efforts across water related sectors, and throughout entire water basins, formal mechanisms and means of co-operation and information exchange need to be established. Such co-ordination mechanisms should be created at the highest political level and put in place in all relevant levels of water management. An IWRM planning process creates an environment where such coordination mechanisms can be forged and consensus reached among various stakeholders on appropriate governance structures.

2.1 The process

IWRM/WE planning is a cyclic process. This entails continuous review of the status at regular intervals in order to deal with new or additional priority water resources issues, management requirements and infrastructure requirements. The IWRM process is illustrated in Fig.1 as the "Integrated Water Resources Management Cycle". The cycle starts with the planning processes and continues into implementation of the frameworks and action plans and monitoring of progress. Stakeholders have to evaluate from time to time whether new reform needs have appeared or whether the reform process has led to the expected improvements. If the latter is not the case then the cycle must be repeated.

2.1.1 Feedback loops in the process cycle

Active stakeholder involvement is key, as is the commitment and practices of managing the process cycle, and should at any stage feed back to repeat some of the steps in the light of new developments. However, two feedback loops are particularly important in the planning cycle.

The first deals with prioritisation of the water resources issues and the status of the present water resources management system, including taking stock of those recent international developments of importance for the national water resources management process. Priority setting and commitment to reform requires political will, awareness to be raised and an active stakeholder dialogue.

The cycle illustrates that before priorities for reform can be agreed there may be need for reviews, extended dialogue, bringing in new stakeholders etc.

The second feedback loop deals with the process of preparing the strategy and, in particular, the “plan”. This requires extensive policy consultations and stakeholder involvement. It illustrates that the final action plans need political agreements on the highest political level, acceptance from the main stakeholders and raising the necessary financial means from domestic and international resources.

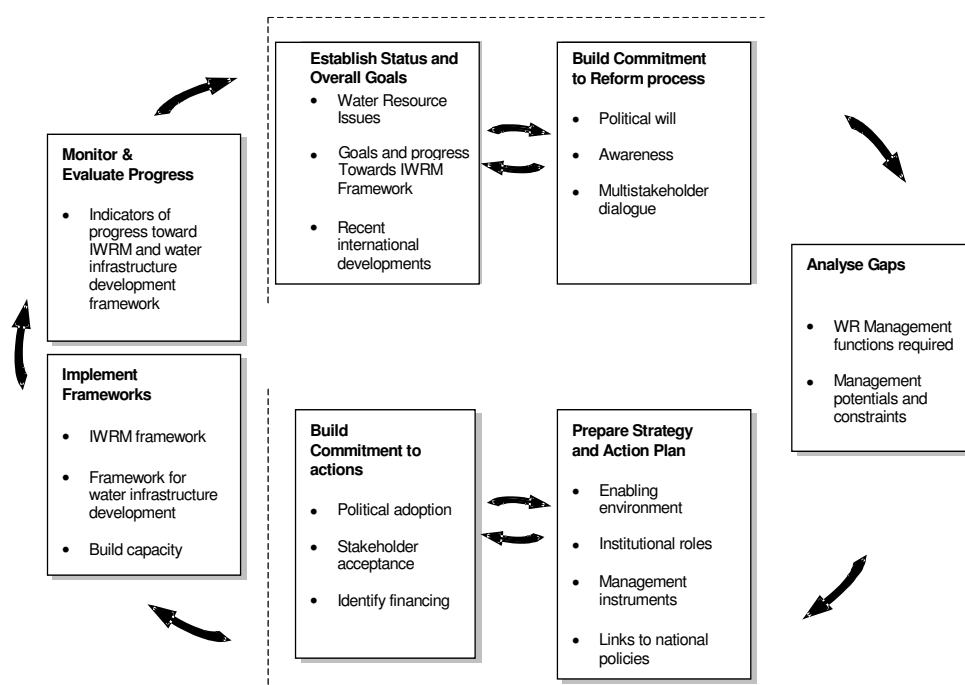


Figure 1 – The Integrated Water Resources Management Cycle

Source: GWP-TEC 10 background paper. IWRM/WE plans by 2005 Why, What and How

3. IWRM planning process in Malawi and Zambia: Lessons learnt

The on-going IWRM/WE planning process in Malawi and Zambia has generated considerable information and experience, which can contribute to the current body of knowledge on the issue of water governance. This is presented below. An attempt has been made in this paper to link the lessons learnt in the process to the proposed “triad model” by the CSIR.

Critical analyses of the lessons from the IWRM/WE Planning process also brings in other dimension to proposed elements of water governance; that of scale and the in-

terface between the various scales with the Science, Government and Society processes, and that of power relations. Who is eligible to make decisions at each scale and how these decisions are made and communicated are other important factors to water governance. The role of the media in water governance is also highlighted.

3.1 Government Process

Good governance requires the establishment of an enabling environment. IWRM is a political process and involves conflicts of interest that must be mediated through a good governance structure. A system with clear rules of accountability, participatory mechanisms and respect for law and obligations are pre requisite for a good governance structure. An appropriate institutional structure needs to be developed. Governments play a key role in the establishment of an enabling environment. They must also be the main regulators and controllers in the water sector with its associated infrastructure. Further, governments promote improvements in the public sector, regulate the private sector involvement, and decide on market mechanisms. But “water is everybody’s business” – a resource to be managed at the lowest appropriate level. It is governments working with civil society that must raise awareness of the importance of improved water resources management among policy makers and the general public.

Figure 2 below shows the process management structure in place for the IWRM/WE planning processes in Malawi and Zambia. Progress to date confirms that political support is critical to the IWRM Plan development process. Political support is crucial not only for political legitimization but also for ensuring that government, being the custodian of national development, takes ownership of the Plan and fundraises for the final implementation of the Plan. Large-scale mobilization of resources is required for implementation and this is only possible if the process has sufficient support from government.

In the IWRM/WE planning process, senior officials from government are participating actively in the project steering committees and some are also involved in the project management teams. In Malawi, tremendous political support exists with the Country Vice President, who was also also Minister of Water Development at the start of the project, having launched the project in 2004. The new minister of water development is also enthusiastic and has been closely following up on developments in the project.

In Zambia, a high level Cabinet Inter-ministerial committee is responsible for overall policy guidance of the water reforms and IWRM planning process. The Cabinet committee, chaired by the Minister of Water Affairs and Energy Development (MEWD), was constituted by Cabinet to provide cross-sectoral policy guidance to the Water Resources Action Programme (WRAP) funded by World Bank, NORAD and Dannida. By anchoring the planning process at this highest policy planning level, this has ensured that the strategies being defined are not only consistent to national policy but also address national priorities.

The IWRM/WE process management structure include directors and senior government officials from the water line ministries. These are part of the PAWD Core Team (PCT) whose primary responsibility is to ensure that the various components of IWRM in different sectors are integrated in the IWRM plan being developed. The PCT is basically the “Integrating committee” of the planning process. The project core team ensures that sector plans from their respective line ministries are taken into consideration. In Zambia, the PCT is chaired by the Director of Water affairs while in Malawi the

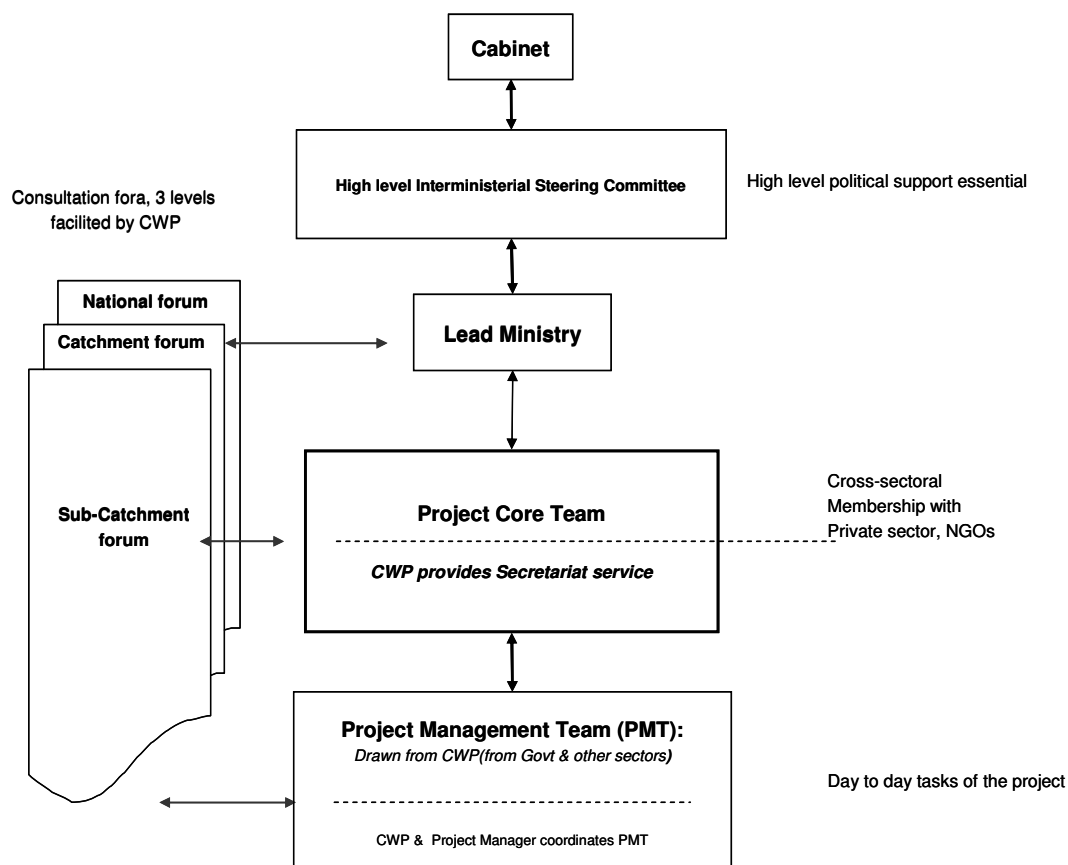


Figure 2 – PAWD process management structure, Source, GWPSA PAWD project document.

Contrary to the boundaries supposedly “created” by the proposed trialogue model, there are no distinct boundaries between government, society and science. The three clusters interact and overlap in the different project structures. Government is present in the stakeholder catchment fora, the PCT and also in the PMT, and so is science and society.

Stakeholders at the national scale dominate representation in the PAWD structures. To facilitate participation by stakeholders from the lower scales, both Malawi and Zambia have set up project structures at catchment and sub-catchment scales and have put in place mechanisms of communication among these different scales. This is shown in figure 2.

3.2 Society Process

Effective stakeholder participation depends on a conducive governance regime at the national level, which allows for equitable participation of society in the governance of water resources. Laws need to set out clear understanding between National, Basin and State level responsibilities as well as promote integration across sectors. In South Africa, a “good” water law with devolved responsibilities could not be implemented

effectively as the required decision making powers and resources and capacity at the lower levels did not accompany it (Manzungu, 2004).

Participation by stakeholders in water management programmes is required not only to build the necessary consensus for policy reform but also to promote more efficient and socially responsible water management strategies that benefit all sections of society, especially the poor and marginalized. Dialogues need to take place between the many stakeholders involved, government, civil society and private sector. Governments can only exercise their responsibilities of good water governance if they involve all relevant national (and if appropriate also regional/ transboundary) stakeholders in the dialogue when the framework is developed and implemented. Without stakeholder support, government efforts to implement the framework can easily be frustrated

In the PAWD project, consultation fora have been set up at three different levels in order to ensure legitimization and consensus on issues affecting stakeholders. Both countries have set up these fora at National, Catchment, and Sub-catchment scale. These stakeholder fora include local government leadership, traditional leaders, and representatives of NGOs, CBOs and private sector institutions active at the local level.

These structures are part of the process management structure shown in figure 2 and while they may be taken to represent Society in the "governance dialogue", Society is not homogenous and the issue of power among different players is critical. Stakeholders hold different interests largely determined by the stake they hold and this may translate in power. Balancing participation among different stakeholders in society is part of the facilitation role of GWP and it involves mediation and negotiation as conflicts among stakeholders arise. Operational guidelines have also been in place and these highlight who is eligible to make certain decisions (power) and how such decisions should be communicated.

3.3 Government-Society Interface

3.3.1 Stakeholder Participation

Lessons from the IWRM/WE planning process confirm that stakeholder participation is critical to IWRM plan development process as it provides for consensus and legitimization of the process.

A multi-stakeholder platform comprising of stakeholders, beyond water practitioners, is important for effective stakeholder representation. Effective stakeholder participation depends on a conducive governance regime at the national level, which often lies outside the purview of water practitioners (Manzungu, 2004). GWP's country water partnerships have been instrumental in bringing various stakeholders to neutral platforms.

The multi-stakeholder platforms in both countries have established multi-sectoral steering committees to spearhead the development of the plan, refer to figure 2 above. The membership of these steering committees includes line water ministries such as agriculture, environment, local government, finance, natural resources, etc. Other members include NGOs, academic and research institutions and community representative organizations such as farmer associations. The value of the CWP platform lies in the fact that stakeholders are brought to the round table at par with each other, which enables open discussions on issues that affect them.

The membership profile in the CWP and project structures highlight the lack of separate clusters as proposed in the dialogue and reinforces the fact that the clusters are not distinct but overlap.

3.1.2 Engaging the media

Another key lesson is the critical role that media can play in the water sector. Awareness rising has been a crucial part of the project. In Malawi, the MWP organized a media workshop on the PAWD project prior the launch of the PAWD project. Journalists from both print and electronic media attended the workshop. This enabled them to aptly discuss the value of water in economic development in their publications and the critical role of multi-stakeholder platforms such as the MWP. The MWP has since received widespread coverage with several institutions requesting to join the MWP and be part of the PAWD programme (Chipofya, V. 2005, pers. Comm). The media is thus a critical partner in the government-society interface and plays the role of "messenger" in transmitting and promoting flow of information from government to society and vice-versa, and across the different scales. The media also plays a fundamental role in facilitating debate among stakeholders on the different issues related to governance such as accountability, transparency, inclusiveness, etc. and also critiquing the consequences of certain strategic alternatives for water governance.

3.4 Science process

A critically important element of IWRM is the integration of various sectoral views and interests in the development and implementation of the IWRM framework. Integration should take place within:

- The *natural system*, with its critical importance for resource availability and quality, and
- The *human system*, which fundamentally determines the resource use, waste production and pollution of the resource, and which must also set the development priorities and control associated infrastructure

Integration within the natural system concerns for instance the integration of land and water management, surface and groundwater, upstream and downstream water related interests recognizing the full hydrologic cycle. Public pressure caused by e.g. lack of safe and affordable drinking water and basic sanitation, pressure from national economic sectors like energy and agriculture due to lack of water for development, transboundary conflicts and crises and international agreements on water all justify the importance of Science and research for new and innovative and of improving water resources management. Water scarcity and deteriorating water quality have been or will soon become critical factors limiting national economic development, expansion of food production and/or provision of basic health and hygiene services to the population. The recognition of the need to redress these weaknesses in their water governance structures has convinced many countries that a new water management framework, which recognizes the important contribution of science, is needed. Other common critical issues include:

- *Inappropriate pricing structures* and hence limited cost recovery resulting in inefficient operation and maintenance of water systems, as well as in misallocation and loss of water
- *Inadequate Information and data* to support sound management of water

- *Water degradation, health and loss of productivity.* The often quoted global figures of 1.2 billion people without access to clean water, and more than double that amount without proper sanitation is among the prime causes of one billion people being annually affected by water-borne diseases primarily in the developing countries.
- *Soil degradation and loss of productive land.* The way water is managed in coordination with land management has significant effects on agricultural production. Deficient management will often result in erosion, salinization and destruction of soil structure. Soil degradation presently affects 30% of the world's irrigated lands, 40% of rainfed agricultural lands and 70% of rangelands (UNEP, 1991). Total agricultural productivity losses are experienced. Further decline in productivity will occur as new areas are no longer readily available as replacement.
- *Risk management, floods and droughts.* Economic losses from floods, droughts and climate variability are experienced at a very large scale globally. The drought in Zimbabwe in the early 1990s entailed a 45 % decline in agricultural production and an associated 11% decline in gross domestic product (GDP) (GWP Tec 10, 2004). El Niño floods (1997-98) caused an estimated economic loss exceeding 1.7 billion USD in Kenya and 2.6 billion USD in Peru. Mozambique suffered a 23% reduction in GDP following the floods in 2000. In Zambia, Agriculture sector share in GDP decreased from 16% in 1991 to 8% in 1992 mainly due to drought (Hunt. S et al, 1994) while in Malawi, GDP declined by 7.9% as result of the 1992 drought (Malawi Economy, 2006)

Adopting an integrated approach that takes into account the Science process including risk management, prudent coordinated management of land and water; monitoring, forecasting and contingency planning is important to inform decisions aimed at alleviating grave economic consequences such as above.

In the IWRM planning, the role of science is critical in providing IWRM planning guidance material through the GWP Technical committee, GWP-Tool box, Cap Net and Water Net. These are key players in the planning process. Water Net comprises about 40 academic institutions within the SADC region and these provide a body of scientific knowledge to tap from.

3.5 Science-Society Interface

As mentioned earlier, there are no distinct boundaries among the three clusters proposed in the trialogue model. Membership of PCT includes academic and research institutions as well. In fact the IWRM/WE process is hosted by academic institutions, Malawi Polytechnic and University of Zambia. Other academic institutions are involved at various levels of the project management and these are key in providing science based guidance and contribution to the planning process.

3.6. Government-Science Interface

The PCT comprising of government, civil society and academic institutions provides a platform for active interaction between the government and academic institutions.

The above sections clearly demonstrate that the governance "trialogue" comprising of Government, Science and Society is at play in the GWPSA IWRM/WE planning facilitated process. The IWRM/WE process management structure in place (figure 2) provides for the interface of the three clusters: Government, Science and Society. The

boundaries, as proposed in the model, are not explicitly there and the issue of power as an implicit element is important.

4. Discussion

This section argues that, while governance may be seen to be dependent on three main clusters; Government, Society and Science and the interactions among them, Scale and power are other important elements that should be factored in the “governance triad”. IWRM Plans are being developed for river systems and natural resources at the national scale, confined to national boundaries. However, the trans-boundary nature of water resources implies that external factors, existing at different scales within and beyond national boundaries, are important aspects to be considered. Interactions across the different scales is important and so is the issue of power relations among players at a given scale and also between different scales. The way decisions and information is communicated from central government to local government and vice-versa or from the catchment to the sub-catchment scale is crucial to good water governance. International conventions, protocols, declarations and targets such as the 2015 MDGs are some of the factors beyond the national scale that have a strong influence on the IWRM Planning process.

4.1. Importance of International scale

The SADC Protocol on Shared Watercourses is one case in point that both Malawi and Zambia have taken under consideration. The issue of harmonising these national plans with the plans among riparian states of the Zambezi Basin has often come up. The countries are cautious of the obligations of riparian states as espoused in the SADC Protocol (SADC, 2000). The Plans were also born out of the 2002 World Summit on Sustainable Development (WSSD) in Johannesburg, South Africa where in the international community agreed that all countries should prepare IWRM/WE plans by the year 2005. While the 2005 target has generally been accepted to be an ambitious target, both Malawi and Zambia maintained that they wanted to develop the plans by 2005 even when it was clear that the target was ambitious. Both countries however only managed to have draft plans by the end of 2005. The insistence by these countries to meet the 2005 target as called for by the WSSD international community, is an example of how processes at the international scale influence governance at the national level. The IWRM plans are by themselves international commitments that seek to accelerate efforts towards achievement of the 2015 MDGs. Consequently both Malawi and Zambia have proposed to structure the IWRM plan towards the 2015 target and 2025 in accordance with the SADC Vision for Water, Life and the Environment. (Hollingworth et al, 2005)

Other examples of process at the global/international scale that influence water governance at the national scale include, Agenda 21 of 1992, the Dublin conference in the same year, gave birth to IWRM, the World Water Forums have contributed to calls for water and environmental planners and managers to promote IWRM approaches. (Varady, R., 2003). Agenda 21 is a comprehensive plan of action to be taken globally, nationally and locally by organizations of the United Nations System, Governments, and Major Groups in every area in which human impacts on the environment. These processes have contributed to national water and ecosystem governance programs by influencing national water and environmental policies.

In fact Zambia has also embarked on revising the 1994 national water policy and one of the objectives of the current revision is to align the policy to current international agreements (MEWD, 2005). In Malawi, stakeholders at a national consultative meeting called for the revision of the 1969 Water resources Act so as to, among other things, align it with current international developments for water resources management (MWP, 2005). This is being pursued in the Malawi PAWD process.

The influence of international process on national processes shows the complexity of ecosystem governance and the fact that governance involves interaction of processes across different scales, both vertically and horizontally.

Further, within the PAWD management structures in GWP, linkages with the key partners at a global regional and national level have been extremely useful to the development of the PAWD project. Project Management Teams for the entire programme have been set up from global to country level, see figure 3.

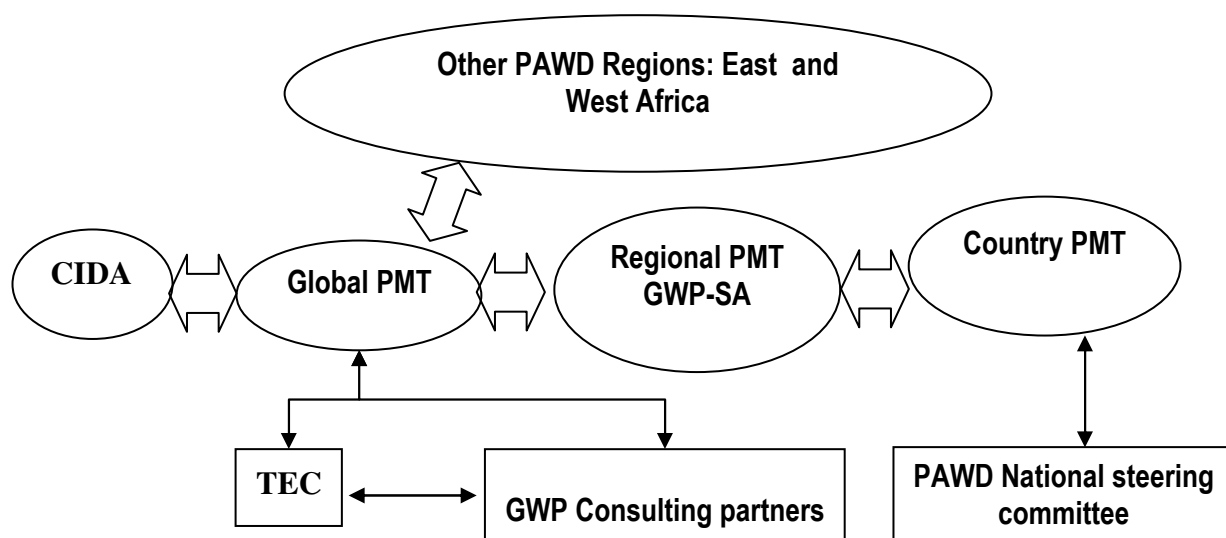


Fig. 3: Schematic PAWD management structure, global to country level

Being part of the GWP international global family has also added value and benefits to the availability of critical information whilst developing the Plan. Guidance is critical and at global level the GWP Technical Committee (TEC), through active interaction with the PAWD teams from the countries involved in the project, has produced a handbook titled *Catalyzing Change: A handbook for developing integrated water resources management (IWRM) and water efficiency strategies* (GWP-Tec, 2004). Such guidance ensures that countries interacting with the larger global family benefit from global knowledge. Also, as new lessons and experiences are captured in the process, these are shared with the whole global family through the GWP IWRM Tool Box and made accessible to the teams involved in the project. Capnet, a GWP capacity building Associated Programme (AP), has developed training materials for IWRM Planning based on the experiences of countries in the PAWD project and in conjunction with Waternet conduct training courses on IWRM planning. (Cap Net, 2005). Gender and Water Alliance (GWA), working with GWP at the global level has also developed training guidelines for mainstreaming Gender in IWRM (CAP-NET, GWA, 2006). This information is also being used by the teams in both Malawi and Zambia.

4.2 Importance of power relations

The importance of power in governance can not be overemphasized. One school of thought on governance advocates that governance is fundamentally about power, relationships and accountability: who has influence, who decides, and how decision-makers are held accountable. (Graham, 2003). Within the PAWD project in Malawi and Zambia, PAWD operational guidelines have been put in place to primarily regulate power relations among different stakeholders involved in the planning process. The guidelines serve as control mechanism on who has the power to make decisions. These guidelines also articulate how stakeholders are to be chosen and who makes the choices. When decisions are made at country level, the guidelines stipulate that such decisions should be communicated to stakeholders through the CWP coordinator who is also responsible for communicating to the regional GWPSA office. At the regional scale, GWPSA regional office is part of the national project steering committees. The regional office represents the Global project management team in Sweden that is responsible facilitating the process globally. Both Malawi and Zambia are part of a global family (International scale) that has strong influence on the development of the Plans. Lessons emerging from the planning process have confirmed the importance of accounting for power relations. In both Malawi and Zambia, governments have applauded the CWPs for being able to bring stakeholders from different backgrounds to dialogue on important water governance matters (MEWD, 2006), (MoD, 2004). While the CWPs have this responsibility and seem to ostensibly have the power to bring stakeholders together, governments take the lead in matters of policy and thus have the power to provide strategic direction. The dynamics of power are however not static as stakeholders ultimately want to feel that government is making correct decisions and is accountable to the stakeholders. In Zambia, several stakeholder consultations have been conducted on the water resources bill and while government has the ultimate responsibility of legislating the bill into law, stakeholders feel that the bill cannot be legislated into law until they have been adequately consulted.

Another example on accounting for power relations can be seen from the negotiations on signing the Zambezi River Basin Commission (ZAMCOM) agreement for management of the basin among the eight riparian states; Angola, Botswana, Malawi, Mozambique, Namibia, Tanzania, Zambia and Zimbabwe. The Government of Zambia was the only government of the eight riparian states, that did not sign the ZAMCOM agreement in 2005 citing the need to further consult with national stakeholders (Chola, P.2005 pers. Comm). In Malawi, a national workshop on IWRM sensitization for permanent secretaries failed to take off at first because the invitation letter to other permanent secretaries had initially been written by the Permanent secretary in the ministry of water and irrigation development. When the same letter was written and signed off by the secretary to Cabinet, twenty nine out of thirty-three permanent secretaries in the country attended and participated in the workshop (Chipofya, V. 2004, pers. Comm)

The above clearly shows the dynamic nature of power in water governance and in this instance, while governments have the power to legislate; stakeholders have the power to legitimize.

5. Conclusion

Management in an effective governance system would need an integrated approach where the needs and demands of all water users are provided for and consequences for the water resources taken into account in decision-making process in all sectors of society. While the main clusters of Government, Society and Science as proposed in the triaologue, provide an important framework for such an approach, the model is simplistic in that the fundamental interplay across scales, especially vertical, is "hidden" and yet interaction of processes across scales is a fundamental component of water governance as highlighted in the IWRM planning process. The transboundary nature of water resources requires effective interactions across different scales within and beyond national boundaries. International conventions, protocols, declarations and targets such as the 2015 MDGs are all factors at the international scale that have a strong influence on the IWRM Planning process. The issue of scale is thus an important element that should be factored in the governance triaologue.

Power is another important factor that need to be factored in the triaologue. The way in which decsisions are made and who has the power to do so, relationships and accountability: who has influence, and how decision-makers are held accountable, are important elements not clear in the triaologue.

From the IWRM/We planning process, it is clear that issues of scale and power are important elements of governance. Further, while the main clusters (Government, Society and Science) and their corresponding interface come out in the on-going IWRM/WE planning process, they are not exclusively separate and in some cases, these are mutually intertwined.

References

- Cap Net, 2005. *Integrated Water Resources Management Plans*, training Manual and Operational Guide, Netherlands
- Commission on Sustainable Development (www.un.org/esa/sustdev/csd/csd12/)
- CAP-NET, GWA, 2006. *Why Gender Matters: a tutorial for water managers. Multimedia CD and booklet.*
- CAP-NET International network for Capacity Building in IWRM, Delft
- Chipofya, V. 2005. *GWPSA regional capacity building workshop, personal communication.* Professor Victor Chipofya is coordinator of MWP.
- Chola P. 2005. ZWP/PAWD national consultative workshop, personal communication. Mr. Peter Chola is the deputy director in the Ministry of Water and Energy Development (MEWD) in Zambia.
- GWP-TAC, 2000. *Integrated Water Resources Management*, GWP Technical Committee, Stockholm, Elanders Infologistics vast Press, Sweden
- GWP-TAC, 2004. *Integrated Water Resources Management and Water Efficiency Plans by 2005*, GWP Technical Committee, Stockholm, Elanders Inforlogistics vast Press, Sweden
- GWP-TEC 10, 2004. *Integrated Water Resources Management (IWRM) and Water Efficiency Plans by 2005, Why, What and How?* Stockholm, Elanders Infologistics vast Press, Sweden
- Global Water Partnership IWRM ToolBox (www.gwpforum.org)
- GWP-Tec, 2004. *Catalysing Change: A Handbook for Developing Integrated Water Resources Management and Water strategies.* Stockholm, Elanders Infologistics vast Press, Sweden.
- GWP, 2000. *Global water dialogues for water governance*, Elanders Infologistics vast Press, Sweden ...

- GWP-SA, 2000. Southern Africa Vision for Water, Life and the Environment in the 21st Century. Harare. GWP SA
- GWP-TA, 1999. Integrated Water Resources Management - GWP Technical Committee (TEC) Background Paper No. 4 (www.gwpforum.org)
- Hollingworth, BE and Chiramba, T (eds), 2005. Implementing the SADC Regional Strategic Action Plan for Integrated Water Resources Management (1999-2004): lessons and Best practice. SADC,GTZ,Inwent.
- Hunt, S., Kaite, C., Kasonde, T. & Campbell, E. (1994). Nutrition and Food Security. Analysis of the Zambia Priority Survey I. Food Studies Group, Oxford University
- Malawi Economy, 2006. The Encyclopedia of the Nations, (www.nationsencyclopedia.com)
- Manzungu E, 2000. Towards effective Stakeholder Participation for improved Governance of Water Resources in Southern Africa, CASS, Harare Zimbabwe
- MEWD, 2006. Letter to the GWP Executive secretary Mr. Emilio Gabrealli from the Government of Zambia; GWP continued support to IWRM planning in Zambia.
- MoD, 2004. Letter to the GWP Executive secretary Mr. Emilio Gabrealli from the Government of Malawi; GWP support towards the WSSD target in Malawi.
- SADC, 1998. Regional Strategic Action Plan for Integrated Water Resources Management. Maseru. SADC.
- SADC, 2000. The Revised Protocol on Shared Watercourses. Gaborone. SADC.
- SADC, 2000. Protocol on shared watercourses systems in Southern Africa Development Community (SADC). Signed in Windhoek on August 2000. SADC Gaborone.
- SARDC, 2000. State of the Environment, SARDC publications, Harare
- Robert G. Varady, 2003. Global Water Initiatives: Observations on their Evolution and Significance. Presented at the Third Annual Meeting of the International Water History Association (IWHA. University of Arizona, Udall center for studies in public policy.
- UNEP, 1991. Status of Desertification and Implementation of the United Nations Plan of Action to Combat Desertification UNEP, Nairobi.
- WWF, 2003. Third World Water Forum - Kyoto 2003 (www.world.water-forum3.com/)
- WSSD, 2002. World Summit on Sustainable Development Plan of Implementation, 2000. Johannesburg (www.johannesburgsummit.org)

Biopolitics, climate change and water security: impact, vulnerability and adaptation issues for women

Nidhi Tandon

abstract

This *article* is not intended to be alarmist but its message is urgent. Its observations are fairly straightforward – it examines how climate change will impact on water security¹, from both the supply and the demand side and how the African continent is especially vulnerable. Its core premise is that one important factor is to ensure that women have the necessary information, tools and resources to plan and take decisions around water security as it pertains to current and future needs. The paper's focus is the African continent, with examples drawn from other developing countries. Its recommendations are extracted from workshop experiences in the field.

keywords

climate change, water security, poverty, drought

The world over, the increased degradation of ecosystems, excessive consumption of water, contamination and salinisation of water-bearings, aquifers and dams, along with the impact of extreme poverty have been worsened by the privatisation of water utilities.² The resulting catastrophe has had profound effects on the availability of drinking water and, consequently, has led to the violation of the right to life, safety, food, health and education of millions of human beings. Climate change compounds the complexity and costs of ensuring water security,

particularly in countries and regions with difficult 'hydrologic legacies'³. This *article* will consider:

- What needs to be done at community levels to enable women to articulate their needs and priorities as the drawers and managers of water;
- Why it is important for women to urgently get involved in the protection of water in solidarity with each other;
- How women are adapting to change at the local level and the implications for local, national and international water policies.



MANOCHER DEGHATI, IRIN

By putting a price on water, one is de facto putting a monetary value on life.

'*Faa yalo dzwaa gbe*' (Ga, Ghanaian dialect). Translated literally, this Ghanaian proverb suggests that the one who fetches water (from the river or community water source) is also the one most likely to break the water vessel. To interpret the proverb further, it serves as a reminder that those responsible for fetching water are also responsible for the safe delivery of that water and presumably for the judicious allocation of that water – from farming to cooking, drinking, washing and storing. The water fetcher might also be the most keen to protect her water source. In other words, breaking the pot is only one of many issues she might be concerned about.

A water sketch

Climate change will have an impact on water security in Africa, although the severity of the

impact is not certain. Climate change scientists suggest that total global precipitation is likely to increase during the next century, although this will not be uniform across the world. At the same time, global warming could further reduce water availability in those areas that already suffer from water stress or water scarcity.⁴ It will also lead to an increase in water variability, rising sea levels and floods.

Hydrological variability and extremes are the main challenge of maintaining water security. This will require significant adaptation, particularly by countries that lack the infrastructure and institutions to store, manage, distribute and deliver their water resources. Industrial and municipal demand will also be affected through the increased flow of migration of people from water scarce regions.

The World Commission on Water estimates that water use will increase by about 50% in the next 30 years. An estimated four billion people (half the planet) will at this time live under conditions of severe water stress, with conditions especially acute in parts of Africa, the Middle East and Asia. Compounding the relative scarcity of water is the continuous deterioration in water quality in most transition and developing economies.

The UN's Intergovernmental Panel on Climate Change (IPCC) (2007) predicts that climate change will have a graver effect on Africa than on any other continent – with drylands bordering deserts getting drier and wetlands bordering rainforests getting wetter (see map on page 9). In the dryland areas, of the 800 million people living there, it is estimated that up to 250 million people will face water shortages by 2020. Given that research data from the continent is, for the most part, unreliable, these estimates do not provide a clear picture of what level of water shortage can be expected

As it is, desertification affects 46% of Africa, and the Sahara is expanding slowly. The IPCC's most recent report provides some broad indication of the kinds of change we can expect to see (IPCC, 2007). Selected facts include:

- a) In the Sahelian region, warmer and drier conditions have led to a reduced length of growing season with detrimental effects on crops;
- b) In southern Africa, longer dry seasons and more uncertain rainfall are being recorded;
- c) Sea level rise and human development are contributing to losses of coastal wetlands and mangroves and increasing damage from coastal flooding;
- d) At lower latitudes, especially seasonally dry and tropical regions, crop productivity is projected to decrease for even small local temperature increases (1-2 degrees), which would increase the risk of hunger;
- e) Poor communities are especially vulnerable,

in particular those concentrated in high-risk areas. They tend to have more limited adaptive capacities and are more dependent on climate-sensitive resources, such as local water and food supplies.

At the same time, the UNDP's Human Development Report (2006) says in no uncertain terms that inequalities based on wealth and location play a major role in shaping water markets. The poor who pay the highest price for water systems are the most vulnerable in a water crisis. For the poorest families of sub-Saharan Africa, fees to connect to piped water exceed more than a year's income, for example.

The biopolitics of water

'Unlike geopolitics, which views nature exclusively as strategic resources, biosphere⁵ politics views the environment as the irreducible context that sustains all of life and sets the conditions and limits for all other human thought and activity. In the biospheric era, the exploitation of nature gives way to a sense of reverence for the natural world and a sustainable relationship with the environment.' (Rifkin, 1991:4)

Seen in this context, biopolitics is about the location (supply) of water, the ownership of (control over) water and about access (rights) to water – and the implications of these relationships with water on life as a whole.

The biopolitics of water is complex and uneven. It is complex because life depends on water. By putting a price on water, one is de facto putting a monetary value on life. It is uneven, because access to water often reflects socio-economic inequalities, including land ownership. In today's world, a single child's access to clean water teeters between, on the one hand, the universal management of a global common good and, on the other hand, more and more regulation



JULIUS KIMELU, IRIN

Global warming will lead to an increase in water variability, rising sea levels and floods.

by social and economic interests over a highly localised private good.

At the micro level of biopolitics, the subsequent allocation of this resource is very much about a series of 'life' decisions that, in many developing countries, have critical gendered aspects and ramifications.

Where there is water scarcity, the biopolitics of water is even more complex. How do we ensure that those who have no voice and few means have an equal claim to water? In a situation of climate volatility, supply of and control over water is made further acute – climate governs the weather, weather dictates water distribution and water distribution controls life (Leonard, nd).

Water makes up one of the three largest industries in the world (alongside oil, gas and electricity). Investor deals in infrastructure,

including water and sanitation systems, soared to \$145bn in 2006 (CARE, 2006). The Summit Water Universe in 2005 was composed of 359 companies with \$661bn of market value. In other words, those with the capital and the means regard the water sector as a high potential investment opportunity and will continue to prescribe market remedies and privatisation solutions for water scarcity into the next millennium.

In a world dominated by finance capital and high technology solutions where power and wealth is concentrated in the hands of the very few, how do we ensure that real water needs are not compromised by speculative profit motives? Global household water requirements are miniscule compared to water use in industry and agriculture. Even more miniscule by comparison are the water

consumption rates of poor households in Africa. In light of this, how realistic is it to suppose that women in African countries might stand a chance in negotiating rights over their meagre water needs?

One aspect of water biopolitics is the trade in virtual water. Virtual water is the amount of water embedded in food produce and other products through their production. For instance, producing one kilogram of wheat requires about 1,000 litres of water. In other words, there is a virtual flow of water out of the producing country that needs to be factored into the export of crops or commodities. In some instances, industries are literally draining away local water resources. The Lake Naivasha area in Kenya, for instance, is home

Electric pumps are used to draw water from Lake Naivasha to irrigate the farms, and this is threatening the lake's very existence

to huge flower farms that export their produce to lucrative European markets. Electric pumps are used to draw water from Lake Naivasha to irrigate the farms, and this is threatening the lake's very existence (O Ogodo and J Vidal, 'The African paradise ravaged by roses', *The Guardian*, 14 February 2007).

'The human census in 1969 showed just 27,000 people living in the surrounding areas. Today, the population is nearly 300,000, and security guards patrol the few paths left open for local people and animals to get to the lake. Naivasha, officially 130 square kilometres, shrank last year to about 75% of its 1982 size, and the great papyrus swamps that were the breeding grounds for fish have been largely cut down. The undulating hills around the lake have few trees left' (O Ogodo and J Vidal, 'The African paradise ravaged by roses', *The Guardian*, 14 February 2007).

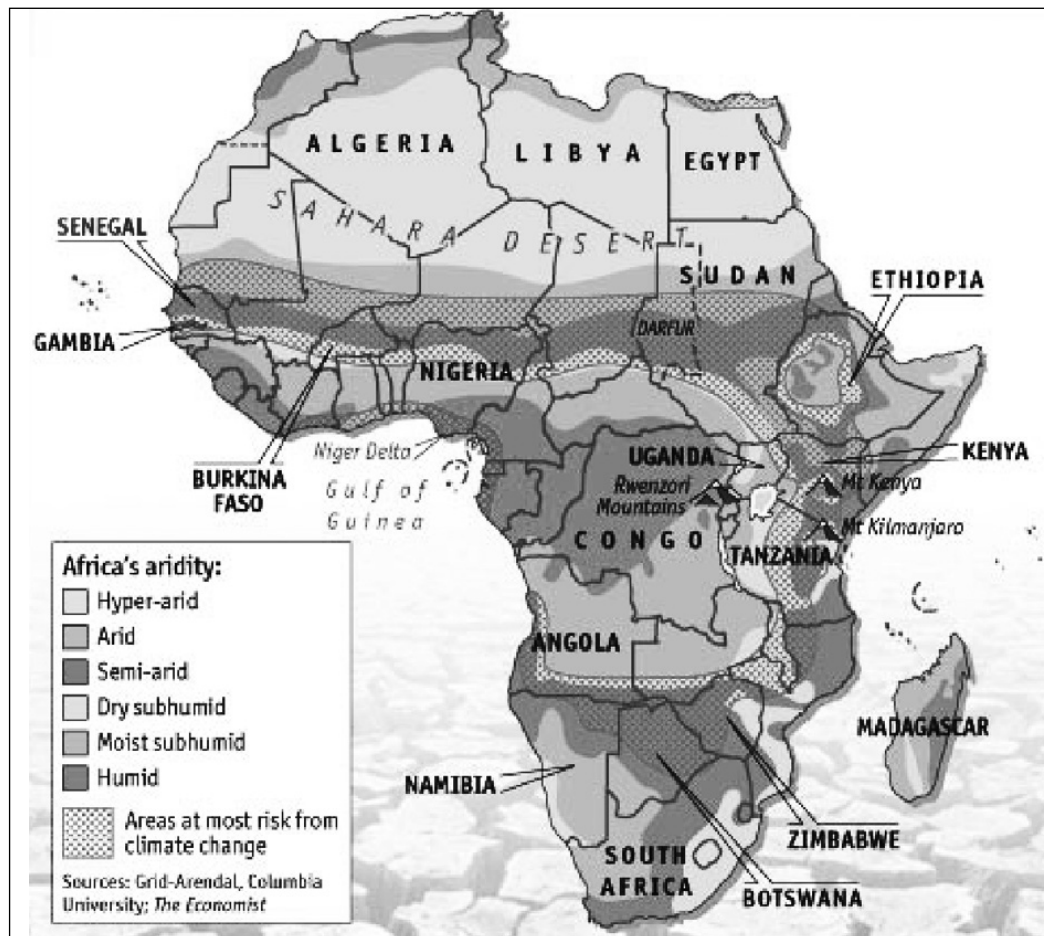
According to conservationists and ecologists, the

lake could be little more than an African Aral sea – a turbid muddy pond – in about 20 years time. The most visible changes to the lake in the last 30 years and the cause of much of its problems are the giant sheds and greenhouses of more than 50 major flower farms that line its shores and the settlements of people who have flooded into the area since the global flower industry moved in. Naivasha is now Europe's prime source of cut flowers and, to a lesser extent, vegetables, which are grown on more than 50 square kilometres of land around the lake in the open and under 2,000 hectares of plastic (O Ogodo and J Vidal, 'The African paradise ravaged by roses', *The Guardian*, 14 February 2007).

Britain imported 18,000 tonnes of flowers from Kenya in 2005, nearly twice the amount it imported in 2001. There are no publicly available figures for how much water the companies extract from the lake but they are conservatively estimated to take at least 20,000 cubic metres of water a day on average. A combination of climate change, which is increasing the severity and frequency of droughts, and the over-extraction of water is now stretching the lake to its limits. 'Last year, we could walk right into the heart of the lake through the mud. We are literally watching over the lake as it makes its last kicks', said a security guard at one of the biggest flower farms (O Ogodo and J Vidal, 'The African paradise ravaged by roses', *The Guardian*, 14 February 2007).

Sometimes the virtual drain of water is less obvious. In Varanasi, India, for instance, a community-led movement is now in its fifth year demanding the closure of the local Coca-Cola plant which continues to further deplete an already dangerously low water table (India Resource Centre, 2007).

Another aspect of the biopolitics of water is geo-political. Water basins are often shared between different countries (Leonard, nd). Water does not follow political boundaries, but political boundaries quite often are drawn along water



Source: The Economist, 12 May 2007

lines. Africa has the greatest number of rivers that cross or form international boundaries than any other continent. Ten river basins flow through 33 sub-Saharan countries and Egypt.

Few of the trans-boundary river basins in the region are effectively jointly managed.⁶ Effective management would require treaties, political commitment, institutions, capacity, information and finance. Over the past decade, international river basin management protocols have developed, including the Southern Africa

Development Community Protocol on Shared Waters, the Niger Basin Authority and the Lake Victoria Fisheries Authority. However, river basin authorities as yet have no legal framework for ensuring equity in access to and accountability for water supply and water quality management. Diversion projects continue with the justification that those who use the most water deserve the biggest share.

Those of us who witnessed the impacts of 'economic structural adjustment' in the 1980s

will recall how long it took before Western donors and the established aid institutions understood that structural adjustment should, after all, have a 'human face' and that this human face was primarily a woman's face. Is there a parallel to be drawn here?

Current economic models based primarily on privatisation strategies do not include accountability in terms of meeting peoples' basic needs. How can we ensure that the 'wide lens' view of scientists and meteorologists, of planners, policy makers and politicians and of investment capital and grant funds focus also on the immediate 'human face' of climate adjustment – those on the ground, at the pumps, in the fields, those caring for the young and feeble?

Gender, poverty and water vulnerability

Women make up 70% of the world's poor. Their vulnerabilities are further accentuated by race, class, ethnicity and age. When natural disasters and dramatic environmental shifts take place, women and men are affected differently because of their different social roles, responsibilities and access to support. In Zambia, for instance, women and youth contribute 70% of agricultural labour, but they have little access to productive assets and are marginalised in the decision-making processes at both the household and community levels. These gender differences become more acute when productive resources are eroded, making female- and youth-headed households the most vulnerable of the rural poor (Government of Zambia, 2004).

Women are the most affected by water stress – more than half of the 1.2 billion people who do not have access to water worldwide are women and girls. In most developing countries, women are responsible for water management at the domestic and community level. It is estimated that women and girls use more than eight hours a day travelling between 10 and 15 kilometres to

transport between 15 and 20 litres of water on each trip.

Men, especially in rural areas, do not play the role of getting or carrying water. Their relation with water has more to do with agricultural work and with the storage of water. This gender-determined inequality has implications to women's daily life from a rights-based perspective, since the carrying of water not only causes them physical disorders but also makes it impossible for them to make time for education, income generation, politics and recreation. According to a report from the Women and Environment Development Organisation (2007:2),

'women use vegetation and forests for medicinal plants, food and fuel as well as for income generation, but these ecosystems rely on a healthy water supply. As the environment deteriorates, women's livelihoods become increasingly vulnerable. [...] Access to toilets has a huge impact on women; in many communities women walk a long distance to use facilities, often risking personal safety – there is an increased incidence of sexual and physical assault when toilets are in remote locations. In rural areas where toilets may be unavailable, deforestation and loss of vegetation have forced women and girls to rise earlier and walk further in search of privacy. Toilets are also unavailable for vast numbers of poor women who work in urban centres. About one in ten school-age African girls do not attend school during menstruation or drop out at puberty because of the absence of clean private sanitation facilities in schools'.

Long-term and persistent drought also impacts women more acutely. Tens of thousands of at-risk people migrate across traditional tribal and political boundaries in search of food and water in countries worst affected by drought, such as Djibouti, Ethiopia, Somalia and Kenya, where



MARIA FONT DE MATIAS, IRIN

Climate change is increasing the severity and frequency of droughts.

close to eight million people live. This migration further exacerbates existing competition over scarce grazing areas and water – provoking further inter-clan conflict, with women risking further gender-based violence.

An Oxfam (2005) report on the impact of the 2005 Asia Tsunami reported that the majority of those killed and least able to recover were women (many drowned simply because they had never learnt to swim). In Aceh, Indonesia's largest city, located in Sumatra, for example, more than 75% of those who died were women, resulting in a male-female ratio of 3:1 among the survivors. As many mothers died, there were major consequences with respect to infant mortality, early marriage of girls, neglect of girls' education, sexual assault and trafficking in women and prostitution (Oxfam, 2005)

Adjusting to climate change

Climate change has occurred several times in our recent history. It has happened frequently, with long-term effects and with flora and fauna changing as a result. People's living patterns 6,000 years ago and in the 20th century, for instance, contributed to conditions necessary for sea surface temperature (SST) to cause dramatic land conversion in North Africa. According to the IPCC (2007), a combination of factors – including vegetative cover, soil moisture and SST – best explains the ancient and modern droughts of the Sahel and the desertification of the Sahara. Those living in semi-arid regions develop coping strategies and local knowledge systems to survive through long drought periods where supplies are limited.

An International Institute for Environment and

Development (Toulmin and Hug, 2006:1) report states:

'The West African Sahel, a belt of semi-arid land lying along the southern edge of the Sahara desert, shows what "adaptation" means in practice. Since the late 1960s, the Sahel has experienced a 25% decrease in rainfall combined with several harsh drought years. In response, farmers have shifted to shorter cycle varieties of millet and maize and abandoned crops like groundnuts that need higher rainfall. Livestock have been herded further south, away from the desert margins and into settled, cultivated areas where a new accommodation between animals and crops must be sought. Wells have been dug and small dams built to provide for gardens of onions, tomatoes and mangoes for sale. Many farmers have also moved southward, seeking land in better-watered areas. Since the late 1960s, five million people from Burkina Faso and Mali have migrated south to neighbouring Côte d'Ivoire. Much of the civil strife there today stems from the uneasy relations between incomers and local people and the growing shortage of land in a region where it had formerly been considered in endless supply.'

What is vital to understand is not the *degree* of climate change that we should expect, nor necessarily the impact that we might anticipate on water resource management, coastal defence, food security, species survival, etc. What is important to grasp is that we *do* have the ability to adapt and adjust to the changes that climate change will bring, and often it is communities at the frontline of change and a direct relationship with the land who adapt first. It is less a question of when and more a question of how and who. IPCC (2007:18) makes the following observation:

'Sustainable development can reduce vulnerability to climate change by enhancing adaptive capacity and increasing resilience. At present, however, few plans for promoting sustainability have explicitly included either adapting to climate change impacts or promoting adaptive capacity. On the other hand, it is very likely that climate change can slow the pace of progress toward sustainable development, either directly through increased exposure to adverse impact or indirectly through erosion of the capacity to adapt.'

The emphasis then is that 'sustainable development' means that we need to be proactive and deliberate about focusing on the adaptive capacity of societies to respond to climate change. Policymakers and practitioners alike have a responsibility to ensure that any work with community organisations on rural development and infrastructure issues, resource management issues and development policy in general should be built on efficient use of conservation information and knowledge, on proven risk management practices and on sharing local experiences and lessons learnt. It is an ongoing dialogue.

This is easier said than done, especially as women are so often excluded from the mainstream dialogue. Considerably more investment of time and money is needed to support comprehensive workshop-based, peer-to-peer meetings, to invite more women to explore the issues on their own terms.

'I will transform my lifestyle in the way I farm and think'⁷

Organic farming workshops held for small-scale farmers (all women) in the Caribbean region are one example of adaptation. These hands-on customised training programmes accompany the introduction of codes of good farming practice with specific modules on the links between agricultural practices, land conservation and disaster management.



Women use vegetation and forests for medicinal plants, food and fuel as well as for income generation.

As in many countries, women in this region play a vital if under-recognised and unsupported role in food production.⁸ They have less access to land, extension training, affordable credit and loans than men. By implication, women have less opportunity to negotiate or act upon their concerns in the food production sector at the policy level. At the same time, research indicates that women are not only responsible for up to 65% of day-to-day farming and 80% of marketing decisions, but they also demonstrate and articulate a growing interest and commitment to more holistic farming methods, not least because they have already experienced first-hand the damaging effects of synthetic fertilizers and pesticides, and they are very concerned about their families' health and well-being.

The agri-food sector plays a critical role in preserving rural landscape and contributing to sustainable rural development. The European Union (EU), for instance, has introduced regulations which require farmers to 'apply usual good farming practice' to qualify for certain EU funds. Good farming practice involves nutrient management planning, protection of water, good grassland management, compliance with animal welfare and hygiene standards, proper use, handling and storage of pesticides and chemicals and the protection of wildlife habitats.

In designing the Caribbean organic farming workshops, the organisers⁹ took the decision to host a workshop in Grenada, a country that had already suffered the impact of hurricane damage but that also had successful organic farm practice

examples to study. During field trips, women farmers saw for themselves the value of growing organic crops in a variety of ways. Apart from the management of soil content and water storage and collection, the participants could observe how cocoa trees grown in the shade of mango trees were protected from damage from hurricane winds.

Discussions were held at every juncture throughout the workshop. Over the course of the week, participants were able to draw the links between their individual actions, their collective activities and the political, trade and agricultural contexts they work in. They recognised the potential impact of their local decisions on national, regional and international developments, including food policy and trade.

The fact is that women are often faced with real and immediate choices and decisions without all the information at hand

Through hands-on internet training, they realised that they are members of a worldwide movement that flourishes beyond their immediate communities and that shares the same goals and visions. They engaged in broader discussions around intellectual property rights issues, the World Trade Organisation's Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) and the implications for organic growers. By the end of the workshops, the farming women had a comprehensive and balanced perspective on their capacity for managing and influencing change, both in their fields and at the national policy level.

The fact is that women are often faced with real and immediate choices and decisions – such as how to allocate water resources between agriculture and livestock or whether or not to use GMO¹⁰ seeds in farming – without all the information at hand. It is striking how many myths, misconceptions or misinterpretations abound. In other words, information packages provided to women need to

be comprehensive, holistic and contextualised within the framework of both environmental changes and the current trade regime.

Women as primary managers of change

There are a good number of field studies documenting women's particular problems with accessing water, how reducing the time women spend collecting water will free them up for other activities from farming to education to political involvement and how grassroots and indigenous women's movements are working to renegotiate natural resource rights in their favour. What are the real water risks for women if they are *not* in control of change?

- Further costs will be imposed directly on women for their water uses, which is made more acute by the increase in female-headed households in sub-Saharan Africa¹¹;
- Women will continue to be compromised into other commercial activities to 'earn' water access (including selling food meant for the household, selling forest wood, engaging in prostitution activities, criminal activity);
- Women will continue to bear the brunt of managing water shortage implications, including increased incidences of domestic violence because they are unable to bring enough water home and migrating to other areas;
- Women's involvement in water policy decisions will continue to be minimal or non-existent;
- Where women are able to influence water policies, these will remain sporadic, incidental, piece-meal and localised;
- Women's ability to protect existing water sources will be weakened.

A southern solution

Importantly, to effectively face the global aspects of the biopolitics of water, women need to be able

to build solidarity with each other, locally as well as with their national governments. In particular, women need to engage to:

- Help resist pressures to turn land and forests away from the food needs of the people towards the production of export crops or bio-fuels because of pressure to sustain a pattern of elite consumption in developing and developed countries that is clearly unsustainable;
- Build solidarity to vigorously pursue the provision of Global Public Goods (GPGs), but also vigorously resist pressure to open up National Public Goods (NPGs) to global corporations. The NPGs include, for example, the provision of water for household use, energy and electricity for national enterprises, education at all levels, indigenous knowledge and cultural expressions;
- Help build capacity to negotiate with Western providers of technology and investment capital. Here, the successes of grassroots organisations need to be drawn upon;
- Help build capacity to negotiate terms of the World Trade Organisation and related regional trading fora.

Technological and financial solutions to these problems are secondary. The core solution lies in building alliances, supporting dialogue and enabling women to determine their choices, priorities and 'ways of doing and being'. While incremental changes are being made, these are still patchy and not systemic – women continue to be left out of the decisions around resource allocation. Women want to influence the decisions that affect the lives of their families and communities as well as their political and economic environments. Women need to be better informed but they also need to have their own information, experiences and ideas valued and organised into voices for change.

Too many policy or aid decisions that impact

women are made in a non-participatory, top-down, one-directional way. There is a high risk that with the new attention to climate change, policy and aid will once again go the way it always has, and women will once again be left with the responsibility of managing local change but without the required resources.

The recently published UNECA (nd:8) report makes the following statement:

'The Vision calls for a new way of thinking about water and a new form of regional cooperation. At the regional level, it calls for partnership and solidarity between countries that share common water basins. At the national level, it will require fundamental changes in policies, strategies and legal frameworks as well as changes in institutional arrangements and management practices. *It will necessitate the adoption of participatory approaches, management at the lowest appropriate level and the mainstreaming of gender issues and the concerns of the youth.* At the global level, it will call for assistance from Africa's development partners in mobilising seed funding for priming the urgent developments needed to underpin sustainable management of the region's water resources. Above all, it will require adherence to the following critical success factors:

- Openness, transparency and accountability in decision-making processes;
- Ability to generate and receive knowledge and information;
- Cooperation and teamwork by all countries in the region to achieve common, mutually beneficial objectives;
- Readiness to take tough decisions on the future direction and course of action consistent with the aspirations in the shared water vision;
- Proper appreciation of 'where we are',

‘where we want to be’ and ‘how to get there’;

- The adoption of financing and cost-recovery methods that are equitable and sustainable, while reflecting the concerns of the poor;
- Political commitment and grassroots support’.

Poverty is more often about the lack of voice and influence and less about a lack of wealth or resources. When women can articulate their needs and concerns, when they can push for change that addresses their priorities, then, and only then, will they have reason to be hopeful.

Notes

- 1 Water security is the reliable availability of an acceptable quantity and quality of water for production, livelihoods and health, coupled with an acceptable level of risk to society of unpredictable water-related impacts. Implicit in the notion is the idea of a minimum platform of water infrastructure and institutions (Vogt, 2006).
- 2 In Bolivia, Ghana and Nigeria, grassroots movements are successfully reversing the two-decade trend of selling key public utilities to global firms.
- 3 ‘Difficult’ hydrologies are those of absolute water scarcity and, at the other extreme, low-lying lands where there is severe flood risk. It also encompasses areas with markedly seasonal rainfalls – with short seasons of torrential rains followed by long dry seasons requiring the storage of water. With increasingly difficult hydrology, water security and the level of infrastructure and institutional investment become significantly greater than in more temperate and less variable climates.
- 4 Water stress results from an imbalance between water use and water resources. Water stress causes deterioration of fresh water resources in terms of quantity (aquifer over-exploitation, dry rivers, etc) and quality (organic matter pollution, saline intrusion, etc) (Vogt, 2006).
- 5 The biosphere is the film of dry land, water and air enveloping the planet earth within which all life exists (see Rifkin, 1991).
- 6 In 2002 the African Union established an African Council of Ministers on Water (AMCOW) to create necessary political leadership, policy direction and advocacy in the use and management of water for social, economic and ecological benefits.
- 7 Woman farmer’s comment made at the end of the organic and ICT workshop in Grenada, an island nation in the Caribbean, in 2006.

- 8 In sub-Saharan Africa, women contribute 60% to 80% of the labour in both food production for household consumption and sale. A survey of national sectoral reports for Benin, Burkina Faso, the Congo, Mauritania, Morocco, Namibia, Sudan, Tanzania and Zimbabwe found that women’s contributions to household food production range from 30% in Sudan to 80% in the Congo, while the proportion of women in the economically active labour force in agriculture ranges from 48% in Burkina Faso to 73% in the Congo (FAO, 1994).
- 9 Jamaica Organic Agriculture Movement and Networked Intelligence for Development jointly designed and ran regional workshops in the Caribbean region in 2004 and 2006. The detailed report on the workshop in Grenada is available on www.networkedintelligence.com/REPORT.pdf. Grenada was deliberately chosen as the workshop venue, following the devastation left behind by recent hurricanes and the opportunity that the workshop would afford local participants in drawing the links between organic farming and disaster planning and management. The workshop offered comprehensive training on the new opportunities for women-led farming businesses and start-ups within the context of the growing demand for organic produce and products. Thirty participants came together from Dominica, Grenada, St Lucia, St Vincent & Grenadines, Guyana, St Kitts & Nevis and Trinidad & Tobago.
- 10 The acronym GMO stands for ‘genetically modified organism’ and was first used to designate micro-organisms that had genes from other species transferred into their genetic material by the then-new techniques of ‘gene-splicing’. Applied to crops, the term refers to any genetic plant type that has had a gene or genes from a different species transferred into its genetic material, using accepted techniques of genetic engineering. In a real sense, all of the crop cultivars that we use are ‘genetically modified’ in that they were bred to be more productive, more pest resistant or produce better or different quality of product than did previous cultivars.
- 11 In many countries in Africa, as elsewhere, there has been a significant increase in the percentage of female-headed households (FHH) in recent years. FHHs have a higher dependency ratio in spite of the smaller average size of the household, have fewer assets and less access to resources and tend to have a greater history of disruption (IFAD, 1999).

References

- CARE (2006) ‘Drought expected to drive refugees, Violence in Horn of Africa’, 3 March, available at www.reliefweb.int/rw/RWB.NSF/db900SID/RURI-6MJQU2?OpenDocument, site accessed 18 June 2007.
- Food and Agriculture Organisation of the United Nations (FAO) (1994) *Women, Agriculture and Rural Development: A Synthesis Report of the Africa Region*, Rome: FAO.

- Government of Zambia (2004) 'Zambia: HIV AIDS and gender impact report', June, available at www.reliefweb.int/rw/RWB.NSF/db900SID/EVIU-6EHGF2?OpenDocument, site accessed 18 June 2007.
- India Resource Centre (2007) 'Communities Protest Against Coca-Cola Plant in India. Government Data Confirms Drop in Groundwater Levels', available at www.indiaresource.org/news/2007/1048.html, site accessed 11 July 2007.
- Intergovernmental Panel on Climate Change (IPCC) (2007) 'Climate Change 2007: Impacts, Adaptation and Vulnerability', Working Group II Contribution to the Intergovernmental Panel on Climate Change, Fourth Assessment Report, Brussels, April.
- International Fund for Agricultural Development (IFAD) (1999) 'Human Enterprise Ecology: Supporting the Livelihoods of the Rural Poor in East and Southern Africa', main report and working paper No 2, Rome, August, available at www.ifad.org/gender/learning/challenges/women/60.htm, site accessed 18 June 2007.
- Leonard E (nd) 'Uncharted Waters: Climate Change and Water Scarcity in Africa', available at www.environmentalphilosophy.org/environmentalphilosophy/upcoming/uncharted_waters.pdf, site accessed 18 June 2007.
- Oxfam (2005) 'The Tsunami's impact on women', briefing, March, available at www.oxfam.org.uk/what_we_do/issues/conflict_disasters/downloads/bn_tsunami_women.pdf, site accessed 18 June 2007.
- Rifkin J (1991) *Biosphere Politics, A New Consciousness for a New Century*, New York: Crown Publishing Group.
- Toulmin C and Huq S (2006) 'Africa and Climate Change', sustainable development opinion paper, International Institute for Environment and Development (IIED), United Kingdom, available at www.iied.org/pubs/pdf/full/11063IIED.pdf, site accessed 18 June 2007.
- United Nations Development Programme (UNDP) (2006) 'Beyond Scarcity: Power, poverty and global water crisis', in *Human Development Report*, New York: Oxford University Press.
- United Nations Economic Commission for Africa (UNECA) (nd) 'Africa Water Vision for 2025: Equitable and Sustainable Use of Water for Socio-economic Development', Addis Ababa, Ethiopia, available at www.uneca.org/awich/African%20Water%20Vision%202025.pdf, site accessed 18 June 2007.
- Vogt E (2006) unpublished briefing paper, Toronto: Networked Intelligence for Development.
- Women's Environmental and Development Organization (WEDO) (2003) 'Gender, Water and Poverty', available at www.wedo.org/files/untapped_eng.pdf, site accessed June 18th 2007.

NIDHI TANDON is an independent development consultant, animator and advocate for political, socio-economic and cultural transformation based in Toronto, Canada. She is also director of Networked Intelligence for Development. Tandon has a news journalist background with the Zimbabwe International News Agency in Harare and the BBC Africa Service in London. She also worked with the Women and Development Programme of the Commonwealth Secretariat and the Overseas Development Institute in the UK. Email: nidhi@networkedintelligence.com



The African Village Borehole

In the dry dusty village, Morogoro
was an only borehole providing water to a hundred families.
Women gathered there daily to fetch water.
With empty pots balanced on their heads, some with babies
wrapped on their backs, they never failed their daily visits to the borehole...

Goats and dogs trailed along longingly for the cool water.

The village women named it – their Heaven – a temporary respite from the
burning fields and the never-ending chores in the homes.
The rhythm of the flowing water and the comforting
clanging of the water pump handle, lulled babies to sleep;
some time for relaxation, chatter, laughter...

Men came with added intent, to woo the wife to be.

Sheaves of leaves placed on the filled vessels to prevent spilling
On stiff necks, outstretched arms and elbows, precious water ferried home.
To prepare sadza and relish, to wash and clean.
And if they could race the setting sun, before
darkness enveloped the sky...

They could prepare some local brew for sale to the men.

Then one starless night, a
Thunderous explosion
filled the still air, the crickets and frogs froze
No one dared to stir out of their homes, children drew closer in their sleep
Until the roosters crowed their plucky cries in the dawn's light...

The villagers discovered their borehole, blasted. The women cried in anguish.

Noooooh, not our borehole! Where will we get our water?
'What has become of our borehole?' they asked the village chief
'A rich white man, from distant soil, bought the land and rights to the borehole
He will set up a modern system piping water to your homes.
This will be a great improvement to your lives. No more fetching and carrying...

You just turn on the tap and out the water flows!

The women had mixed feelings, no more heavy carrying but
'Until we see these big ideas, where will we get our water?'
The borehole belongs to all of us – we should have been consulted first
before destroying our property – now we are unprepared!
'Such matters are not for women to understand!!'...said the Chief

Things are being made easy for you – you should be so grateful!

Trucks came and went transporting labour, tools, pipes and water
for mixing cement – no water for the villagers.
Those with donkeys, carts, bicycles begged water from the neighbouring village
Others, with crowbar and hammer,
broke open the builders' shed...

And stole away with the drums of water stored for mixing cement.

Seven months later, water pipes connected to water meters; water meters connected to
individual homes – 'Hulululu hulululu' cried the women.
What happiness was bestowed by this gift of water.
But this did not last too long
at the end of the fourth week...

Each household received a piece of paper – payment statements for water.

At first the eyes could not believe what they saw, and then they saw red.
Women were in a warfare mood –
their right to free water was snatched away and
now they were forced to pay for every drop used.
The monthly water bill was even more than what they earned in a month...

They marched to authorities higher than the Village Chief.

They explained to the District Councillor, the Provincial Councillor,
the Mayor. They pleaded for the return of their borehole
for they could not pay for this new development.
One wise grandmother spoke out fearlessly:
'We won't pay because we can't pay...

The choice is to pay the water bill or for food for our children to eat!

'You can't arrest us, we did no wrong.
Our borehole was taken from us without our say.
This means stealing our water, then forcing us to pay/
Two young policemen came and lifted her into the police van.
And loud and clear she cried out 'Sisters stand by your rights...'

The van door closed and she was whisked away.

Grandmother served two weeks for breach of public peace.
The villagers opted not to pay. The authority turned off the meters.
The taps ran dry.
The neighbouring villagers learnt of the injustices,
offered to share their borehole...

A communal kitchen was set up and beer brewing was abandoned.

A compromise was offered by the Mayor '...this is the Government's development plan. It costs the government to install the water pipes and meters and to employ labour to service the system. Therefore you have to pay; like you pay for your mealie meal and beer... Here is a solution. You will not be charged for the first 50 litres of water each month...

After that the charge is 50 cents per litre. What do you say?

The women in the village held a meeting
'50 litres – it's manageable if I am very careful' uttered a voice.
'Not me, I have twelve children; you have only two' shouted another.
'Then you pay for the extra water' retorted another.
'There is no way I can brew beer,' moaned another...

'No, no payment, no', echoed several others.

Old Grandmother fresh out of prison stood up
She said 'We have different needs. We have to make sacrifices.
We must stand together and show the authority that we, the people, must be consulted when they want to take our property.
I have a plan. We tell the Mayor that we accept the offer.
But among ourselves, we agree that we will use only the 50 litres of free water,

For any extra water needed, we will carry the water from the neighbouring borehole.'

'Agreed', the villagers clapped in full support of the plan.
'We will not pay for the water.'

The Mayor was pleased that a compromise had been met.

Mary O Tandon

Gender, climate change and adaptation. Introduction to the gender dimensions

This paper aims at introducing *why gender* is an important factor in climate change debates and particularly in adaptation to climate change. It starts with a brief overview of gender aspects in climate change and a description of the impacts of climate change on women's lives. How these gender aspects and women's needs are taken into account in climate change debates, what is needed to implement gender mainstreaming in adaptation programmes and measures, and how to assure that women benefit from adaptation funds is discussed subsequently. In the end you will find a list of gender dimensions which should be taken into account in planning and implementation of measures that aim at adapting to climate change. These dimensions are based on the (very limited) data currently available on gender and climate change.

I. Gender and climate change: Introduction to the debate

The United Nations are formally committed to gender mainstreaming within all policies and programmes. However, gender equality is not yet realized in any society, in any part of the world. Men and women have different roles, responsibilities and decision-making power, leading to disadvantages for women. It is therefore not surprising that gender also plays a role in relation to climate change. Yet the topic has not been explored sufficiently, and many people still find it difficult to comprehend the ways in which gender might be a factor in climate change, or how it should be politically addressed.

Gender aspects are rarely addressed in climate change policy. This applies – with few exceptions – to the national as well as the international level. Various reasons account for this neglect: gender aspects in climate change are often not self-evident, and there is little data, research, or case studies clarifying and exemplifying the linkages between gender justice and climate change.

Nevertheless, there are a number of issues that point to the crucial role of gender when understanding the causes of climate change, aiming to mitigate it, and working towards successful adaptation to inevitable climate change:

- ♦ Women and men – in their respective social roles – are differently affected by the *effects of climate change*. Reasons are inter alia to be found in different responsibilities for care work and income generating work, in dependency on natural resources because of lacking access to environmental services, or in knowledge and capacities to cope with the effects because of differences in the access to education and information systems.
- ♦ Women and men – in their respective social roles – are differently affected by *climate protection and adaptation instruments and measures*. If these mechanisms and measures are developed in a non-gender-sensitive way – which most often is the case – they again do not take into account different responsibilities and financial options.
- ♦ Women and men differ with regard to their respective *perceptions of and reactions to climate change*. It is well known, especially in industrialised countries, that women have a higher risk perception than men, and thus also recognize climate change as a more serious problem than men do. Gender differences are crucial when it comes to assessing adequate measures, too. While men trust in technical solutions, women vote stronger for lifestyle changes and reduction of energy consumption.
- ♦ Women's and men's *contribution to climate change* differs, especially with regard to their

respective CO₂ emissions. This is especially proven in regard to transport systems. For example, in Sweden men consume up to double amounts of energy compared to women. Difference results mostly from gendered car use and mobility patterns.

- ♦ Social roles and responsibilities of women and men lead to different degrees of *dependency on the natural environment*. Women are usually the ones engaged in household subsistence activities, thus degradation of forests, watersheds, foreshores and agricultural land in developing countries can have a severe effect on their ability to perform the daily household maintenance tasks.
- ♦ As the male perspective is dominating, climate protection and climate adaptation measures often fail to take into account the *practical and strategic needs* of large parts of the population (e.g. infrastructure, energy supply);
- ♦ The *participation of women in decision-making* regarding climate policy – mitigation and adaptation – and its implementation in instruments and measures is very low. Thus, in general it is men's perspectives which is taken into account in planning processes.

Women and men are not homogenous groups but include people of various age, ethnicity, education, income. These social categories also relate to differences in influence, attitude and in contribution to climate change, to how people are affected by it and which possibilities they possess to adapt to climate change. This applies to developing as well as to developed countries. Principally, however, the situation of women in the global South differs significantly from the situation in the global North. While women in the South are more dramatically affected by climate change, women in the North are expected to play a significant role as consumers without having appreciable influence on decision-making as it relates to emission reduction (Röhr/Hemmati 2007).

The same holds true for the adaptation to climate change: women in the South suffer most and have least capacities (economic, information, education etc.) to adapt to climate change and to prepare for the effects. Whereas both women *and* men in the global North need to adapt their consumption behaviour and daily life routines in order to mitigate climate change, they are differently affected by natural disasters and changing weather conditions too. Research about extreme weather conditions show that women and elderly people are most sensitive to hot summer weather in terms of mortality, and that women perceive hot and dry summer weather more unfavourably than men and are more likely to change their behaviour (PIK 2000).

II. Impacts of climate change on women's lives

As predicted by the Intergovernmental Panel on Climate Change (IPCC), “climate change impacts will be differently distributed among different regions, generations, age classes, income groups, occupations and genders” (IPCC, 2001). The IPCC also notes that the impacts of climate change will hamper development and harm human living conditions and lifestyles. The effects will fall disproportionately upon developing countries and the poor within all countries, and thereby exacerbate inequities in health status and access to adequate food, clean water, and other resources. Today, women represent about 70 per cent of the poor throughout the world.

Most of the key areas of the negative consequences of climate change are strongly connected to gender equality issues. “Women in developing (and developed) countries are generally considered part of the vulnerable groups. High dependence from agriculture, forest resources, fisheries and biofuels can increase the vulnerability and the risk of environmental depletion. (...) Moreover, the problems relating to the management of the environmental common assets can become worse under the pressure of global warming.” (Lambrou and Piana 2005:20) These problems include food security, freshwater

supply, rural and urban settlements and their infrastructures. The impact on women's lives varies between regions and cultures, thus planning for adaptation to climate change need to take a close look at each individual and concrete situation. However, there are some general subjects, which are effected throughout regions and cultures:

1) Care work, poverty reduction, income generating activities

In most societies, women are responsible for household tasks and care for children and the elderly. They have to secure food, provide clean water and household energy, and care for the sick. At the same time, due to the need for poverty reduction, they have to run income generating activities. Climate change may put additional burdens to the double and triple burdened women.

- Depletion of natural resources and agricultural productivity could place additional burdens on women who will have to spend more time for collecting plants and cultivating their crops for subsistence and local markets. In many regions of the world women make up the majority of the agricultural workforce. Due to patrilinear inheritance, women's access to and control over land is often limited, and if they own or control land, it is often the less fertile ones. Thus, additional depletion of soil productivity forces women to spend more time providing food for their families and thus have limited time to participate in decision-making and income-generation activities. So climate change might lead to a vicious cycle aggravating injustice.
- Decreased availability of water in both quantity and quality as well as heavy rainfalls and more frequent floods will have the same negative impacts on workloads and economic resource base. In general, it is women who are responsible for collecting and storing the water for drinking/household needs, while men are responsible for irrigation. Often the norm is that irrigation water should only serve men's businesses. Because of a lack of participation of women in water related decision making and planning, it is often men's interests that are served in such planning. Additionally, droughts and floods can be particularly detrimental to women who keep livestock as a source of income and food security (Lambrou and Piana 2005; Women's Statement at COP10/2004).
- A similar situation is to be found where energy consumption/use is concerned. Decreased availability of firewood to provide household energy has the same negative impact as water scarcity in terms of time to be spend for collection of biomass, of workloads and income-generating activities. In addition, indoor air pollution by burning biomass in inefficient ovens causes heavy respiratory diseases, accounting for about 2 Mio deaths a year worldwide, most of them women and children.

2) Health impacts

Climate change will also place additional burdens on women's health and have a triple effect on women. First, they are affected because of special physical vulnerabilities, second because of their caring roles in families, and third because the additional work which is required due to depletion of environmental conditions may lead to health damage.

- Waterborne and vector-borne diseases will increase in a warmer world. Pregnant women for example are particularly vulnerable to malaria, because they are twice as attractive to malaria carrying mosquitos than non-pregnant women. Additionally, pregnancy reduces women's immunity to malaria, making them more susceptible to infection and increasing their risks to illness and secondary diseases, too. Anaemia which can result from malaria infection is responsible for a quarter of maternal mortality (Duncan 2007).
- Decreased agricultural productivity is supposed to increase malnutrition and hunger by 10 per cent

(Duncan 2007). Women are responsible for up to 80 per cent percent of household food production in Africa and Asia, and 45 per cent in Latin America and the Caribbean. Because women usually are involved in a very labour-intensive, low-emission subsistence agriculture, while men are more often found in mechanized agriculture, women's livelihood strategies and efforts to ensure food security are seen to be disproportionately affected by impacts of climate change.

- As described above, climate change may put additional work on women. More work, heavier loads to carry, longer ways to find water or biomass in a sufficient amount - this all has a negative impact on women's health. Additionally, due to the gendered division of labour, women have to take care of sick family members, which is again contributing to time constraints.

3) *Climate change related natural disasters*

Natural disasters like floods or droughts, hurricanes or heavy rains, are already impacting livelihoods in many regions of the world. There are clear gender differences in the prevention of disasters (e.g. early warning systems don't get through to women), in emergency response (e.g. different risk reduction strategies and different needs), and in the reconstruction phase (e.g. gender differences in migration). It is often reported that women's workloads double or triple in the aftermath of disasters, while their income generating conditions deteriorate. The following are only a few examples out of the wide range of research and reports available¹.

- Because of gender differences in property rights, access to information and in cultural, social and economic roles, natural disasters are likely to affect men and women differently: Following the cyclone and flood of 1991 in Bangladesh, the death rate was almost five times as high for women as for men. Warning information was transmitted to men by men in public spaces, but rarely communicated to the rest of the family. As many women are not allowed to leave the house without a male relative they perished while waiting for their relatives to return home and take them to a safe place (Aguilar 2004).
- Another clear illustration of the different vulnerabilities women and men face is offered by the fact that *more men than women died* during Hurricane Mitch. It has been suggested that this was due to existing gender norms in which ideas about 'heroic' masculinity encouraged men to take risky actions (Nelson 2002). This means: women are at risk mostly during the disaster (and often in post-disaster situations), when they find themselves thrown into situations where they are unable to decide whether to stay or leave. Men on the contrary are most at risk in the search for survivors and cleanup after disasters and are more likely to be able to decide for themselves how to act.
- Men and women also have different needs and priorities following a disaster. Some women have clear physical needs such as obstetric-gynaecological care or feminine hygiene products. More broadly, they also tend to prioritize different activities from their male counterparts. "Men tend to focus almost exclusively on productive activity, including agriculture and waged income. Women tend to prioritize physical and psychological health, economic opportunities, and their children's welfare." (Delaney et al. 2000:15)
- While women are known as experts in post-disaster management, their involvement in institutionalized disaster mitigation and response efforts is often lacking.

The effects of climate change on gender inequality are not limited to immediate impacts and needs for changing behaviour patterns but may also lead to subsequent changes in gender relations. The shortfall

¹ See the resources of the Gender and Disaster Network, www.gdnonline.org

of resources like water and fuel wood or the role of care-giver in post-disaster-situations may increase women's workloads. Due to increased burdens, a negative cycle is starting: if time for information and income-generating measures is lacking, girls have to take on more tasks in the household and don't have time to attend schools. Poor education of girls results in high number of children and marginal participation in community planning, and then the poverty-cycle starts all over – chances to break it are diminished in the long run. Spending more time on traditional reproductive tasks additionally re-enforces traditional work roles and works against a change in which women might begin to play other roles or take up non-traditional activities.

Each of the issues mentioned before is highlighting women's vulnerability due to gendered roles in society and the impacts of climate change on daily life. Nevertheless, that's only half of the picture: On the other side, these special situations sometimes bear opportunities for women and men to change their gendered status in society and to go beyond traditional roles. "As destructive as they are, natural disasters clearly offer rich opportunities for social change. But, too often, opportunities to address gender inequalities are overlooked in the rush to return to "normal" life, including normal or routine gender norms." (Enarson 2004:14) But there is also ample evidence that long-established rules lose force when people are forced to respond to emergency conditions produced by natural disasters. Following hurricane Mitch in 1998, women in Guatemala and Honduras were seen building houses, digging wells and ditches, hauling water and building shelters. Though often against men's wishes, women have been willing and able to take an active role in what are traditionally considered "male" tasks. This can have the effect of changing society's conceptions of women's capabilities (Pan American Health Organisation). On the other hand it was observed during the hurricane, "that more men did more cooking and took more responsibility for child care. During a drought period in Sri Lanka, men took on more of the work of providing drinking water as people became more dependent upon government-provided water ferried home in five-gallon plastic containers by men on push bicycles or tractors." (Enarson 2004:14).

III. Mainstreaming gender into climate change debates: experiences and recommended strategies

As mentioned in the beginning, gender aspects currently are poorly addressed in climate change debates. This is due to lacking gender sensibility of those shaping the debates, leading to a strong technical and economical bias in the contents – best to be seen in the Kyoto Protocol. Social issues and gender issues do not have a space in these discussions and documents. In 1997, at UNFCCC COP3 in Kyoto, a female environmentalist asked via a mailing list why women's organizations did not take part in the process leading to the Kyoto Protocol. The answer she gave was that "the arguments used here are almost entirely economic. Decisions are made mostly with little consideration being given to survival. Perhaps women felt they could not penetrate this masculine perspective – and stayed at home" (Sargent 1997). This assumption is backed by experiences in other UN processes: If women's organizations are not actively involved, gender and women's aspects will not be addressed. Thus, it is like a vicious circle: because women's organization or gender experts are not involved, women's /gender aspects are hardly addressed. And because they are not addressed, women's organizations don't take part. Recently some efforts have been undertaken to sensitize the parties of the UNFCCC and Kyoto Protocol as well as the constituencies taking part in the process on gender issues. Because negotiations were coming into a new phase, because the post-Kyoto regime may provide an entry point for gender perspective, situation is improving slowly. There are more women's organizations interested in the UNFCCC process now, and thus hopefully the vicious circle will be opened.

Additionally there is another lack preventing the 'mainstreaming of gender' into climate change policies, which is the lack of data and research. This applies to the IPCC Assessment Reports, for example: IPCC is not undertaking research by itself, but reviewing existing research. If there is no research available on gender and climate change, the issue cannot be highlighted in the Assessment Report. Regarding the Stern report we are facing a similar situation: the report is focussing on the economical impact of climate change only, based on a conventional perspective on economics: unpaid labour or care work is not taken into account. Both of the reports certainly would look different if gender experts were involved and gender perspectives were shaping the structures.

However, it is not only research and international institutions related to climate change that are lacking gender perspectives. The same applies to donor organizations and development departments in national governments of industrialized countries. And it is for the same reasons: lacking gender sensitivity and lacking knowledge on how to integrate gender perspectives and what the specific women/gender aspects are in a concrete situation/measure. In the same time it is the very technical and science orientated view to climate protection and often to adaptation to climate change too, that make people believe that the policies are 'gender neutral'

So which strategy would be the best to overcome these shortcomings and to assure the integration of gender perspectives in climate change debates and measures? According to experiences in implementing gender mainstreaming into institutions, there are some preconditions for a successful re-organisation from a gender perspective:

1. It is more promising to integrate gender into new developments and new planning instead of trying to 'gender' projects, measures programs which are already running. That is why for example the post-Kyoto period might provide a better possibility than the already accepted Kyoto Protocol. This might be the case as well if new guidelines or methodologies are developed, e.g. for national reporting or national adaptation plans.
2. Gender mainstreaming needs the strong support of the top of the organisation/institution to force departments to include gender perspectives and undertake gender assessments of each policy and measure they are planning. Nevertheless, when it comes to implementation strong support and requirements from bottom up are needed.
3. And last but not least gender mainstreaming has to be done in every institution. Thus it has to be implemented into the UNFCCC as well as in the national and local organisations dealing with climate change. Experiences and findings from the lower levels will help the upper levels to argue for gender mainstreaming, and the other way around. Gender-disaggregated data taken at each of the levels will provide a strong database for future actions and measures to be gender-aware.
4. To support these processes, gender trainings have to be carried out, aiming to sensitize people for the gender relevance of the work they are doing. Gender experts must be involved in all stages of the planning to back the people planning or carrying out the projects/programmes with gender knowledge.

IV. Mainstreaming gender into adaptation programmes and measures

Gender in adaptation measures

As shown above, climate change impacts women's lives differently than men's. Consequently, adaptation policies and measures need to be gender sensitive: restricted access to economic resources may lead to less possibilities to adapt to climate change (e.g. to changing weather conditions and their impacts on agricultural activities), less possibilities of protection against natural disasters and

recovering in the aftermath. Lacking control over land/property effects the ability to crop changes or switching to other fields of income generation; lack of transport systems leads to more time consumption and physical burdens (like transportation of heavy loads over long distances). The lacking access to political resources, like influence, networks, informations, skills or control over decision-making leads to poor participation in project and programme development and poor recognition of the practical and strategic needs of women and girls.

The concurrence of economic disadvantage, lacking access to resources and information, dependency on male family members, and lack of power contribute to women's situation as a particular vulnerable group.

To understand the implications of adaptation measures for all people involved, it is necessary that all members of an adapting community are represented in climate change planning and governance processes. Women, however, are often expected to contribute unpaid labour while being absent from the planning and governance processes. But equal involvement of men and women and their respective needs and perspectives in adaptation planning are important not only to ensure that the measures developed actually benefit those who are supposed to implement them, but also to ensure that all relevant knowledge is integrated into policy and projects (COP10 Women's Statement). Additionally, it is reported from post-disaster situations that natural disasters may provide women with unique opportunities to challenge and change their gendered status in society: in the aftermath, they take active role in traditionally male tasks and develop new skills, such as natural resource and agricultural management which, in the right environment, they could transfer into the job market. To support women in these situations may help to valorise their usually under-valuated work and products.

Available knowledge about impacts in areas where women are involved in/dependent on

Areas which will be effected by climate change and where adaptation measures should be implemented include water, agriculture/nutrition, energy, transport, housing, forestry, fishery/coastal zone management, biodiversity, natural disasters/conflicts/risk management. Currently a research review funded by the FAO is collecting available data and knowledge in most of these fields. The study is expected to be published in autumn 2007, and will provide a more in-depth insight to gender aspects in these issues. Detailed information and support are also provided by international gender networks. Regarding the *energy* issue a wide range of studies from many developing countries can be found at the website of ENERGIA, the International Network for Gender and Sustainable Energy (www.energia.org). The Gender and Water Alliance has a website with detailed information and recourses on gender aspects in *integrated water resource management* (www.genderandwater.org). The same applies for the Gender and Disaster Network (www.gdnonline.org), which provides a *gender and disaster* sourcebook on their website as well as checklists and practical guidance.

V. Financing adaptation – assuring benefits for women

Most available environmental finance mechanisms have limited benefits for disadvantaged, given their lack of capital, skills and knowledge, and market access. Typically these funds are dominated by men's interests and require strengthening of gender concerns, and making them accessible for women. The same holds true for financing mechanisms under the UNFCCC. Therefore, a basic requirement is to undertake a gender analysis for each new funding mechanism. Questions to be asked are for example: Who has access to and control over funds and benefits? How are expenditures allocated amongst women and men? Are (cultural, societal, religious, educational) inequalities addressed in the

allocation criteria?

One of the most serious general problems is the small amount of money available in the adaptation funds. If funds are small, it is even harder to promote gender sensible criteria or projects which address women's needs, because pressure of demand on the small budget is high and women's needs usually do not have the power to prevail. Nevertheless, it is important to steer adaptation projects towards the most vulnerable group: women. The best way to do so is to develop the projects to be founded on grassroot level, in a participatory process by women and men.

Gender responsible funding mechanisms need to be supported by appropriate rules, inter alia:

- Projects to be funded must follow clearly defined sustainable development criteria.
- Gender analysis is mandatory for projects funded (ex ante and ex post),
- The formulation of explicit quantitative and qualitative targets to address gender concerns are to be supported.

To provide good arguments, cost benefits of gender responsible funding mechanisms should be highlighted (e.g. gender responsible projects may lower health costs because of less of the additional burdens explicated under I., higher productivity of women's work).

On institutional level, integrated strategies are required that promote **creative and innovative thinking** and link funding mechanisms to sustainable livelihoods, capacity development, and assure access to markets and cash economy for women.

V. Further recommendations and tools

To ensure success, adaptation policies and measures need to be gender sensitive. In principle, gender could be integrated relatively easy into, for example, stakeholder analyses, livelihoods analyses and multi-criteria decision tools if the users were aware of the need and choose to do this. There are a lot of tools available aiming at integrating gender perspectives into development planning. These tools need to be adopted into adaptation policies, programmes and measures and should be tested and evaluated. Another critical question is how gender awareness among planners and project developers can be stimulated. Gender training is the common instrument to sensitize those persons. In the long term, it should be part of education of each planner. Until then it must be an obligatory part of advanced vocational training.

Some critical points should be mentioned in the end:

- 1) It is important to have in mind that equal participation in terms of numbers does not automatically guarantee representation of women's concerns. Therefore, there is a need to include gender expertise into projects wherever possible.
- 2) Particular emphasis should be put on conflicting effects: e.g. relief assistance in response to natural disaster may cultivate dependency on foreign help instead of strengthening empowering people.
- 3) When looking at women's and men's different needs, it is mostly the immediate necessities (water, shelter, food, income and health care) within a specific situations which are addressed. "Strategic interests, on the other hand, refer to the relative status of women and men within society. These interests vary in each context and are related to roles and expectations, as well as to gender divisions of labour, resources and power. Strategic interests may include gaining legal rights, closing wage gaps, protection from domestic violence, increased decision making, and

women's control over their bodies. To ensure sustainable benefits, both practical needs and strategic interests must be taken into account in the design of policies, programs and projects.” (CIDA1999)

Addendum: General gender dimensions

Gender dimensions can serve as ‘searchlights’ for different degrees of gender-specific implications of climate change:

Gendered division of labour:

This refers to the gendered responsibility for certain types of work, e.g. gender aspects related to income-generating activities, (paid work, self-employment, subsistence production), domestic work and care work (caring for children, sick or elderly people). Regarding adaptation to climate change, it is necessary to look at:

- Gendered additional burdens caused e.g. by degradation of natural resources like water scarcity, fuel scarcity, disasters etc.
- Gendered effects of climate change in certain types or areas of income-generating work (those areas women/men are mostly involved in, e.g. agriculture for local markets/cash crops)
- Gendered effects of climate change on areas relevant for family subsistence
- Gendered contributions to family subsistence (in terms of time, burdens, money, food etc.)
- Gendered valuation/worth of work, working areas and products

Human reproduction, health

This dimension refers to the physio-biological conditions of women’s/men’s constitutions; gendered sensitivities/vulnerabilities, gendered perceptions of environmental change.

Regarding adaptation to climate change, the focus should be on

- Gendered impacts of climate change on health (carrying heavy loads, air pollution, vector-borne and waterborne diseases, disasters)
- Special vulnerabilities during pregnancy or breastfeeding (at any given time, an average of 18-20 percent of the female population of reproductive age is either pregnant or lactating)
- Personal security issues (e.g. when searching for firewood/fetching water way beyond their villages, domestic violence after disasters)
- Socio-cultural construction of male/female identities (risk perception and risk behaviour, attitudes towards appropriate mechanisms and measures)

Power and decision-making:

These are gender aspects related to self-determination, participation in decision-making (participation of women/men in decision-making, participation of women/men in project development, proportion of women/men in stakeholder groups, etc.), participation in community planning.

Questions to be answered should refer to:

- Gendered participation in community policy and community development (decision making, representation, participation in development)
- Gendered participation in project planning (decision making, participation in project development)
- Recognition of gendered needs and interests (valuation of work and products, which situations are taken to be superior)
- Gendered information and knowledge (both directions: providing information and knowledge – taking knowledge into account)
- Traditional norms and socially constructed ideologies (exclusion of women from the public sphere, male role expectations to represent the household)
- Gendered communication patterns (restricted articulation in the public sphere, shyness, dominance)

Institutional organisation of society:

Aspects to be assessed include:

- Gendered patterns of mobility (gendered ability to move in other regions, gendered access to transport services)
- Access to financial and technological support (e.g. for adaptation efforts, that is relief assistance, recovery/reconstruction assistance)
- Gendered access to education
- Gendered access to information (e.g. impacts of climate change on crops, how to adapt income generating activities, early warning systems)
- Gendered access to health systems/services

Cultural and legal situation:

This dimension refers to the way in which gender equality is supported or constricted by religious and cultural norms and legal rights.

- Legal situation (land rights, entitlement of inheritance, anti-discrimination laws etc.)
- Cultural, traditional and religious norms (arranged marriages, dependence on male family members, reproductive health and rights, mobility outside homes, gendered abilities)

References:

Aguilar, Lorena. 2004. Climate Change and Disaster Mitigation. Available on-line:
<http://www.iucn.org/congress/women/Climate.pdf>

Briceño, S./UN-ISDR. 2002. Gender Mainstreaming in Disaster Reduction. Presentation at the Commission on the Status of Women, 6 March 2002, New York

Canadian International Development Agency. 1999. CIDA's Policy on Gender Equality. Quebec

Delaney Patricia L.; Shrader Elizabeth; LCSPG/LAC Gender Team; The World Bank. 2000. Gender and Post-Disaster Reconstruction: The Case of Hurricane Mitch in Honduras and Nicaragua. Decision Review Draft.

- Duncan, Kirsty. 2007. Global Climate Change and Women's Health. In: Women & Environments International Magazine No. 74/75: 10-11
- Enarson, Elaine 2004. Making risky environments safer: Women building sustainable and disaster-resilient communities. Published by the United Nations Division on the Advancement of Women
- [IPCC] International Panel on Climate Change. 2001. Climate Change 2001. Impacts, Adaptation and Vulnerability. Contributions of the Working Group III to the Third Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge.
- Lambrou, Yianna; Piana, Grazia. 2005. Gender: the missing component in the response to climate change. FAO Rome
- Nelson, Valerie et.al. 2002. Uncertain predictions, invisible impacts, and the need to mainstream gender in Climate Change adaptation. In: Oxfam Journal Vol 10 Number 2. Gender and Development – Climate Change: 30-39
- Pan American Health Organisation. (no date). Gender and natural disaster. Fact sheet.
- [PIK] Potsdam Institute for Climate Impact Research. 2000. Weather impacts on natural, social, and economic systems. Authors: Fechtsig, Michael; Gerlinger, Kathrin et.al. PIK-Report 59. Potsdam
- Röhr, Ulrike/Hemmati, Minu .2007. Solidarity in the Greenhouse: Gender Equality and Climate Change. In: Grovers, Velma (ed). Climate Change: Kyoto, ten years and still counting. To be published
- Sargent, Margaret (1997): How the Women Stayed at Home. United Nations Third Conference on Climate Change. Published by email
- Women's Statement at COP10. 2004. Mainstreaming Gender into the Climate Change Regime. Buenos Aires

Paper provided by

Ulrike Roehr

genanet – Focal Point Gender, Environment, Sustainability

LIFE e.V.

Dircksenstr. 47

D-10178 Berlin

Phone +49.30.308798-35

Fax +49.30.308798-25

Email roehr@life-online.de

www.genanet.de



GENDER and INDICATORS

Overview Report

Annalise Moser

July 2007



Annalise Moser (author) is a gender and development specialist, with a doctorate in social anthropology. She has worked for United Nations agencies and non-governmental organisations (NGOs) in Latin America, the Pacific and Africa, including managing the United Nations Development Fund for Women's (UNIFEM) gender-sensitive conflict early warning indicator project in the Solomon Islands. Her main areas of interest are gender, conflict and peace building, and gender mainstreaming.

Justina Demetriades (editor) is a researcher at BRIDGE. Her research interests include gender and security, including gender-based violence (GBV) and HIV/AIDS. Recent research includes the information communication dynamics around GBV in post-conflict contexts.

Kalyani Menon-Sen (advisor) works with JAGORI (<http://www.jagori.org/>), a feminist research, communication and resource centre in Delhi. Kalyani has extensive experience of working on women's rights and gender equality issues with NGOs and grassroots groups in India. She has also worked with the UN system, particularly the United Nations Development Programme (UNDP), to develop and implement gendered learning and change strategies at different levels.

This Overview Report has been undertaken with the financial support of the Bureau for Development Policy, United Nations Development Programme (UNDP). Thanks also to: the UK Department for International Development (DFID), Irish Aid, the Swiss Agency for Development and Cooperation (SDC), and the Swedish International Development Cooperation Agency (Sida), for their ongoing support of the BRIDGE programme. Credit is also due to BRIDGE team members Emily Esplen, Susie Jolly, and Hazel Reeves for their substantive input into this report. Thanks also to Judy Hartley for copy-editing.

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ISBN: 978-1-85864-636-7

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ACRONYMS

ACGD	African Centre for Gender and Development
AGDI	African Gender and Development Index
CEDAW	Convention on the Elimination of all forms of Discrimination Against Women
DFID	Department for International Development
ECLAC	Economic Commission for Latin America and the Caribbean
GBV	Gender-based Violence
GDI	Gender-related Development Index
GDP	Gross Domestic Product
GEI	Gender Equity Index
GEM	Gender Empowerment Measure
GGI	Gender Gap Index
GPI	Gender Poverty Index
GSA	Gender Self-Assessment
GSB	Gender-sensitive Budget
HDI	Human Development Index
IPPF	International Planned Parenthood Foundation
IWDA	International Women's Development Agency
MDGs	Millennium Development Goals
MYFF	Multi-Year Funding Framework
NGO	Non-governmental Organisation
OECD	Organisation for Economic Co-operation and Development
PPA	Participatory Poverty Assessment
PRS	Poverty Reduction Strategy
PRSP	Poverty Reduction Strategy Paper
SDC	Swiss Agency for Development and Cooperation
Sida	Swedish International Development Cooperation Agency
SRC	Supporting Resources Collection
UN	United Nations
UNDESA	United Nations Department of Economic and Social Affairs
UNDP	United Nations Development Programme
UNIFEM	United Nations Development Fund for Women
WHO	World Health Organization

EXECUTIVE SUMMARY

Gender-sensitive measurements are critical for building the case for taking gender (in)equality seriously, for enabling better planning and actions by gender and non-gender specialists, and for holding institutions accountable to their commitments on gender. Yet measurement techniques and data remain limited and poorly utilised, making it difficult to know if efforts are on track to achieve gender equality goals and commitments. This Overview Report examines conceptual and methodological approaches to gender and measurements of change with a focus on indicators, examining current debates and good practice from the grassroots to the international levels.

The what and how of measurement

While measuring is often considered to be a technical exercise, the decision to measure progress towards gender equality is political, as gender is often seen as a marginalised issue. The process of deciding what aspects of gender equality to measure is also political, usually reflecting the priorities of decision-makers rather than those of the women and men intended to benefit from the policy or programme (the 'beneficiaries'). In deciding what to measure we must first establish key objectives and goals; secondly, identify the changes that are required to achieve these goals; and thirdly decide what kinds of indicators will best enable us to measure progress towards these desired changes. The next consideration is which measurement methods to use and what kind of data to collect. The 'hard figures' produced by quantitative methods are crucial to building the case for addressing gender disparities, while qualitative methods enable a more in-depth examination of gender relations and other issues not easily 'counted'. The ideal methodology is thus a combined approach which incorporates gender-sensitive participatory techniques to help ensure that the topics of investigation are relevant to, and 'owned', by the subjects of the research.

Measuring gender mainstreaming

Many development agencies have adopted a gender mainstreaming approach and yet lack procedures to monitor whether commitments at the policy level are reflected in the internal structure, procedures and culture of an organisation, and whether they are being implemented in programming practice. Internal gender audits and gender self-assessments are now used by many development organisations to assess issues such as gender equity in recruitment, flexible working hours, childcare provision and technical capacity of staff in gender issues. To assess the degree to which gender mainstreaming has been implemented in programming practice, particularly at the field level, development organisations have produced checklists or scorecards to measure adherence to gender-sensitive procedures (gender analysis, planning, resource allocation, monitoring systems).

Less common are measures of the impacts of gender mainstreaming programmes on male and female beneficiaries. These might include qualitative assessments, and checklists such as those developed by Oxfam for use with partner organisations, or sex-disaggregated beneficiary assessments.

Measuring the difficult to measure

Certain aspects of gender (in)equality are particularly difficult to measure. Some are difficult to conceptualise, such as the gender dimensions of poverty or women's empowerment, while others are sensitive issues such as gender-based violence (GBV), or occur in sensitive contexts such as armed conflict.

Measuring poverty from a gendered perspective requires using a range of gender-sensitive indicators which give attention to gender power relations at both the household and societal levels. Useful approaches include 'time poverty' studies which can be used to measure women's unpaid care work, and gender-sensitive participatory poverty assessments. To effectively measure women's empowerment, combinations of multi-level and multi-dimensional indicators are needed. Many organisations are incorporating qualitative data into measurements of women's empowerment in an effort to capture these complexities. In the case of GBV, integrating modules or checklists into non-GBV-focused surveys or services has proved successful. Measurements of GBV and the gender dimensions of armed conflict must incorporate means of reducing risks for women respondents.

International measurements

International and regional gender goals and indices are useful because they allow for cross-national comparisons of gender equality, and they condense complex data into clear messages about achievements and gaps in gender equality. Limitations with international indices include the notoriously unreliable nature of national-level census data, and the ongoing challenge of agreeing which elements of gender equality to measure and how best to capture these elements within a limited set of indicators.

Innovative approaches include efforts to incorporate a broader set of indicators into the Millennium Development Goal 3 on gender equality (MDG3), and review the components of composite indices such as the United Nations' Development Programme's (UNDP) Gender-related Development Index (GDI) and Gender Empowerment Measure (GEM). In turn, there is work taking place to develop new indices such as the World Economic Forum's Gender Gap Index (GGI), which is promising in its use of a broad range of dimensions and indicators and its combination of quantitative and qualitative data. Other important developments include the adaptation of international indicators to better represent gender equality in specific regional contexts, efforts to track donor and government commitments to gender equality in the context of the new aid architecture, and initiatives to develop harmonised sets of gender indicators.

Recommendations

Among the recommendations made in this report, cross-cutting and critical issues include the following:

- A combination of qualitative and quantitative methods should be considered by all development organisations, from international agencies through to grassroots organisations, in order to cross check results and to generate a richer understanding of the data.
- The development of specific context-relevant gender-sensitive indicators – and the use of and reporting on those indicators – should be made obligatory within international development agencies, governments and grassroots organisations.
- In the context of the new aid modalities, donors and governments should establish accountability systems which track compliance with commitments to gender equality.
- Governments and gender ministries should support the capacity of national statistical offices to produce gender-sensitive data.

It is important to keep in mind that gender-sensitive measurements alone do not improve gender equality. In order to be useful, data must be collected, analysed, disseminated and used.

1. INTRODUCTION

1.1 Background

Achieving gender equality requires inspiring and mobilising social change. This raises many questions. What does 'success' look like? How does change happen? Where are we starting from and how do we know if we are on track? How can we understand and build on what works in achieving positive change?

'Another world is possible'

In 2000, a group of village women in Andhra Pradesh, India, defined their visions of social change and worked out ways to measure that change. The women drew pictures inside a large circle to depict gender inequality in the world today as they perceived it: the pictures included girls working in cotton fields outside a school full of boys, and a woman begging for work from the landlord. In another big circle, the women showed how the world would look if gender equality became a reality: these pictures depicted girls going to school, a woman yoking bullocks to a plough, and a man doing housework while his wife attends a meeting.

The women used these pictures to develop an action plan, but how could they tell if their desired changes were actually happening? To measure if they were on the right track, they decided to note whether more women were agreeing to sign on to a pledge to send their daughters to school, and whether training in hand-pump repair was organised for women's groups. To tell if they were getting where they wanted to go, the women counted any increase in the number of days of agricultural work for women, and increases in the number of girls enrolled in school. These are all indicators to measure change.

Adapted from Menon-Sen 2006

This report provides an overview of existing conceptual and methodological approaches to gender and measurements of change. It is intended for a broad range of development practitioners – from those in mainstream evaluation units and organisations who want or are required to report on gender, to gender specialists implementing projects or advocating for change. The report focuses on current debates and good practice around gender-sensitive measurements of change from the grassroots to the international level – with particular attention to gender-sensitive indicators. Section 2 discusses how to measure and explores the politics behind this process. Section 3 considers how to measure the impact of gender mainstreaming, both at the level of internal organisational change and at the level of programming practice. In Section 4, current thinking, policy and practice on measuring specific areas of gender inequality are examined and new approaches to measurement are highlighted. Section 5 outlines a range of international measurement instruments, including widely recognised goals and indices as well as innovative new approaches. Finally, Section 6 presents conclusions and recommendations.

This report forms part of the Cutting Edge Pack on 'Gender and Indicators'. In addition to this report, the pack contains the Gender and Development In Brief bulletin and the Supporting Resources Collection (SRC). The SRC provides summaries of practical resources on measuring change from a gender perspective in different thematic areas, as well as further information on how to monitor international goals and commitments to gender equality. International and regional databases of gender statistics are also presented.

1.2 What are measurements of change?

Measuring change means tracking the degree to which, and in what way, changes take place over time. From a gender perspective, measurements of change might address changes in the relations between men and women, changes in the outcomes of a particular policy, programme or activity for women and men, or changes in the status or situation of men and women with regards to a particular issue such as levels of poverty or political participation.

To measure these changes we need to know where we are now – our starting point. We must also decide what we want to measure, what kind of data is needed, and how that data should be collected and analysed. This report focuses on the use of gender-sensitive indicators as a specific way of measuring change. Indicators are criteria or measures against which changes can be assessed (Imp-Act 2005). They may be pointers, facts, numbers, opinions or perceptions – used to signify changes in specific conditions or progress towards particular objectives (CIDA, 1997).

A 'gender-sensitive indicator' measures gender-related changes in society over time. The term 'gender-sensitive indicators' incorporates sex-disaggregated indicators which provide separate measures for men and women on a specific indicator such as literacy: for example, in Pakistan 75.8 per cent of men and 54.7 per cent of women aged 15–24 are literate (United Nations 2006a). Gender-sensitive indicators may also refer to gender-specific indicators where the indicator is specific to women or men: for example, in Nicaragua 52 per cent of women report having been physically abused by a partner (UNICEF 2000).

1.3 Why do we need gender-sensitive measurements of change?

1.3.1 Taking gender equality seriously

'Although no number of targets and indicators can capture the rich diversity and complexity of women's lives, they help us to monitor the fulfilment of commitments to women's progress, as well as mobilise support for stronger efforts in this regard ... Assessing the progress of women against agreed targets reveals how much progress there has been – but also how much still remains to be done.'

Noeleen Heyzer, Executive Director of the United Nations Development Fund for Women
(UNIFEM) 2001

We need to measure and document gender inequality because what gets measured is more likely to get addressed, and 'gender' has often been marginalised within mainstream development. By highlighting differences in how women and men fare, advocates can make the case for the urgent need to work towards reducing gender inequality. For example, Rwandan women parliamentarians joined forces with national and international NGOs, UN agencies and the national gender machinery to use statistics on gender-based violence to lobby for a GBV bill. This led to an abrupt change of heart by the male parliamentarians, resulting in the acceptance of the bill in which domestic rape and other kinds of 'private' family issues are classified as criminal offences. (UNDP Rwanda, UNDP/BRIDGE e-discussion, March 2007).

To take the more economics-focused approach of the World Economic Forum, data showing the gaps between the advancement of women and men can demonstrate that 'countries which do not capitalise on the full potential of one half of their societies are misallocating their human resources and compromising their competitive potential' (Lopez-Claros and Zahidi 2005: 2). For example, a World Bank study used statistical analyses to argue that increased gender equality in education promotes economic growth, lowers fertility rates and lowers child mortality rates (Klasen 1999). Arguments like these can help make the case for action. However, we also need to assert that gender equality and women's rights are important as ends in themselves.

1.3.2 Enabling better planning and actions

Gender-sensitive indicators can be used to evaluate the outcomes of gender-focused and mainstream interventions and policies, assess challenges to success, and adjust programmes and activities to better achieve gender equality goals and reduce adverse impacts on women and men. For example, Community Information for Empowerment and Transparency (CIET) methods of gender-sensitive evidence-based planning have been applied in 49 countries, using qualitative and quantitative methods to better orient services and allocate resources to meet needs of both women and men and challenge gendered patterns of poverty (Andersson and Roche 2006: 151).

Gender-sensitive budget (GSB) initiatives can assist governments to identify how policies can be adjusted to achieve their maximum impact, and where resources can be reallocated to improve overall development and gender equality. The success of this process is demonstrated in the case of Mongolia, below. GSB initiatives involve analysing government expenditure and revenue with regards to women and girls as compared to men and boys.

UNDP's Gender-sensitive Budget Process in Mongolia

In Mongolia, the United Nations Development Programme's (UNDP) GSB project produced data showing that mechanisms surrounding the allocation of resources have deprived women of state-provided assets. The GSB project aimed to address these inequalities through building national capacity to carry out gender budget analysis and formulate gender-responsive macroeconomic policies. Project outcomes to date have included the Ministry of Finance recognising the importance of making a budget gender-sensitive, identifying gender budgeting and equality as priority issues in the 2006 draft 'Guidelines for Socio-Economic Development', and creating a gender specialist position within the Ministry. In addition, the Poverty Reduction Strategy Paper (PRSP) progress report included a section on gender issues, and the Government is planning to disaggregate the distribution of social welfare assistance data by sex, to highlight gender issues for policymakers.

Dorj 2006; JWIDF/UNDP 2004

1.3.3 Holding institutions accountable

'For aid agencies and governments, gender indicators are a key tool for accountability, telling us whether our programmes are working'

Teresa Gambaro, Parliamentary Secretary for Foreign Affairs, Australia 2006

There is much rhetoric around fighting for gender equality and women's rights at the international and national level, yet delivery on this has been disappointing. Even the rather narrowly defined 2015 Millennium Development Goal (MDG) on Gender Equality could be in jeopardy. How can governments in both the North and South be held to account for their international commitments?

Gender-sensitive measurements can make visible the gaps between these commitments and their actual implementation and impact, and can thus be used to hold commitment-makers accountable for their actions, or their lack of action. They can also be used to measure the outcomes of non-gender-specific goals and activities on gender relations and inequalities.

A recent Eurostep and Social Watch assessment of nine donors found that while they make extensive policy commitments to the promotion of gender equality in their development assistance, these commitments are not adequately followed through to the budget, implementation and evaluation stages (van Reisen 2005). Yet there are positive examples. The International Planned Parenthood Foundation (IPPF) uses gender-sensitive data to produce a series of Report Cards on the current situation of HIV prevention strategies and services for girls and young women. Building on global policy commitments, these Report Cards are used as an advocacy tool targeting policymakers and service providers with the aim of improving programmatic, policy and funding actions on HIV prevention (IPPF 2006). There are also examples of national-level advocates in the South conducting research to hold their governments accountable (see the SRC for an example of how women's civil-society organisations in Chile lobbied the government for change).

2. THE WHAT AND HOW OF MEASUREMENT

2.1 The politics of deciding what and how to measure

‘Indicators validate particular world views and prioritise selected areas of knowledge’

MacKay and Bilton 2003: 46

While measuring is often considered to be a technical exercise, the process of choosing what to measure is political – and indicators tend to reflect the priorities of decision-makers rather than those of the beneficiaries themselves (unless a participatory approach is used – see Section 2.4). Deciding what to measure may draw on accepted values within specific societies, organisations or institutions. For example, the calculations in UNDP’s Gender-related Development Index (GDI) give strong weighting to Gross Domestic Product (GDP), and hence the GDI is biased in favour of richer countries and privileges economic over social development (UNRISD 2005). The choice of indicators, data collection methodologies and statistical analysis techniques can produce not only different kinds of data, but also different results. By choosing what and how to measure, the policymaker, advocate, researcher or practitioner can thus present the story he or she wants to tell.

Deciding whether or not to measure progress towards gender equality is itself a political exercise, and there is often much resistance – both to setting gender equality goals and to measuring progress. Where it is decided to measure gender equality, more politics are involved in deciding which aspects to privilege. Deciding if and how to use gender-sensitive data is also a political consideration; much of the data which is collected is not adequately disseminated, listened to or acted upon due to a lack of political will, as shown in the case below from Papua New Guinea.

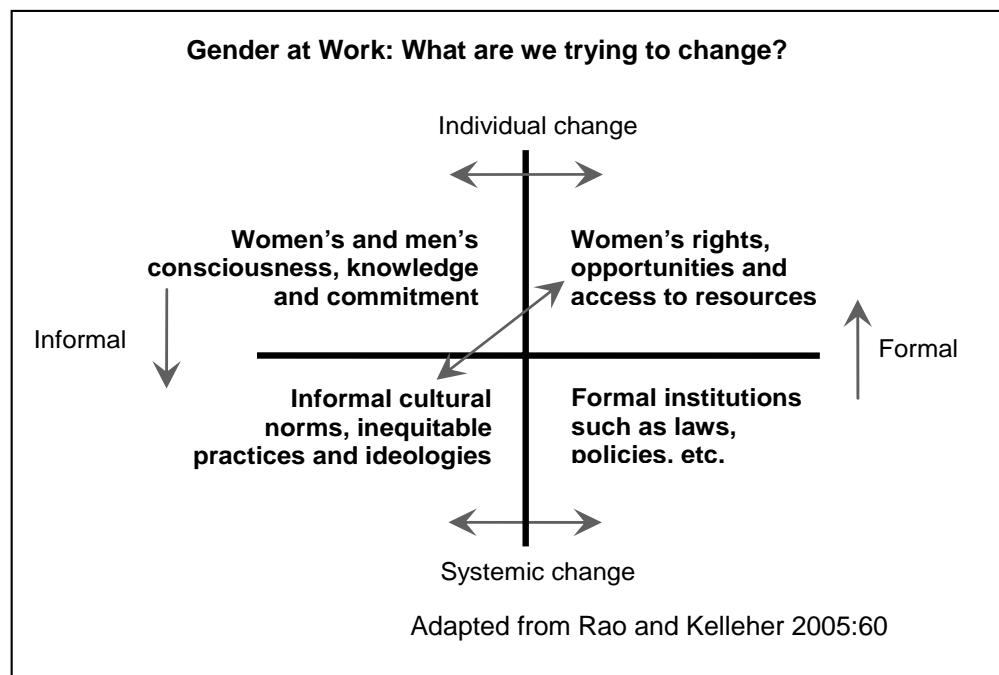
Valuable data does not always lead to useful actions

In Papua New Guinea in the 1980s, a large research project on domestic violence was undertaken under the auspices of the Law Reform Commission. A series of volumes was produced. The data were solid, the analyses compellingly presented, the findings terrible. Prevalence rates in some areas were greater than 70 per cent. The recommendations were impressive. However, subsequent actions taken were limited. There were few attempts to evaluate the effects of interventions, policies and programmes that ensued.

McIntyre 2006

2.2 What change should we measure?

We know that deciding what to measure is a political process, but in practice how should we go about deciding which aspects of change to measure? The choice of what to measure will be different for different actors. Governments might be concerned with monitoring 'progress' for women and men, development agencies might focus on evaluating the 'impact' of their gender programmes, while gender equality activists may be measuring gender (in)equality or (in)justice. The diagram below shows that changes need to happen along four dimensions: at the level of individual men and women and at the level of society as a whole, as well as in both the formal and informal spheres (Rao and Kelleher 2005: 60).



In deciding what to measure, we must establish key objectives and goals; identify the changes that are required to achieve these goals; then decide what kinds of indicators will best enable us to measure progress towards these desired changes; the 'Another world is possible' example at the beginning of this report illustrates this process. In another example, UNDP has developed a framework for mainstreaming pro-poor and gender-sensitive indicators into evaluations of democratic governance (UNDP 2006). A set of key questions are used to formulate the pro-poor and gender-sensitive indicators, with each question being accompanied by a particular indicator (see box below).

Questions to help in selecting pro-poor gender-sensitive indicators in the area of justice

Legal protection

- Are women and the poor effectively protected by the rule of law? Do women enjoy the same property rights (particularly to land) as men?

Legal awareness

- Are women and the poor aware of (i) their right to seek redress through the justice system; (ii) the officials and institutions entrusted to protect their access to justice; and (iii) the steps involved in starting legal procedures?

Adjudication

- How do women and the poor assess the formal systems of justice as victims, complainants, accused persons, witnesses and jury members?
- How effective is the justice system in detecting crimes of domestic violence, convicting the perpetrators and preventing them from re-offending?
- Are men and women treated as equals by informal mechanisms of dispute resolution?

UNDP 2006:10

Once we have determined what changes we want to measure, the next step is to decide how to measure them.

2.3 Which measuring methods should we use?

‘Not everything that counts can be counted and not everything that can be counted counts’.

Albert Einstein

2.3.1 Available methods and methodologies

Quantitative and qualitative approaches both have their own advantages and disadvantages. The ‘hard figures’ produced by quantitative methodologies are crucial to building the case for addressing gender differentials, even if these figures are often contested and subject to interpretation. Qualitative methodologies, by contrast, enable a more in-depth examination of social processes, social relations, power dynamics and the ‘quality’ of gender equality, all of which are difficult to measure with quantitative methods. The ideal methodology, therefore, is a combined approach, which incorporates quantitative and qualitative approaches, and uses gender-sensitive participatory techniques to help ensure that the topics of investigation are relevant to, and ‘owned’, by the subjects of the research. Although there is no consensus on definitions of quantitative and qualitative methods of data collections, here are the definitions that we will be working with:

Methodology	Working definition
Quantitative	Quantitative methods of data collection produce quantifiable results, and as such focus on issues which can be counted such as percentages of women and men in parliament, male and female wage rates, school enrolment rates for girls and boys.
Qualitative	Qualitative methodologies capture people's opinions, attitudes and feelings and are generally derived from more qualitative processes of investigation (e.g. focus group discussions).
Participatory	Participatory methodologies are based on the principle that men and women should be the agents of their own development, contributing to decisions about what should be measured and what indicators should be used, and participating in the research themselves.

2.3.2 Quantitative approaches

Traditionally, quantitative methods have been favoured because they are perceived to be more objective and verifiable. They are also relatively straightforward to track. Moreover, because of their more 'concrete' nature it is easier to use quantitative indicators to measure change on an international level and draw comparisons between different studies in different countries. Carefully chosen quantitative data can clearly show changes in gender equality over time, and such evidence can help make explicit the interrelated factors which inhibit or encourage gender equality.

Quantitative data is generally collected through censuses, administrative records and other large-scale surveys (CIDA 1997). The data is usually interpreted using formal methods such as statistical tests to present and analyse gender-sensitive data in different ways; 'descriptive statistics' summarise the data, such as the average life expectancy of men and women, while 'inferential statistics' can identify relationships, for example whether women's education is more influential on children's health than household income.

National and international quantitative gender measures of wellbeing generally use one of two approaches (Klasen 2004):

- One disaggregates measures by gender to see whether males and females fare differently in outcomes (for example, measuring the number of girls enrolled in primary school compared to the number of boys). There is an advantage here for policymakers in that clearly highlighted gender gaps can focus attention to where action is needed.
- The other approach assesses the impact of gender equality on aggregate (overall) wellbeing, whereby a measure is adjusted downward by applying a penalty for gender inequality (for example UNDP's GDI – see Section 5.2). This approach highlights the fact that gender inequality not only impacts negatively on women but also imposes an aggregate wellbeing loss on society.

Another important issue to consider is how different indicators reveal different aspects of gender inequality. Most gender measures of wellbeing use indicators such as school enrolment and per capita

income (the income each citizen would receive if the yearly income generated by a country from its productive activities were divided equally among everyone); corresponding measures could be, for example, adult literacy and wealth per capita. It can sometimes be important to combine both kinds of measures in order to accurately understand any increases or decreases in gender inequality. Take the example of sex differentials in mortality rates. In China, as parents use sex-selective abortions the survival conditions of girls that are born have improved. Focusing solely on measures such as life expectancy would therefore indicate reduced gender bias – despite this coming at the expense of killing female foetuses (Klasen 2004: 15).

Quantitative data is of course open to contested interpretation and is not always as objective as it may seem. One issue relates to ‘adverse inclusion’ whereby women or men may be worse off than they were before despite data suggesting advances in gender equality. For example, increased numbers of women in work may be interpreted as a positive change. But why are there more women working? Are they cheaper to employ than men? Are they employed on informal terms, with lower wages and poor conditions? Is this a response to high levels of unemployment among men? (Thomson 2006). A similar issue has long been identified with regards to gender and participation; while quantitative indicators may measure the success of an intervention in terms of the number of women participating (attending workshops or otherwise participating in a project), this fails to capture the quality of that participation. Are women’s voices actually being heard? Are they involved in decision-making or just ‘participating’ as silent observers? Does women’s participation place increased burdens on their workloads and time use? This point is also made with reference to the measurement of violence against women in Papua New Guinea (McIntyre 2006: 62):

What if we were to depend on police statistics and found that in the period during a project for the empowerment of women the number of reported criminal assaults by intimate partners soared? Numbers are not transparent. Is this because the project has led to women asserting themselves at home and getting beaten up more? Is it because police involved in the project are taking women’s reports more seriously, recording or investigating them more diligently? Is it because women, recognising their rights as citizens to protection against assault, are reporting crime more often?

Finally, while the cornerstones of much national-level data are the censuses and population surveys conducted by national statistical offices, it is here where many gender biases start, due to a lack of understanding of gender issues, a lack of methods and systems, and a lack of women in decision-making positions. The UN reports that over the last three decades there has been little progress in official reporting of sex-disaggregated data across regions and across topics (UN 2006b), and even the most basic statistical data on men and women – such as population, births and deaths – are not routinely collected, especially in the poorest countries (UN 2005). One exception is the Philippines which has a large representation of women in key positions in national statistical agencies, a situation which has contributed to some excellent government work on gender and statistics (Beck 1999).

The statistics divisions of the UN’s Department of Economic and Social Affairs (UNDESA) and UNIFEM, have identified strategies for strengthening the gender capacity of national statistical offices

(UN 2006b: 92–3; UNIFEM 2002: 56). In order to mainstream a gender perspective into national statistical systems, UNDESA asserts that gender analysis must be implemented throughout the process of producing statistics – from the development of concepts and methods for collecting data to the presentation of results. This requires political will at all levels and in all institutions that provide administrative data. To date, there have not been adequate structures with sufficient authority, gender expertise and commitment to gender driving the process (UNDESA 2006a).

In all of these cases, the quantitative data alone is not sufficient to tell the full story behind gender-related changes. This is where qualitative data and analysis come in.

2.3.3 Qualitative approaches

Qualitative methods of measurement differ from quantitative methods in that they capture people's perceptions and experiences, for example women's experiences of the constraints or advantages of working in the informal sector, or men's and women's views on the causes and consequences of domestic violence – as illustrated in the case of the World Bank's Voices of the Poor project described in the box below.

Qualitative data in the Voices of the Poor project

The World Bank's Voices of the Poor project used qualitative methods to gather the views and experiences of more than 60,000 men and women from 60 countries on a range of issues. Small group discussions about domestic violence revealed the following forms of abuse and violence: verbal abuse, deprivation, physical abuse, drinking and gambling by men, polygamy, promiscuous behaviour and casual sex, property grabbing, dowry and bride price, divorce and desertion, teenage pregnancy, and abusive in-laws.

Narayan et al 2000

The methods used to collect qualitative data include those often associated with participatory methodologies such as focus group discussions and social mapping tools, as well as key informant interviews (see the In Brief article on the Swayamsiddha project for an example of using these qualitative methodologies) and oral testimonies. Qualitative data can also be collected through surveys measuring perceptions and opinions. One example is 'Program H' which was developed in Latin America to promote more gender-equitable attitudes among young men. The programme evaluates attitude changes resulting from project activities using a GEM Scale – or Gender-equitable Men Scale. Indicators have been developed in the form of a scale of questions about attitudes. Attitude questions or statements include affirmations of traditional gender norms, such as 'Men are always ready to have sex' and 'There are times when a woman deserves to be beaten', as well as assertions of more gender-equitable views, such as, 'A man and a woman should decide together what type of contraceptive to use'. For each indicator, three potential answers are provided: I agree; I partially agree; I do not agree. This has proved useful to assess men's current attitudes about gender roles and to measure whether men have changed their attitudes over time (Barker et al 2004).

Qualitative data can be presented in the form of indicators, for example the level of women's satisfaction with credit services. Such qualitative indicators can be quantified, or 'quantized' – where qualitative information is counted, ranked or scaled. Quantification of qualitative data can be important for making convincing arguments. A gender audit of the United Kingdom's Department for International Development (DFID) Malawi programme found that 'quantitative results were taken far more seriously than is often the case with interview information supported by "anecdotal quotes"' (Moser 2005: 24).

The constraints associated with qualitative data include the fact that it can be considered 'non-concrete' data by decision-makers who require evidence to make policy changes. It is based on subjective opinions and is open to differing interpretations which causes scepticism about the validity of this data among some statisticians and economists – although the manner in which qualitative data is collected can be as rigorous as for other kinds of data. Another constraint is that qualitative methods may be more labour-intensive and they are therefore limited to smaller sample sizes.

2.3.4 Combined approaches

A combination of quantitative and qualitative methods enables data to be compared so as to cross-check or 'triangulate' the results. Examples include IPPF's Report Cards on HIV prevention for girls and young women mentioned in Section 1.3.3 (IPPF 2006), as well as the African Gender and Development Index (AGDI) (ACGD 2005) and the World Economic Forum's Gender Gap Index (Lopez-Claros and Zahidi 2005), both of which are discussed in Section 5 of this report.

Although qualitative data does not have to be quantified to be useful or to provide insights, and quantified data can make a powerful standalone statement, the quantification of qualitative data can boost impact for advocacy purposes, depending on the target audience, and qualitative interpretation of quantified data can provide for more nuanced analysis which reduces the possibility of distorted findings and conclusions. The Swiss Agency for Development and Cooperation (SDC) has developed a matrix to assist the qualitative interpretation of quantitative data. For example, a statistic on the proportion of women and men in parliament can be interrogated further by asking 'Is there a correlation between proportion of women candidates who stood for parliament and number of women who actually got in? How does this compare with the situation of men?' (SDC 2006: 31).

2.4 Participatory approaches

Participatory approaches and methodologies are founded on the principle that men and women should be the agents of their own development, and are themselves best placed to analyse and evaluate their own situations – provided that they are equipped with tools of data collection and analysis.

Participatory approaches to measuring change comprise a wide range of methods, from focus group discussions through to verbal and visual tools such as scoring, ranking, mapping, calendars, time lines and diagrams. When appropriately planned and executed, gender-sensitive participatory methodologies can help ensure that the topics of investigation are relevant to the community, and can create a sense of community ownership of the measurement process and the data collected. For

example, the Swayamsiddha women's health and empowerment project in India carried out a Community Needs Assessment where women beneficiaries were consulted about their perceived needs and asked to rank these needs in order of priority. This was an empowering process in itself and generated a sense of ownership over the project among stakeholders (Kishore et al 2006) (see the *In Brief* for more detail of the Swayamsiddha initiative).

Organisations working especially at the community level should therefore consider adopting participatory methodologies for: ensuring the indicators chosen are relevant, keeping programmes accountable to the realities of women and men's lives when measuring poverty and other dimensions at the community level, and mobilising real support for change.

3. MEASURING GENDER MAINSTREAMING

Gender mainstreaming is an organisational strategy to bring a gender perspective to all aspects of an institution's policy, programme and project processes. Although the majority of development agencies have adopted a gender mainstreaming approach in terms of policy and planning, a recent assessment of gender mainstreaming in 14 international development institutions found that there was a significant lack of indicators to measure gender mainstreaming *outcomes and impacts* (Moser and Moser 2005). The danger is that when gender concerns are left to the 'mainstream' – rather than to specific gender units, staff or programmes – they can become invisible. In the context of the new aid architecture, the need to ensure that commitments to gender mainstreaming at the policy level don't evaporate at the lower levels has become all the more acute (see below).

3.1 Measuring internal organisational change

'Working on gender issues obliges organisations to set their own houses in order'.

Sweetman 1997: 2

In recent years, increasing attention has been given to measuring the extent of gender equality within development organisations themselves, including the gender-sensitivity of policies and programmes, as well as internal organisational structure, procedures, culture and human resources. Internal gender audits or gender self-assessments are now used by many bilateral development agencies, international NGOs and their partners, and to a lesser extent, NGOs in the South. The following issues might be considered in internal gender assessments:

- Analysis of gender issues within organisations in relation to, for example, flexible working hours for both women and men, childcare provision, and policies that encourage more flexible gender roles;
- Mainstreaming of gender equality in all mainstream policies, and creating requirements for gender-sensitive monitoring and evaluation systems;
- Human resources, including issues such as gender equity in recruitment;
- Technical capacity of staff in gender issues, and internal capacity building;
- Allocation of financial resources to gender mainstreaming efforts or women-focused initiatives;
- Organisational culture, including a culture of participation and consultation.

While practical methodologies for measuring internal change towards gender equality vary greatly, they frequently comprise a combination of questionnaires gathering quantitative and qualitative data, and participatory methodologies such as focus groups and diagrams – see the example in the box below. Participatory methods allow staff at different levels to be involved in discussions about how their organisation can or should change, meaning that they are less likely to feel alienated by a judgemental process which condemns them as being 'not up to the mark' on gender.

Gender Audit Methodology in DFID Malawi

A recent gender audit of the UK Department for International Development (DFID) Malawi comprised an internal organisational assessment in conjunction with an external assessment of development objectives. The internal assessment methodology – based on an abridged version of InterAction’s (2003) model – was made up of two components:

1. Self-assessment questionnaires: These were short questionnaires of 18 multiple choice and three open-ended questions, administered to all staff. The questionnaires covered both technical capacity and institutional culture. Examples of questions include:

- Does DFID Malawi offer enough opportunities to strengthen your knowledge of gender issues in your professional or technical area?
- How often do you integrate gender explicitly in your work?
- Does DFID Malawi have an active policy to promote gender equality and respect for diversity in decision-making, behaviour, work ethics, etc? If so, how would you rate its effectiveness?

2. Focus group meetings: As in-depth follow-up to the questionnaires, these were brainstorming sessions on institutional and operational gender mainstreaming issues, including recommendations for improvement. These were held with three groups: combined male and female UK staff, female Malawian staff and male Malawian staff.

The survey data was complemented by anecdotal data from the focus groups to inform the gender audit report. For example: ‘Less than one in five people (17 per cent) are completely aware that DFID has a gender strategy, with half insufficiently aware. *“It’s just another term. We don’t really know what it means.”*’ (Moser 2005: 24)

Moser 2005; Moser et al 2004

Gender audits or self-assessments should be used to facilitate change through the development of action plans and/or monitoring systems for internal institutional development around gender issues. See the SRC for more detail on this approach. Gender issues should also be integrated into non-gender-focused self-assessments.

3.2 Measuring the implementation of gender mainstreaming in programming practice

It is also important to assess the degree to which gender mainstreaming has been implemented in programming practice; this is especially important at the field level where policy commitments tend to evaporate. There are two key areas to address: firstly, adherence to gender-sensitive procedures in the programming actions of the organisations (gender analysis, planning, resource allocation, monitoring systems). The second area is that of measuring the actual impacts of gender mainstreaming programmes on male and female beneficiaries. In many organisations, tools to measure gender mainstreaming do exist; the challenge often lies with convincing non-gender specialists to use these tools (UNDP Rwanda, UNDP/BRIDGE e-discussion March 2007).

3.2.1 Gender-sensitive programming actions

For development organisations to effectively measure their progress towards gender equality it is necessary to start at the project planning phase. The logical framework – a tool for planning and managing development projects which looks like a table and aims to present information about the key components of a project in a concise and systematic way (BOND 2003: 1) – should identify gender-related goals and objectives and specify gender-sensitive indicators. Gender-sensitive indicators should be developed for every stage of the programme cycle.

UNDP has developed a Gender Mainstreaming Scorecard, a tool which combines the measurement of both institutional and programmatic performance on gender mainstreaming, as illustrated in the box below. Each of the indicators is allocated a score between one and five. The scorecard has been pre-tested and will shortly be rolled out across the organisation.

UNDP Gender Mainstreaming Scorecard

These parameters, indicators and corresponding targets, are for all UNDP Headquarters Bureaux, Regional Centres and Country Offices to report on annually.

1. Corporate Commitments

1.1 Gender action plan: progress on implementation of country office Gender Action Plan (GAP) is regularly monitored by head of office

2. Implementation Mechanisms

2.1 Strategy documents: implementation of country office GAP is included in senior managers' performance targets

2.2 Resources: 100 percent of resources needed for implementation of GAP are available

3. Internal Capacities

3.1 Gender experts (staff): experienced gender team is operating in the bureau, centre or office

3.2 Training for professional staff in gender analysis: all staff are trained

4. Gender Mainstreaming in Project Cycle

4.1 Toolkits (guidelines, checklists, formats): gender toolkit is mandatory, monitored and regularly updated - technical backstopping is available to programme staff when required

4.2 Mainstreaming in project documents: project appraisal committee monitors project documents to ensure integration of gender elements

4.3 Monitoring and evaluation: gender-blind M&E reports are not accepted by the country office, bureau or unit concerned

5. Accountability Mechanisms

5.1 Results competency assessment system: gender targets are included in senior managers' performance targets

5.2 Results based management system: gender indicators are used for reporting in more than 50 percent of programmes

6. Organisational Culture

6.1 Gender sensitisation training for all staff: 100 percent of staff have completed the online gender sensitisation module

6.2 Prevention of sexual harassment (SH): SH committee is functional, all staff are sensitised and aware of complaints procedures, systems for confidentiality and protection of complainants/witnesses are in place.

Adapted from UNDP (n.d.)

3.2.2 Measuring impact

It is equally important to measure the impact of gender mainstreaming activities on gender equality among those intended to benefit. This often relies more heavily on qualitative assessments.

Oxfam has developed a tool for assessing the gender impacts of their own work, as well as work by partner organisations, outlined in the box below. Oxfam uses the results of the assessments to help them determine the extent and type of support which should be offered to partners to improve their gender mainstreaming process (Oxfam 2002). This type of assessment tool can be used for gender-focused organisations and programmes, or to measure the impact of mainstream organisations and programmes on gender equality outcomes.

Oxfam criteria and indicators to assess impact on gender equality

1. Women and men participate in decision-making in private and public more equally

- Do women enjoy greater participation in the political processes of the community in situations where they were previously disenfranchised?
- Has the influence of women on decision-making in the project increased in relation to that of their male counterparts?

2. Women have more equal access to and control over economic and natural resources, and basic social services

- Do women share the workload more equally with men and have more time for themselves?
- Has women's access to and control over natural and economic assets (land, household finances, other assets) increased?

3. Fewer women suffer gender-related violence, and women have increased control over their own bodies

- Has the project led to a decrease in violence against women, or has it caused or exacerbated violence, or the fear of violence?

4. Gender stereotypes and discriminatory attitudes towards women and girls are challenged and changed

- Do men and women better understand how unequal power relations between them discriminate against women and keep them in poverty?
- Is women's unpaid and caring work better valued? Is greater value attached to girls' education?

5. Women's organisations are established, strengthened or collaborated with

- Have more women's organisations been established or strengthened through the project?

6. Women are empowered to act as agents of change through increased self-confidence, leadership skills, and capacity to organise

- Has women's self-esteem and self-confidence to influence social processes increased?
- Are women able to exercise their capacity for leadership?

Adapted from Oxfam 2002

Another way of measuring impact is through sex-disaggregated beneficiary assessments. These assess the extent to which public service expenditure and programmes address the needs and priorities of male and female beneficiaries, and their levels of satisfaction with the provision of services. Beneficiary assessments are primarily qualitative, and combine opinion surveys with participatory techniques. For example, a gender-sensitive beneficiary assessment of a federal anti-poverty programme in Mexico revealed that women beneficiaries felt that the financial benefits of the programme were not worth the overall effort invested in complying with its requirements, as it relied heavily on women's unpaid work (Red de Promotoras y Asesoras Rurales 2000, quoted in Hofbauer Balmori 2003).

As with the internal self-assessments, the results of operational assessments can be used as a driver for change. In Tanzania, World Vision implemented their Gender Self-Assessment (GSA) tool – consisting of staff questionnaires and group discussions – and immediately afterwards staff developed an engendered action plan designed to bridge the gender mainstreaming gaps that were identified through the GSA. One recommendation was to train women leaders at the national and field levels in leadership skills, self-assertiveness and confidence building. In a remarkable result, women at both levels have since been trained and three women contested and won the local council elections the following year, attributing their success to the gender training (Hashi and Ghamunga 2006).

3.3 The new aid architecture

Recent political commitments such as the 2005 World Summit and the Paris Declaration on Aid Effectiveness have brought about a new aid architecture, based on a shift towards channelling development assistance through Sector Wide Approach Programmes (SWAPs) and country-led national development programmes – particularly Poverty Reduction Strategies (PRS) (van Reisen 2005). This can be seen as a window of opportunity for highlighting – and potentially filling – the gaps between policy commitment and action that are outlined above. Yet other commentators are less optimistic: 'The new aid architecture has few, if any, mechanisms for accountability and even less mechanisms for the implementation of national obligations to gender equality' (van Reisen 2005: 14). How can we harness the aid effectiveness agenda to speed up implementation of gender equality commitments? UNIFEM has proposed some immediate actions to take:

- Improving the production and dissemination of sex-disaggregated data;
- Ensuring the inclusion of aid performance indicators that specifically measure changes in gender equality;
- Refining accountability systems to monitor donor and recipient countries' performance in advancing women's rights;
- Strengthening the capacity of gender equality advocacy groups to voice women's priorities, and the capacity of public institutions to respond to women's needs.

UNIFEM 2006b: 10–11

The Organisation for Economic Co-operation and Development's (OECD) Development Assistance Committee (DAC) has a Creditor Reporting System Aid Activity online database which allows us to see where aid from DAC members goes, what purposes it serves, and what policies it aims to implement. This uses the Gender Equality Marker to track aid targeted towards the objective of gender equality, whereby donors indicate for each aid activity whether gender equality is a principal objective, a significant objective, or is not a targeted objective. While there are many limitations to the marker system, it is a step in the right direction. Key findings of the data from 1999–2003 included the fact that around one half of aid to basic education and basic health targeted gender-specific concerns, while aid for transport, communications and energy infrastructure – which accounted for a third of all bilateral aid – was reported as being little focused on gender equality (OECD 2005).

4. MEASURING THE DIFFICULT TO MEASURE

Some aspects of gender (in)equality are particularly difficult to measure. Some are difficult to conceptualise, such as the gender dimensions of poverty or women's empowerment, while others are sensitive issues (GBV) or occur in sensitive contexts (conflict). This section considers how to measure the difficult to measure, focusing on these four challenging areas.

4.1 Measuring poverty from a gender perspective

Poverty is difficult to measure because it is a multi-dimensional process which is hard to define. However, although there is no consensus on what constitutes 'poverty', any definition must include inadequate income and consumption as well as the broader impoverishment of wellbeing – such as a lack of personal security and poor health. Measuring poverty thus requires using a multidimensional range of gender-sensitive indicators which give attention to the nuances of gender relations and the dynamics of power at both the household and societal levels.

4.1.1 *Limitations of traditional measurements of gender and poverty*

For the last three decades, the measurement of income and consumption – or 'dollar-a-day poverty' – has been the main method of measuring poverty. This approach is based on household survey data where the only gender-sensitive indicator available is female-headed households versus male-headed households. Therefore when 'women's poverty' is talked about, what is actually being talked about is the poverty of female-headed households. This links poverty to women rather than to unequal gender relations and it ignores poverty among women in male-headed households (Chant 2003; Cagatay 1998).

The lack of sex-disaggregated data on spending and consumption within the household also perpetuates an assumption that income is distributed equally among household members. This fails to account for the influence of gendered power relations and bargaining in the intra-household distribution of resources (Chant 2003). Men may also exert their control over income by forbidding women to work outside the home, or by controlling the income which women bring into the household, as has been documented for example in Thailand (Blanc-Szanton 1990) and Brazil (Fonseca 1991).

Furthermore, traditional approaches to measuring poverty assign no economic value to unpaid domestic work (Montano et al 2003). This underestimates the ill-being experienced by some women as a result of the long and physically strenuous hours of care work they carry out in addition to their paid labour. It also overlooks the high opportunity costs associated with unpaid work: girls are withdrawn from school to care for sick relatives or look after children, while women have less time to devote to productive work – confining them to low-paid jobs with few prospects.

4.1.2 Recent approaches to gender-sensitive measurement of poverty

The concept of 'time poverty' – whereby some individuals, especially women, do not have enough time for rest and leisure after taking into account the time spent working, whether in the labour market, for domestic work, or for other activities such as fetching water and wood (Blackden and Wodon 2006: 6) – is sometimes used as an alternative methodology to capture the social and economic dimensions of poverty. Time poverty is measured primarily through time-use surveys, which ask men and women to record how they spend their time during a 'normal' 24-hour day, including productive activities, as well as various forms of unpaid labour, and leisure and educational activities. Time-use studies are especially important for measuring women's unpaid care work, or their provision of services within households and communities (UNIFEM 2000), which often limits their ability to participate in paid employment.

For example, in 2000 the Mongolia National Statistics Office and UNDP conducted a time-use survey to collect data on gender (in)equality in paid and unpaid work. Time-use data was collected using a 24-hour diary kept by household members, and household and demographic information was collected through questionnaires. The findings showed that in rural areas the large amount of time women spend on housework and caring for family members (5–6 hours per day) meant that they had little time to spend on employment and personal care. A key recommendation emanating from the study was to ensure that equal access and availability of employment for men and women is high on the policy agenda. (National Statistics Office and UNDP 2000)

Participatory Poverty Assessments (PPAs) also have the potential to capture the multi-dimensional aspects of gender and poverty. A PPA is a process for including poor people's views in the analysis of poverty and in the design of strategies to reduce it (Balochistan team - Participatory Poverty Assessment 2003). The methodologies are participatory and largely qualitative – the Voices of the Poor project discussed in Section 2.3.3 is a good example. Some results from specific PPAs include the following (Kabeer 2003):

- Forms of disadvantage that especially affect poor women, for example time poverty, was explored in African PPAs, and domestic violence, unequal decision-making power and disproportionate workloads was highlighted in the Vietnam PPA;
- The vulnerability of female-headed households;
- Gender differences in priorities, for example in Zambia women prioritised basic needs while men emphasised ownership of physical assets;
- Policy-related inequalities and unequal treatment; for example in Guinea-Bissau and South Africa women were often bypassed in the distribution of credit and agricultural extension, putting them at an economic disadvantage in terms of earning a livelihood;
- Women's lack of access to resources such as land, as documented in Kenya and Tanzania.

Despite this type of valuable data many PPAs lack any reference to gender and others use 'gender' as a synonym for 'women'. This could be due to biases among those compiling poverty profiles and translating them into policy ('PPAs, like any other methodology, are as gender-blind or as gender-aware as those who conduct them' (Kabeer 2003: 101)), or it could be due to the fact that 'poor

people's perceptions' reflect the norms and values of society, which may not view gender inequalities as significant (Kabeer 2003).

Another way forward lies with the proposal of a Gender Poverty Index (GPI) based on: time use (labour inputs versus leisure/rest time); the value of labour inputs (in the paid and unpaid sectors) versus earnings; and sex-differentiated expenditure and consumption patterns (Chant 2006: 215). For more detail on the GPI see the SRC.

4.2 Gender and empowerment

Since the mid-1980s, the term 'empowerment' has become popular in the development field, especially in relation to women. Yet empowerment is not easily defined in concrete terms and means different things to different people. For feminist activists, empowerment can be about challenging patriarchy: Asia-South Pacific Bureau of Adult Education states that women's empowerment is 'the process, and the outcome of the process, by which women gain greater control over material and intellectual resources, and challenge the ideology of patriarchy and the gender-based discrimination against women in all the institutions and structures of society' (Batliwala 1995). For others, empowerment is about *choices* – 'the expansion in people's ability to make strategic life choices in a context where this ability was previously denied to them' (Kabeer 2001: 19).

These definitions suggest that empowerment comprises not only forms of observable action, such as political decision-making, but also the meaning, motivation and purpose that individuals bring to their actions – their *sense* of agency or self-worth (Kabeer 2005). Women's empowerment, like poverty, cannot therefore be captured by a single indicator. Instead empowerment must be measured along many lines.

Moreover, purely quantitative indicators may not be sensitive enough to capture the nuances of gender power relations inherent in empowerment processes; nor can they measure an individual's *sense* of agency or self-worth. In order to understand the socio-cultural context within which social interaction and gender relationships take place, it may be useful to use in-depth qualitative methods (Pradhan 2003).

There have been many approaches to measuring women's empowerment. Kabeer's approach involves three inter-related dimensions: access to resources (the preconditions for empowerment), agency (the ability to use these resources to bring about new opportunities) and achievements (outcomes) (Kabeer 1999: 436). Her analysis suggests that all three dimensions are indivisible, pointing to the need to use multiple sources and methodologies to cross-check data. For example, it is difficult to judge the validity of an 'achievement' measure without evidence of *whose* agency is involved and the extent to which the achievement has transformed prevailing inequalities in resources and agency, rather than sustaining or reinforcing them (ibid: 452).

A key challenge is how to satisfy the need for both universal standards to measure empowerment and context-sensitive indicators. One approach is to use multi-level indicators, where broader-level

indicators might be applicable across a range of contexts, while indicators at the community and household level might be adapted for specific contexts. A multi-level set of indicators is discussed in the box below.

A multidimensional and multi-level approach to empowerment

A study reviewing international approaches to measuring women's empowerment suggests measuring along six dimensions: economic, socio-cultural, familial-interpersonal, legal, political and psychological. Each of these in turn are measured at different social levels: the household, community and 'broader arenas'. This is designed to accommodate contextual differences between countries. For example, in the economic dimension indicators of empowerment include women's and men's control over household income; their access to employment, credit and markets; and representation of women's and men's interests in macro-economic policies. In the psychological dimension, indicators include self-esteem and psychological wellbeing, collective awareness of injustice, and a systemic acceptance of women's entitlement and inclusion.

Malhotra et al 2003

Approaches to measuring women's empowerment must also take into account the fact that empowerment can be a slow process of change. An example from India is provided in the box below, also stressing that the road to empowerment is not a linear one. The message for researchers and evaluators is to look for small successes, to look in unexpected places (such as in the next generation, in the example below), and to recognise that women's empowerment initiatives require a long time-frame commitment.

The non-linear nature of women's empowerment

The 2001 Indian census data suggested a pronounced increase in female literacy levels since 1991. This came as somewhat of a surprise because many of the women's adult literacy programmes of the 1980s and 1990s had been declared failures because the short-term programmes did not enable women to retain their newly-acquired skills. One hypothesis regarding the 2001 census data, was that while the women who had attended these literacy classes may not have become literate, they did ensure that their daughters and granddaughters went to school. Ten to 20 years later, this was born out in the census and other qualitative data.

Gurumurthy 2006

4.3 Measuring gender-based violence

Why is it important to measure levels of GBV – what purpose will this serve in reducing the problem? GBV can be defined as physical, sexual, or psychological abuse inflicted on the basis of a person's gender. However, definitions of GBV vary across and within countries, making it difficult to measure

GBV as a global phenomenon. A lack of data and general under-reporting also makes GBV appear far less common than it actually is: more reliable data would better highlight the widespread nature of the problem and strengthen the case for action. To help reduce the acceptability of this violence, initiatives are promoting attitude change, the success of which also needs to be measured (see Section 2.3.3).

A better understanding of who experiences GBV, where, and with which associated causal factors (alcohol abuse, cultural practices, armed conflict, etc.), will enable planners and policymakers to better target interventions to reduce GBV or assist survivors. For example, a survey of violence perpetrated against young female vendors trading at bus and truck stops in urban areas was conducted by the University of Ibadan in Nigeria. The data was used to design training and advocacy with police, drivers' unions and judicial officials, resulting in measures ensuring a significant drop in the incidence of violence (UNIFEM 2007).

4.3.1 Mitigating risk in data collection

One of the reasons for the severe lack of accurate data on GBV is the sensitive nature of the issue, which is taboo in many contexts. For this reason women may be concerned that by speaking out they will increase their vulnerability to violence. A critical consideration when measuring GBV is thus to address female respondents' fears for their safety. The World Health Organization (WHO) has developed ethical and safety guidelines for researching domestic violence against women, highlighting issues such as guaranteeing privacy and confidentiality of the interview and providing special training for researchers (WHO 2001). Participatory researchers in Pakistan also used special steps to ensure that women felt comfortable answering questions about domestic violence, such as getting mother-in-laws to leave the room during particular questions by politely asking for a glass of water. In another case, they gave women respondents double-sided key chains with helpline numbers on them, and asked them to respond to the question of whether they had experienced abuse in the last year by showing one side or the other of the key chain. This meant that women could respond more honestly because they did not risk being overheard.

4.3.2 Methodologies for measurement of GBV

One approach to measuring GBV is to carry out a dedicated study on the types, circumstances and consequences of violence. However, such studies are costly and difficult to repeat on a regular basis. A more cost-effective option is to incorporate questions about GBV into surveys designed for other purposes, such as demographic surveys. This has the advantage of being able to use the other variables collected to deepen understanding of risk factors and consequences of GBV, for example on reproductive and child health over time. However, the inclusion of only one or two questions about GBV in surveys can result in under-reporting of GBV. WHO has consequently developed a specific GBV module which can be integrated into broader studies (UNDAW 2005).

Alternatively, GBV may be measured as part of a broader assessment of sexual health programmes or legal aid services. In Venezuela, for example, GBV was measured as part of a sexual and reproductive health programme. Key actions taken to facilitate effective and sensitive measurement included: appropriate training for all staff; establishing good rapport with clients; explaining to clients that all women in the programme are screened for GBV as a matter of course; and using a simple,

standardised assessment tool which included emotional, physical and sexual violence, as well as sexual violence in childhood. The prevalence of violence detected rose from 7 per cent to 38 per cent of new clients, which was attributed to the above systematic procedures, the screening of all clients, and increased public awareness of a new domestic violence law (Guedes et al 2002).

4.4 Gender and conflict

Gender equality is hard enough to measure in situations of peace and stability but even more difficult in a conflict-prone context of rapid change. Gender-sensitive indicators can help to warn of, and thus avert, escalating conflict; they can also provide a roadmap for monitoring change towards long-term gender equality in the critical post-conflict period.

4.4.1 Monitoring the escalation of conflict

Appropriate use of gender-sensitive indicators can anticipate the escalation of conflict. Increases in gender inequality, for example manifested through high rates of domestic violence, can be indicators of the escalation of conflict. Attention to gender can therefore strengthen the effectiveness of analytical and preventative models such as risk assessments and conflict early warning systems, as well as highlighting the different capabilities of women and men to engage in conflict prevention (UNIFEM 2006a).

While the majority of conflict monitoring systems to date have been gender-blind, UNIFEM has piloted a number of projects to develop gender-sensitive indicators which can be mainstreamed into conflict risk assessment and early warning systems. A project in the Solomon Islands using gender-sensitive conflict indicators enabled donors, government, NGOs and communities to better adapt their strategic planning and activities to reflect current peace building and gender priorities. This led to a more nuanced understanding of conflict dynamics, and enhanced women's role in the peace building process (Moser 2006). The indicators, examples of which are provided in the box below, were collected using a survey of men's and women's opinions of conflict risk at the community and national levels, followed up by participatory focus group discussions.

Examples of UNIFEM's Gendered Conflict Early Warning Indicators

- Increased domestic abuse
- Increased male youth unemployment
- Increased avoidance of markets / gardens by women due to fear
- Reduced trust between ethnic groups
- Increased 'informal negative discourse' (gossip)
- Reduction in women's involvement in community resolution of land disputes

See the SRC for more gender-sensitive indicators of conflict.

4.4.2 Assessing gender equality in post-conflict settings

Gender-sensitive indicators are important for tracking progress on gender equality in post-conflict settings. The post-conflict context provides a critical window of opportunity for setting the foundation for long-term gender equality; it is the time when new constitutions and legal frameworks are set up, when elections are held, when development and reconstruction activities lead to new employment opportunities, when the desire for transition to 'democracy' can allow for discussion of equal rights for women and men. It is crucial to ensure that women as well as men are able to take advantage of these opportunities.

The box below outlines possible indicators to measure gender equality in post-conflict situations, based on experience in Timor Leste. The indicators incorporate four of the categories for tracking the MDGs proposed by the UN Millennium Taskforce on Gender Equality (these will be discussed in further detail in the next section).

Gender Equality Indicators in Post-Conflict Contexts

Women's participation in political bodies

- Proportion of women/men in provisional/transitional governing bodies;
- Proportion of women in the Constituent Assembly, constitution drafting committees and popular consultations;
- Proportion of women/men in political candidate lists (including winnable positions).

Property rights

- Proportion of women/men among beneficiaries of post-conflict land (re)distribution, including land allocation to ex-combatants;
- Provisions for equal rights to ownership/inheritance of property ensured in new constitution and legislation.

Employment

- Proportion of women/men in emergency reconstruction and rehabilitation work;
- Proportion of women /men in employment/income generating schemes;
- Proportion of women /men employed in UN, NGOs, and civil service at all levels.

Violence against women

- Inclusion of gender sensitisation in training of army and police forces and judges;
- Cases of gender-based violence reported to the police or other bodies, cases investigated and conviction rates.

Ospina 2006

In addition to these four categories, it is proposed that data be collected on the proportion of households that are female-headed (as this can be a volatile indicator during and after conflict, and is important in terms of planning livelihood programmes), as well as the proportion of women among registered ex-combatants (as special measures are needed to ensure that women benefit from reintegration measures for former combatants) (Ospina 2006). The data would then either be

compared to similar data from the pre-conflict situation – if such data exists – or gathered regularly during the post-conflict phase to monitor the effectiveness of development and reconstruction efforts in relation to gender equality.

4.4.3 Mitigating risk in data collection

Women activists, researchers and informants are particularly vulnerable to security threats in conflict situations, because they are subject to sexual attacks, and because they can be seen as stepping outside their traditional gender roles. This is in addition to the security risks associated with collecting data in a context of hostilities. Strategies to address these security risks include:

- Avoiding creating a false sense of security;
- Ensuring participation does not make participants targets for attack;
- Explicitly analysing risk levels and factors with local partners;
- Creating an enabling environment to allow the expression of opinions in safety;
- Accessing communities through locally respected women's organisations.

Anderson and Olsen 2003

5. INTERNATIONAL MEASUREMENTS

International and regional gender goals and indices are valuable because they can unite people around a common understanding of issues at the international level, allow for cross-national comparisons of gender equality, and condense complex data into clear messages about the achievements and gaps in gender equality. However, limitations with international indices include the tendency towards quantitative forms of measurement, combined with the notoriously unreliable nature of national-level census data, inconsistencies over time and across countries making cross-country comparisons difficult, and the ongoing challenge of agreeing which elements of gender (in)equality should be measured, and how best to capture these elements within a limited set of indicators.

This section examines some of the most widely used international goals and indices for measuring gender equality – the Millennium Development Goals (MDGs) and UNDP's gender-related indices. It then considers alternative composite (combined) indices, regional approaches, and innovative efforts to harmonise existing gender indicators.

5.1 Millennium Development Goals

5.1.1 *Background to the goals*

The MDGs are a set of eight goals – with 18 targets to be measured by 48 quantifiable social, economic and environmental indicators – to be achieved by 2015, reflecting the world's main development challenges (see the box below). They were adopted by 189 world leaders at the United Nations Millennium Summit in September 2000. The MDGs have been viewed by some gender advocates as a distraction, and by others as a strategic entry point for promoting gender equality. The focus on gender equality and women's empowerment in Goal 3 serves as a milestone for the decades of advocacy around the importance of gender equality to human development, as well as being a timely reminder of the policies, actions and resources still needed to achieve equality between and among men and women worldwide.

Many gender practitioners and policymakers now agree that gender equality and women's empowerment are central to the achievement of each of the MDGs, and the achievement of Goal 3 in turn depends upon the extent to which the other goals address gender-based constraints. The Millennium Project Task Force on Gender and Education has illustrated this by spelling out some of the reasons why gender equality is important to each of the 8 MDGs, as shown in the box below (Grown et al 2005: 31). The Task Force is part of the UN Millennium Project, an independent advisory body commissioned by the UN Secretary-General to propose the best interventions and policy strategies for meeting the MDGs.

MDGs and the importance of gender equality	
Goal 1. Eradicate extreme poverty and hunger	<ul style="list-style-type: none"> • Gender equality in capabilities and access to opportunities can accelerate economic growth. • Equal access for women to basic transport and energy infrastructure can lead to greater economic activity. • Equal investment in women's health and nutritional status reduces chronic hunger and malnourishment, which increases productivity and wellbeing.
Goal 2. Achieve universal primary education	<ul style="list-style-type: none"> • Educated girls and women have greater control over their fertility and participate more in public life. • A mother's education is a strong and consistent determinant of her children's school enrolment and attainment and their health and nutrition outcomes.
Goal 3. Promote gender equality & empower women	<ul style="list-style-type: none"> • This central goal dedicated to gender equality and women's empowerment depends on the achievement of all other goals for its success.
Goal 4. Reduce child mortality	<ul style="list-style-type: none"> • A mother's education, income, and empowerment have a significant impact on lowering child mortality.
Goal 5. Improve maternal health	<ul style="list-style-type: none"> • A mother's education, income, and empowerment have a significant impact on lowering maternal mortality.
Goal 6. Combat HIV/AIDS, malaria, and other diseases	<ul style="list-style-type: none"> • Greater economic independence for women, increased ability to negotiate safe sex, greater awareness of the need to alter traditional norms around sexual relations, better access to treatment, and support for the care function that women perform are essential for halting and reversing the spread of HIV/AIDS and other epidemics.
Goal 7. Ensure environmental sustainability	<ul style="list-style-type: none"> • Gender-equitable property and resource ownership policies enable women (often as primary users of these resources) to manage them in a more sustainable manner.
Goal 8. Develop a global partnership for development	<ul style="list-style-type: none"> • Greater gender equality in the political sphere may lead to higher investments in development cooperation. <p style="text-align: right;">Adapted from Grown <i>et al</i> 2005: 31</p>

However, despite the centrality of gender equality to each of the goals, gender is not mainstreamed into the goal statements, the indices chosen, nor the methods used for measuring against these indices. A recent gender review of 78 national MDG reports found that references to women and gender were largely 'ghettoised' under Goals 3 and 5, and that discussions around Goal 7 on environment and Goal 8 on partnerships were almost always gender-blind (Menon-Sen 2005).

5.1.2 Millennium Development Goal 3: gender equality

MDG3 comprises one overarching target and four indicators to track progress:

MDG3 Targets and Indicators

Target: Eliminate gender disparity in primary and secondary education, preferably by 2005, and in all levels of education no later than 2015

Indicators:

- Ratios of girls to boys in primary, secondary and tertiary education
- Ratio of literate women to men, 15–24 years old
- Share of women in wage employment in the non-agricultural sector
- Proportion of seats held by women in national parliament

There have been critiques of Goal 3, which have questioned the validity of the indicators – how appropriate they are for measuring gender equality – and suggested that they do not capture the full range of issues which are needed to measure gender equality. For example:

- Achieving MDG3 would still not guarantee the existence of gender equality, since gender equality in schooling may not translate into other spheres, such as gender equity in the workforce or in the share of national income (Johnson 2005);
- The indicators chosen to monitor progress towards MDG3 do not mention key issues such as women's rights, women's empowerment, violence against women, or women's poverty. In countries where MDG3 has been 'achieved', women still suffer from violence and may not have access to abortion, for instance (Verdière 2005);
- The chosen indicator of literacy is particularly problematic as literacy data is unreliable in many countries (Grown et al 2003);
- While enrolment rates measure the input side of education, they fail to capture the equally important school completion rates and learning outcomes (ibid);
- The proportion of seats in parliament is a poor proxy for empowerment, as it does not measure whether women actually have decision-making power in parliament, nor does it measure the progress made at the municipal and local levels (Grown et al 2003);
- Increased women in wage employment may lead to a double work burden for women who already engage in unpaid housework and caring for family members, as discussed in Section 4.1 on measuring poverty.

5.1.3 Potential ways forward

Over the past two years, the UN system has discussed new targets and indicators for all the MDGs. The Millennium Project Task Force on Gender and Education identified seven strategic priorities to ensure that Goal 3 is met by 2015, and several indicators that can be used by countries to monitor progress towards meeting these seven strategic priorities (see the box below). The Task Force recommended substituting these indicators for the four that were originally suggested by the UN to

monitor progress towards MDG3 (Grown 2007, personal correspondence). To date, the UN General Assembly has not adopted these recommendations. However, following the 2005 World Summit a number of the Task Force recommendations have been included as targets under other goals (Judd 2007, personal correspondence).

Proposed Millennium Project Task Force indicators for tracking MDGs

Strategic priority 1: Education

- Ratio of female to male gross enrolment rates in primary, secondary and tertiary education.
- Ratio of female to male completion rate in primary, secondary and tertiary education.

Strategic priority 2: Sexual and reproductive health and rights

- Proportion of contraceptive demand satisfied.
- Adolescent fertility rate.

Strategic priority 3: Infrastructure

- Hours per day (or year) women and men spend fetching water and collecting fuel.

Strategic priority 4: Property rights

- Land ownership by male, female, or jointly held.
- Housing title disaggregated by male, female or jointly held.

Strategic priority 5: Employment

- Share of women in employment, both wage and self-employment, by type.
- Gender gaps in earnings in wage and self-employment.

Strategic priority 6: Participation in national parliaments and local government bodies

- Percentage of seats held by women in national parliament.
- Percentage of seats held by women in local government bodies.

Strategic priority 7: Violence against women

- Prevalence of domestic violence

Grown *et al* 2005: 18

In addition to proposing new indicators, a number of other recommendations have been made for strengthening efforts to track progress towards MDG goals. The UNDP review of national MDG reports suggests increasing the range and scope of reporting, improving linkages across goals, and enhancing ownership and commitment to achieving the shared goals (Menon-Sen 2005: 63). The World March of Women, an international feminist action network of grassroots organisations, has argued that the MDGs do not go far enough, and their Women's Global Charter for Humanity is more radical in its approach, focusing on human rights and freedoms, and denouncing patriarchy, capitalism, poverty and violence against women (Verdière 2005).

5.2 Gender-related Development Index and Gender Empowerment Measure

5.2.1 Background to the indices

The Human Development Index (HDI) was introduced by UNDP in 1990 as part of a move away from focusing solely on economic factors in the measurement of poverty and wellbeing (see Section 4.1). While this represented an important alternative to measures of socioeconomic status based on gross domestic product (GDP), the HDI failed to sex-disaggregate its indicators. In 1995, coinciding with the UN's Fourth World Conference on Women, UNDP developed two instruments to complement the HDI: the Gender-related Development Index (GDI) and the Gender Empowerment Measure (GEM). Both of these are composite indices, comprised of several indicators (listed in the box below) which are combined into one overall measure. The GDI and GEM are among the most widely used indicators for measuring gender equality at the national level; they are especially useful because their limited number of easily accessible indicators mean that they can cover a large number of countries, and they provide a 'shorthand' means of tracking gender-related development (Crawford 2006: 9).

Indicators used in the GDI and GEM

The GDI uses the same wellbeing indicators as the Human Development Index (see the SRC for more detail of the HDI), but applies a penalty to aggregate scores for gender disparities. The greater the disparity between women and men, the lower a country's GDI compared with its HDI. The three equally weighted indicators used to measure the GDI are:

- Long and healthy life (measured by male and female life expectancy at birth)
- Knowledge (measured by male and female adult literacy and years of schooling)
- Decent standard of living (measured by women's and men's share of earned income).

The GEM measures the gap between men and women along three equally weighted dimensions of empowerment:

- Political participation and decision-making (measured by women's and men's share of parliamentary seats)
- Economic participation and decision-making (measured by women's and men's share of professional and technical jobs, and share of administrative and managerial jobs)
- Power over economic resources (measured by women's and men's share of earned income).

The methodologies used to calculate the GDI and GEM are described in UNDP 2004.

5.2.2 Potential

Comparing the GEM, GDI, HDI and income per capita provides important information about gender equality. For instance, comparing the HDI with the GDI shows that no country treats its women as well as its men as shown by the fact that for every country the GDI is lower than the HDI. It also demonstrates that achieving gender equality does not depend on national income levels. For example,

while South Korea does well in terms of GDP and human development, it performs very poorly on the GEM – mostly due to its very small number of female members of parliament and female share of administrators and managers (Klasen 2004; Bardhan and Klasen 1999). In addition, some countries have low GEM values compared to their GDI ranking because they achieve more in education and literacy than in employment and political participation (Beck 1999: 35). In a small number of cases, these measures have been successfully used for lobbying purposes. For example, in Korea the GEM was used to persuade the government to take action with regards to the low representation of women in political and economic sectors in the country (UNDP 2005).

5.2.3 Limitations and challenges

However, there are limitations to these indices. Neither measure gender (in)equality as such; the GDI is a measure of human development corrected for gender inequality, and the GEM is ‘an odd combination of relative female and male empowerment ... and absolute levels of income per capita’ (Dijkstra 2006: 276). Both the GDI and GEM are difficult to calculate or interpret, and a lack of understanding of their limitations has sometimes misguided policy debates, discussions and advocacy efforts. The most common mistake is to interpret the GDI as a measure of inequality – a misinterpretation made in various years in the national human development reports of Kenya, Albania and Macedonia, as well as in a host of academic papers (Schüler 2006).

The choice of indicators is also questionable. For example, using income as a proxy for consumption ignores intra-household resource distribution, as discussed in Section 4.1 on measuring poverty. In the case of the GEM, choosing women’s share of parliamentary seats and professional occupations as key indicators means that inequality is measured among the most educated and economically advantaged women (Cueva Beteta 2006). The GEM also fails to take into account the extent to which female parliamentarians are actually involved in, or influence, decision-making.

Limited public participation in the choice of indicators is a further issue. This is reflected in the fact that the GDI has been criticised for not adequately reflecting the concerns of developing countries. In response to this critique, the 2004 Gujarat Human Development Report introduced a locally appropriate Gender Development Measure (GDM-1) which included additional indicators such as incidence of disability, percentage of electorate voting and availability of ‘durable’ housing (Schüler 2006: 168).

Furthermore, the Human Development Report has not provided a consistent time series of the GDI. The way the calculations for the GDI were carried out was adjusted in 1999 and different data sources have been used from year to year. Trends cannot therefore be adequately compared and analysed because changes in the GDI may be a result of improved data sources rather than changes in the underlying data (Klasen 2006).

5.2.4 New initiatives around the GDI and GEM

Several initiatives are being developed to make the GDI and GEM more effective for measuring gender equality. There is a particular emphasis on meeting the demand from the policy and advocacy community to clearly measure gender gaps – the differences between men and women on a particular

indicator. One suggestion is to develop separate human development indexes for males and females (Klasen 2006). Another proposal is the development of a simpler composite indicator of gender disparity using the three MDG3 indicators, to complement the GDI and GEM (Leete 2005). With regards to the GEM, Cueva Beteta (2006: 235–6) recommends the following additional indicators:

- For political participation, include women's presence in local governments;
- For economic participation, include lower levels of the employment hierarchy;
- Include indicators for women's agency within the household and control over their bodies and sexuality.

UNDP is currently undertaking a review of the GDI and GEM, with one of the expected products being an interactive tool on the UNDP Human Development Report Office website to help train people to calculate and interpret the GDI and the GEM (HDRO 2005). As part of this review, a UNDP 'e-discussion' held from July - September 2005 elicited suggestions for the inclusion of other dimensions of gender equality and women's empowerment in the GDI and GEM, including: violence against women, trafficking, women's leisure time, their decision-making power within communities and households, and their personal security and dignity (UNDP 2005). UNDP in Mexico is also engaging work around the GDI and GEM, including efforts to use the GDI and GEM at the municipal level, as well as a pilot study combining GDI and GEM indicators with indicators of violence (UNDP Mexico, UNDP/BRIDGE e-discussion, March 2007).

5.3 Other composite indices

A 'next generation' of international composite indices to measure gender equality has been developed, in part to complement and expand on the GDI and GEM. Certain indices redress some of the limitations outlined above. For example, Social Watch's Gender Equity Index (GEI) enables the level of gender equity to be clearly ranked across different countries – unlike the GDI which can be used only in reference to the average (gender-neutral) level of wellbeing through the HDI. The GEI combines indicators from both the GDI and GEM, with a separate gender equity rating estimated for three dimensions (Social Watch 2005b):

- Education (measured by the literacy gap between men and women and by male and female enrolment rates in primary, secondary and tertiary education);
- Participation in the economy (measured by the percentage of women and men in paid jobs, excluding agriculture, and by the income ratio of men to women);
- Empowerment (measured by the percentage of women in professional, technical, managerial and administrative jobs, and by the number of seats women have in parliament, and in decision-making ministerial posts).

The World Economic Forum's Gender Gap Index (GGI) also uses a broad range of dimensions and indicators – a selection of which are illustrated in the box below (Lopez-Claros and Zahidi 2005). Part of the GGI's innovation is in its measurement techniques, which combine quantitative data sets with qualitative measures from the Executive Opinion Survey of the World Economic Forum, a survey of 9,000 business leaders in 104 countries.

Gender Gap Index (GGI)

GGI indicators include the following:

- *Economic participation*: male and female unemployment levels, levels of economic activity, and remuneration for equal work;
- *Economic opportunity*: duration of maternity leave, percentage of wages paid during the covered period, number of women in managerial positions, availability of government-provided childcare, impact of maternity laws on the hiring of women, wage inequalities between men and women in the private sector;
- *Political empowerment*: number of female ministers, share of seats in parliament, women holding senior legislative and managerial positions, number of years a female has been head of state;
- *Educational attainment*: literacy rates, enrolment rates for primary, secondary and tertiary education, average years of schooling;
- *Health and wellbeing*: effectiveness of governments' efforts to reduce poverty and inequality, adolescent fertility rate, percentage of births attended by skilled health staff, and maternal and infant mortality rates.

Lopez-Claros and Zahidi 2005

Essentially, these new indices demonstrate different choices in the trade-off between the use of multiple dimensions and indicators, and the ability to measure and compare across a large number of countries. Because the availability and comparability of national statistical data is limited in many countries, the more indicators being measured, the less likely it is that countries will have available data. For example, while the GGI is a nuanced and comprehensive tool, the data is so complex that it is only available to measure 58 countries; on the other hand, the GEI measures a much smaller range of indicators than the GGI but it can be applied to 130 countries (Social Watch 2005b).

There are a number of shortcomings associated with these composite indices. Neither the GGI nor the GEI include indicators for informal work, unpaid and reproductive work, or time-use. These are critical to understanding women's participation in the economy because much of women's work falls outside the formal sector. Incorporation of these indicators into composite indices is therefore an important area for future work.

5.4 Regional approaches

How useful are international indicators in a specific regional context? As manifestations of gender inequality are context-specific, international indicators based on global standards do not always translate usefully to the local or regional context (UNRISD 2005). For example, the 2004 ECLAC report on the Caribbean's progress towards the MDGs highlighted the limited utility of the broad measurements and assumptions embedded in the MDG indicators (ECLAC 2004). In the Caribbean, while girls have higher participation rates in primary and secondary education than boys, this

educational attainment does not translate into women's better positioning in labour markets or increased involvement in decision-making in the region. Consequently, the ratio of boys to girls in education may not be an appropriate indicator of gender equality (ibid).

There have been programmes in several regions to begin the process of adapting indicators to better represent changing levels of gender equality in specific contexts. For example, since 1997 the Development of a Gender Statistics Programme (GSP) in the Arab Countries has sought to strengthen regional capacity in the identification of statistics and indicators, including through a series of regional workshops. In the third of these workshops in 2003, participants identified a number of high priority gender statistics and indicators needed to measure gender equality in the region, including one section on 'women and public reproductive health' which included 'prevalence of contraception' as one of its indicators (UN Economic and Social Commission for Western Asia 2001).

The Economic Commission for Africa (ECA) and the African Centre for Gender and Development (ACGD) have developed the African Gender and Development Index (AGDI) which was launched at the Fourth African Development Forum in 2004 and has since been piloted in 12 countries. It is designed to provide African policymakers with an appropriate tool for monitoring progress towards gender equality and to help monitor progress made in implementing the conventions which have been ratified by African countries, including the Dakar Platform for Action (Economic Commission for Africa 2004). It differs from the GDI and GEM, with a move away from Gross Domestic Product (GDP) measures. It incorporates a quantitative tool of 42 sex-disaggregated indicators (the Gender Status Index) along with a qualitative assessment of the level of implementation of key women's rights and gender equality documents (the African Women's Progress Scoreboard). The index is geared towards regionally-available data sets, although the data required is not always available in each country (ACGD 2005). (See the Supporting Resources Collection for further detail on the AGDI and its underlying methodology).

5.5 Harmonisation of gender indicators

The proliferation of international gender indicators can lead to confusion, as governments and civil society struggle to comply with overlapping measures and understand different terminology and concepts. A small number of initiatives are responding to this challenge, identifying and using sets of harmonised indicators.

UNIFEM and UNDP – harmonising indicators in Kyrgyzstan

The set of harmonised gender indicators was developed by gender experts, who grouped the gender indicators for the MDGs, Poverty Reduction Strategy Paper (PRSP), Beijing Platform for Action (BPFA) and the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) within three categories: mandatory, recommended and optional indicators. A meeting with representatives from government ministries, the Prime Minister's office, UN agencies, donors and civil society, considered and validated each indicator for applicability, feasibility, cost efficiency and correlation to global indicators. The harmonised gender indicators in Kyrgyzstan have already achieved positive outcomes. The process has contributed to a stronger gender equality perspective in the country's second MDG report and Poverty Reduction Strategy (PRS). Partners advocated for engendering the MDG report and PRS, using evidence-based advocacy emanating from a Gender Statistics Book prepared as a joint Memorandum of Understanding between UNIFEM and the National Statistics Committee.

UNIFEM 2005

For information on international and regional databases of gender-sensitive statistics, see the SRC.

6. CONCLUSIONS AND RECOMMENDATIONS

6.1 Revision and development of international gender indices

While gender goals and indices at the international level provide some of the most important tools for advocacy and accountability around gender equality, their refinement and better utilisation remains necessary.

Recommendations:

- UN agencies should continue review processes such as that of the GDI and GEM, and use these reviews to develop improved methods of calculations and better choices of indicators.
- UN agencies and international research organisations should consider developing alternative measures such as a ‘standalone’ measure of gender equality (rather than a measure of human development penalised for gender inequality), or sex-disaggregating the HDI.
- Research institutes, think tanks, development agencies and civil society groups should experiment with and develop new composite indices for measuring gender (in)equality (along the lines of the GGI and GEI), exploring the use of different combinations of indicators – for example, including indicators on women’s unpaid work – and different types of data. Particular attention should be paid to accessing and incorporating qualitative gender-sensitive data.
- Composite indices for international use should select indicators which are: simple, few in number, relevant to key policy issues, comparable and affordable.
- Beyond efforts to revise and create international indices, it is important that development organisations apply new and existing indices to practical cases and document the types of knowledge and understanding they create.
- It is also important to work on the adaptation of international indices to local contexts. A framework needs to be developed which can be used and adapted by national statistical offices across countries.

6.2 National statistical offices

Mainstreaming gender into national statistical systems must be implemented throughout the process of producing statistics, from the development of concepts and methods of data collection to the presentation of results (UN 2006b).

Recommendations:

- Develop human resources at all levels in national statistics offices through continuous staff training in gender-sensitive statistics and increasing the representation of women.
- Specify the development of gender statistics within the legal framework of official statistics.
- Support and strengthen gender statistics units.
- Support efforts to 'engender' census-taking, such as training census workers on ways to probe for gender-sensitive information and ensure that such information is documented.
- Look for ways to disseminate gender-sensitive statistics in accessible ways, such as via radio programmes or using a CD-ROM.
- Foster dialogue between statistics offices and interested stakeholders, including women's groups, which can enable women's groups and gender advocates to understand, gain access to and use gender statistics more effectively, as well as helping statisticians to understand the perspectives and concerns of gender advocates.

6.3 Choosing measurement methodologies and tools

Development organisations often select indicators and methodologies without thinking about what it is they want to achieve, what they therefore want to measure, and how best to measure it.

Recommendations:

- The first step of any measurement process should be to identify the objectives and goals – the 'vision of change' – that the development organisation wants to achieve. This should be the basis for choosing appropriate gender-sensitive indicators against which to track progress towards agreed objectives.
- All development organisations, from international agencies through to grassroots organisations, should use a combination of qualitative and quantitative methodologies to cross-check results and generate a richer understanding of the data. For some this could mean introducing a simple survey into a largely qualitative methodology; for others it could mean supplementing survey data with in-depth interviews and focus group discussions.
- Wherever possible, participatory approaches should be used. This could mean involving male and female research 'subjects' in defining appropriate gender-sensitive indicators, or including them in the gathering and analysis of data.

6.4 Gender mainstreaming

A key challenge for development organisations at all levels is to ensure that gender does not become a marginalised issue and that gender mainstreaming efforts are not undermined. One important step involves the formulation and utilisation of explicit mechanisms and procedures to track progress and evaluate mainstreaming outcomes – a process which can also feed into work on the new aid modalities.

Recommendations:

- International development organisations and national NGOs should formulate appropriate gender-sensitive indicators for monitoring gender mainstreaming outcomes and impacts. Both quantitative and qualitative indicators should be considered, as well as participatory methodologies of data collection and analysis.
- Gender evaluations of development organisations and programmes should be mandatory and regularly carried out, and results should be fed back into the programming cycle in order to hold people accountable for results.
- International development organisations and NGOs at all levels should regularly carry out internal gender audits to measure internal organisational change, with particular attention to the development and implementation of action plans to improve gender equality within the organisation.
- Delivery on gender mainstreaming commitments should be included in staff performance reviews.

6.5 Requirements and incentives

One of the long-standing challenges associated with gender mainstreaming is that when gender becomes the responsibility of everyone, no one takes responsibility and accountability is diluted. In addition, despite many organisations and governments agreeing to strong policy commitments on gender equality, these frequently ‘evaporate’ at the sectoral, programmatic or project level. Without explicit mechanisms to enforce policy commitments and hold institutions and individuals accountable, gender concerns – including monitoring and measuring – drop off the radar.

Recommendations:

- Producing official national statistics on gender should be a required component of international reporting mechanisms for reports such as the Convention on All Forms of Discrimination Against Women (CEDAW) and the Beijing Platform for Action.
- Development organisations should explore possibilities for making the measurement of performance on gender equality a requirement for the payment of contractors. Gender equality should also be made central to personal performance objectives (Dawson 2005).
- The development of context-relevant gender-sensitive indicators and the tracking and reporting on those indicators should be obligatory within programmatic development cooperation; the same should true for the work of grassroots organisations.
- Development organisations could create an ‘industry award’ to demonstrate and promote incentives for good practice in the use of gender indicators and measurements of change, a suggestion made at the International Women’s Development Agency (IWDA) Symposium 2006.

6.6 Measuring other dimensions

As more attention is given to gender-sensitive indicators and to the collection of sex-disaggregated data, it is important to devise ways of measuring the gender aspects of multidimensional issues – such as poverty and empowerment, as we have seen – as well as disaggregating other dimensions beyond gender. This applies to statistical bodies at the national level, to international researchers looking at new ways of measuring, and to users of gender indicators at the programme and project levels.

Recommendations:

- National statistical bodies and international researchers should give continued attention to measurement methodologies for gender and poverty – including time use, the informal sector and unpaid work – as well as other ‘difficult to measure’ multidimensional issues such as advocacy and sexuality.
- At all levels, there is a need to move beyond sex disaggregation to examine the gender dimensions of ethnicity, caste, disability status, place of residence, religion, age – including the girl-child and the elderly – and sexual preference.
- International agencies should provide capacity building and funding support to national governments in developing a consolidated and gender-responsive database across sectors, to prevent doubling up and ‘tunnel-vision’ on data-gathering approaches and encourage greater collaboration and information sharing.

6.7 Documentation and recording

A knowledge gap which has been highlighted in the preparation of this report is the fact that even where gender-sensitive indicators and methods for measuring change are being used, the process is rarely documented.

Recommendations:

- Institutions working on the measurement of gender (in)equality should explicitly examine, track and document the process of using indicators or otherwise measuring change. Grassroots organisations in particular should document their experiences in this area, as less information is published (whether formally or via the internet) at this level than at the international level.
- This process of documentation should include case studies, description and analysis of what the process was, how it was undertaken, what the challenges and limitations were, what was successful and why.
- Documentation and experiences should be shared internally and made available to all staff, whether gender specialists or not. They should also be disseminated for external audiences, especially via the internet so as to be available to as wide an audience as possible. Documents can be submitted to online resource collections specialising in gender issues, such as www.siyanda.org.

6.8 New aid architecture

If commitments to gender equality are to be realised, it is imperative that ways are found to support gender equality within the new aid architecture.

Recommendations:

- Donors and governments should establish concrete accountability systems which track compliance with commitments to gender equality.
- Such accountability systems should include the formulation of appropriate gender-sensitive aid performance indicators (such as the OECD Gender Equality Marker) to be assessed through a combination of both quantitative and qualitative data.
- Capacity building in gender-sensitive budget initiatives for civil society organisations and governments is necessary so that governments can reallocate resources to improve development and gender equality.
- Governments should strengthen the capacity of gender equality advocacy groups to voice women's priorities, and build the capacity of public institutions to respond to women's needs.
- At the national and international levels, increased attention should be given to the development of harmonised sets of gender indicators. This should include harmonised indicators appropriate to the country level, feeding up to regional sets and even an international set of agreed harmonised gender indicators.

6.9 Better use of existing gender indicators

Indicators alone do not produce gender equality; in order to be effective they must be used. How data is used is also critical, as data can distort and mislead. These points are easily lost amidst efforts to count, measure and highlight gender inequality or progress towards equality. As has been demonstrated in this report, a proliferation of gender-sensitive indicators already exists. While there is a need to continue to refine international composite indices, and to develop better ways of measuring specific dimensions such as the gendered aspects of poverty, empowerment, etc., the priority is to better utilise the indicators we already have.

Recommendations:

- Governments and development agencies should make sure that gender-sensitive data is collected – governments through national surveys; development agencies through monitoring and evaluation procedures.
- All actors should ensure that the data produced is adequately analysed.
- All actors should look for further ways to harmonise the use of the broad range of indicators in use.
- All actors should carefully analyse and appropriately disseminate gender-sensitive data, so that the information can be used to inform policy and shape programme design and support advocacy for gender quality – to generate action from findings.

It is important to keep in mind that gender-sensitive measurements alone do not improve gender equality. In order to be useful, data must be collected, analysed, disseminated and used.

REFERENCES¹

African Center for Gender and Development (2005) *Introducing the African Gender and Development Index – AGDI*, Nineteenth Session of the African Commission on Agricultural Statistics, Maputo, 24–27 October 2005, Food and Agriculture Organisation of the United Nations (FAO)
www.fao.org/statistics/meetings/download/afcas2005/papers/AFCAS_05_7_2_b.pdf

Anderson, M. and Olsen, L. (2003) *Confronting War: Critical Lessons for Peace Practitioners*, Cambridge, MA: The Collaborative for Development Action, Inc.
<http://www.cdainc.com/publications/rpp/confrontingwar/ConfrontingWar.pdf>

Andersson, N. and Roche, M. (2006) 'Gender and evidence-based planning: the CIET Methods', *Development in Practice* 16.2: 141–52

Bardhan, K. and Klasen, S. (1999) 'UNDP's gender-related indices: a critical review', *World Development* 27.6: 985–1010

Barker, G. with Nascimento, M., Segundo, M. and Pulerwitz, J. (2004) 'How Do We Know if Men Have Changed? Promoting and Measuring Attitude Change with Young Men: Lessons from Program H in Latin America', in Ruxton, S. (ed.) *Gender Equality and Men: Learning from Practice*, Oxford: Oxfam
http://www.oxfam.org.uk/what_we_do/resources/downloads/geneqmen/gem_barker.pdf

Batliwala, S. (1995) 'Defining women's empowerment: a conceptual framework', taken from Batliwala, S., *Education for Women's Empowerment*, ASPBAE Position Paper for the Fourth World Conference on Women, Beijing, September 1995, New Delhi: Asia-South Pacific Bureau of Adult Education.

Beck, T. (1999) *Using Gender-Sensitive Indicators: a Reference Manual for Governments and Other Stakeholders*, London: Commonwealth Secretariat
http://www.thecommonwealth.org/shared_asp_files/uploadedfiles/{D30AA2D0-B43E-405A-B2F0-BD270BCEFA3}_ugsi_ref.pdf

Blackden, M. and Wodon, Q. (2006) *Gender, Time Use, and Poverty in sub-Saharan Africa*, Country Analytic Work (CAW)
[http://www.countryanalyticwork.net/caw/cawdoclib.nsf/viewSearchableDocumentsAgency/2A9872108C1608388525714D004EC097/\\$file/AFR+Gender+and+Poverty.pdf](http://www.countryanalyticwork.net/caw/cawdoclib.nsf/viewSearchableDocumentsAgency/2A9872108C1608388525714D004EC097/$file/AFR+Gender+and+Poverty.pdf)

Blanc-Szanton, C. (1990) 'Gender and Inter-Generational Resource Allocation among Thai and Sino-Thai Households', in Dube, L. and Palriwala, R. (eds) *Structures and Strategies: Women, Work and Family*, New Delhi: Sage

¹ Web links correct as of May 2007

BOND (2003) 'Logical Framework Analysis', *Guidance Notes No. 4*

<http://www.gdrc.org/ngo/logical-fa.pdf>

Canadian International Development Agency (CIDA) (1997) *Guide to Gender-Sensitive Indicators*, Canada: CIDA

[http://www.acdi-cida.gc.ca/INET/IMAGES.NSF/vLUIImages/Policy/\\$file/WID-GUID-E.pdf](http://www.acdi-cida.gc.ca/INET/IMAGES.NSF/vLUIImages/Policy/$file/WID-GUID-E.pdf)

Chant, S. (2003) *New Contributions to the Analysis of Poverty: Methodological and Conceptual Challenges to Understanding Poverty from a Gender Perspective*, Santiago: ECLAC

<http://www.eclac.org/publicaciones/xml/6/13156/lcl1955i.pdf>

Chant, S. (2006) 'Re-thinking the "Feminization of Poverty" in relation to aggregate gender indices', *Journal of Human Development* 7.2: 201–20

http://www.lse.ac.uk/collections/geographyAndEnvironment/whosWho/profiles/s.chant/Chant_JHD_PDF.pdf

Crawford, J. (2006) 'Indications of change? Measuring progress towards gender equality: developments, issues, challenges and directions', background paper prepared for the IWDA Symposium on the Harmonisation of Gender Indicators, Canberra, 15–16 June 2006

Cueva Beteta, H. (2006) 'What is missing in measures of women's empowerment?', *Journal of Human Development* 7.2: 221–41

Dawson, E. (2005) 'Strategic gender mainstreaming in Oxfam GB', *Gender and Development* 13.2

Dijkstra, A. G. (2006) 'Towards a fresh start in measuring gender equality: a contribution to the debate', *Journal of Human Development* 7.2: 275–83

Dorj, N. (2006) Personal communication, September 2006

Economic Commission for Latin America and the Caribbean (ECLAC) (2004) *Regional Report on the Achievement of the Millennium Development Goals in the Caribbean Community*, ECLAC

<http://www.eclac.org/mdg/docs/RegionalMDGCaribbean.pdf>

Fonseca, C. (1991) 'Spouses, Siblings and Sex-linked Bonding: a Look at Kinship Organisation in a Brazilian Slum', in Jelin, E. (ed.) *Family, Household and Gender Relations in Latin America*, 133–60, London: Kegan Paul International / Paris: UNESCO

Gambaro, T. (2006) 'Opening Speech', *Development Bulletin* 71: 4–6

Grown, C., Rao Gupta, G. and Kes, A (2005) *Taking Action: Achieving Gender Equality and Empowering Women*, UN Millennium Project Task Force on Education and Gender Equality, London and Sterling, VA: Earthscan

<http://www.unmillenniumproject.org/documents/Gender-complete.pdf>

Grown, C., Rao Gupta, G. and Khan, Z. (2003) 'Promises to keep: achieving gender equality and the empowerment of women', background paper for the UN Millennium Project Task Force on Education and Gender Equality, Washington, DC: ICRW

<http://www.mdgender.net/upload/monographs/tf03genapr18.pdf>

Guedes, A., Stevens, L., Helzner, J and Medina, S. (2002) 'Addressing Gender Violence in a Reproductive and Sexual Health Program in Venezuela', in Haberland, N. and Measham, D. (eds) *Responding to Cairo: Case Studies of Changing Practice in Reproductive Health and Family Planning*, New York: Population Council

http://www.ippfwhr.org/publications/download/monographs/gbv_venezuela_case.pdf

Gurumurthy, A. (2006) Personal communication, August 2006

Hashi, F. and Ghamunga, F. (2006) 'Gender self-assessment as an approach for monitoring gender equity in organisations: the experience of Africa region', *Development Bulletin* 71: 80–2

Human Development Report Office (HDRO) (2005) *Improving UNDP Capacity to Assess Gender Development and Advocate for Gender Equality through Revised GDI, GEM and Other Gender Measurements*, New York: Human Development Report Office

http://hdr.undp.org/docs/network/hdrstats_net/HDRO_GDI_GEM%20project%20document2005.pdf

Heyzer, N. (2001) 'UNIFEM Statement: Progress for Women, Progress for All', Santiago, Chile, 9 April 2001

http://www.unifem.org/news_events/story_detail.php?StoryID=198

Hofbauer Balmori, H. (2003) *Gender and Budgets: Overview Report*, Cutting Edge Pack, Brighton: BRIDGE, University of Sussex

<http://www.bridge.ids.ac.uk/reports/CEP-Budgets-report.pdf>

Imp-Act (2005) *Choosing and Using Indicators for Effective Social Performance Management*, Imp-act Practical Notes No. 5, Brighton: IDS

http://www.ids.ac.uk/impact/publications/practice_notes/PN5_Indicators.pdf

InterAction (2003) *The Gender Audit: Questionnaire Handbook*, Washington, DC: InterAction

International Planned Parenthood Federation (IPPF) (2006) *Report Card: HIV Prevention for Girls and Young Women: Malawi*, London: International Planned Parenthood Federation

<http://www.ippf.org/en/Resources/Guides-toolkits/HIV+Prevention+Report+Cards+-+Malawi.htm>

International Women's Development Agency (IWDA) (2006) 'Outcomes', report from the IWDA Symposium on the Harmonisation of Gender Indicators, Canberra, 15–16 June 2006
http://www.iwda.org.au/wp/wp-content/uploads/2006/06/IWDA_Symposium_Outcomes.pdf

Johnson, R. (2005) 'Not a sufficient condition: the limited relevance of the gender MDG to women's progress', *Gender and Development* 13.1: 56–66

—— (2006b) *Measuring Gender (In)Equality: Introducing the Gender, Institutions and Development Data base (GID)*, Working Paper No 247, Paris: OECD
<http://www.oecd.org/dataoecd/17/49/36228820.pdf>

Japan Women in Development Fund (JWIDF)/United Nations Development Programme (UNDP) (2004) *Capacity Building for Gender-Sensitive Budgeting*, Annual Report 2004, Ulaanbaatar, Mongolia: Japan Women in Development Fund and United Nations Development Programme

Kabeer, N. (1999) 'Resources, agency, achievements: reflections on the measurement of women's empowerment', *Development and Change* 30.3: 435–64

Kabeer, N. (2001) 'Reflections on the Measurement of Women's Empowerment,' in Sisask, A. (ed.) *Discussing Women's Empowerment: Theory and Practice*, p17–57, Stockholm: Sida
<http://www.sida.se/shared/jsp/download.jsp?f=SidaStudies+No3.pdf&a=2080>

Kabeer, N. (2003) *Gender Mainstreaming in Poverty Eradication and the Millennium Development Goals: a Handbook for Policy-Makers and Other Stakeholders*, London: Commonwealth Secretariat
<http://www.idrc.ca/openebooks/067-5/>

Kabeer, N. (2005) 'Gender equality and women's empowerment: a critical analysis of the third Millennium Development Goal', *Gender and Development* 13.1: 13–24

Kishore B., Earl, S., Khot, S., Kulkarni, S., Hay, K., and Indapurkar, S. (2006) *How a Use and Learning Oriented Planning, Monitoring and Evaluation System Evolved in the Swayamsiddha Project*, Pune, India: BAIF Development Research Foundation
http://www.idrc.ca/uploads/user-S/11592100393M__E_Report_Version_21.pdf

Klasen, S. (1999) *Does Gender Inequality Reduce Growth and Development? Evidence from Cross-Country Regressions*, Policy Research Report on Gender and Development, Working Paper Series, No 7, Washington, DC: The World Bank
<http://siteresources.worldbank.org/INTGENDER/Resources/wp7.pdf>

Klasen, S. (2004) *Gender-Related Indicators of Well-Being*, Discussion Paper No 102, Goettingen: Georg-August Universitat, Ibero-Amerika Institut fur Wirtschaftsforschung
http://wiwi.uni-goettingen.de/vwlseminar/working_papers/ibero/DB102.pdf

Klasen, S. (2006) 'UNDP's gender-related measures: some conceptual problems and possible solutions', *Journal of Human Development* 7.2: 243–74

Leete, R. (2005) 'UNDP Malaysia's contribution: revisiting the GDI and GEM: 6 August 2005 and 18 October 2005'

<http://www.undp.org.my/uploads/files/Revisiting%20the%20GDI%20and%20GEM.pdf>

Lopez-Claros, A. and Zahidi, S. (2005) *Women's Empowerment: Measuring the Global Gender Gap*, Geneva: World Economic Forum

http://www.weforum.org/pdf/Global_Competitiveness_Reports/Reports/gender_gap.pdf

MacKay, F. and Bilton, K. (2003) *Learning from Experience: Lessons in Mainstreaming Equal Opportunities*, Edinburgh: Scottish Executive Social Research

<http://www.scotland.gov.uk/Resource/Doc/47095/0025589.pdf>

Malhotra, A., Schüler, S. and Boender, C. (2003) 'Measuring women's empowerment as a variable in international development', paper presented at the International Council for Research on Women (ICRW) Insight and Action Seminar, Washington, DC 12 November 2003

Martinez, E. and Glenzer, K. (2005) 'Proposed global research framework for CARE's strategic impact inquiry on women's empowerment', Atlanta: CARE USA

McIntyre, M. (2006) 'Indicators of violence against women', *Development Bulletin* 71: 61–2

Menon-Sen, K. (2005) *En Route to Equality: a Gender Review of National MDG Reports*, New York: Bureau of Development Policy, UNDP

<http://www.undp.org/women/docs/en-route-to-equality.pdf>

Menon-Sen, K. (2006) 'Another world is possible: an exercise to define change goals and work out ways to track the change process', unpublished paper, September 2006

Montano, S., Almeras, D., Milosavljevic, V. and Rico, N. (2003) 'Poverty and Inequality from a Gender Perspective', in ECLAC *Social panorama of Latin America 2002–2003*, Santiago: ECLAC

http://www.eclac.cl/mujer/reuniones/conferencia_regional/Separataing.pdf

Moser, A. (2006) 'Indicators of conflict and peace: a gender-sensitive early warning system', *Development Bulletin* 71: 75–79

Moser, C. (2005) *An Introduction to Gender Audit Methodology: Its Design and Implementation in DFID Malawi*, Overseas Development Institute: London

http://www.odi.org.uk/PPPG/publications/papers_reports/ODI_Moser_gender_audit_methodology.pdf?itemprcd=gender

Moser, C. and Moser, A. (2005) 'Gender Mainstreaming since Beijing: a Review of Successes and Limitations in International Institutions', in Porter, F. and Sweetman, C. (eds) *Mainstreaming Gender in Development: a Critical Review*, Oxford: Oxfam
http://www.oxfam.org.uk/what_we_do/resources/downloads/FOG_MGD_3.pdf

Moser, C., M'Chaju-Liwewe, O., Moser, A. and Ngwira, N. (2004) *DFID Malawi Gender Audit: Evaporated, Invisibilised or Resisted?*, UK Department of International Development (DFID): London
<http://www.dfid.gov.uk/pubs/files/gender-audit-malawi1.pdf>

Narayan, D., Chambers, R., Shah, M. and Petech, P. (2000) *Voices of the poor: crying out for change*, New York: Oxford University Press
<http://www1.worldbank.org/prem/poverty/voices/reports/crying/cry.pdf>

National Statistics Office and the United Nations Development Programme (UNDP) (2000) *A Pilot Time Use Survey*, Ulaanbaatar: Mongolia National Statistics Office and UNDP
<http://unstats.un.org/unsd/demographic/sconcerns/tuse/Country/Mongolia/sourcemng2000.pdf>

Organisation for Economic Co-operation and Development (OECD) (2005) 'Aid to support gender equality, 1999–2003', Summary sheet, August 2005, Paris: OECD/DAC Secretariat
<http://www.oecd.org/dataoecd/54/58/34510060.PDF>

Ospina, S. (2006) 'Using indicators to seize the opportunity for promoting gender equality in post-conflict settings', *Development Bulletin* 71: 45–8

Oxfam (2002) *Gender Mainstreaming Tools: Questions and Checklists to Use across the Programme Management Cycle*, Version 1, November 2002, Oxfam

Balochistan team - Participatory Poverty Assessment (2003) *Between Hope and Despair – Balochistan Province Report*, UK Department for International Development: Pakistan
<http://www.dfid.gov.uk/pubs/files/ppa-balochistan.pdf>

Pradhan, B. (2003) 'Measuring empowerment: a methodological approach', *Development* 46.2: 51–7

Rao, A. and Kelleher, D. (2005) 'Is there life after gender mainstreaming?', *Gender and Development* 13.2: 57–69
<http://www.civicus.org/new/media/f/Rao.pdf>

Red de Promotoras y Asesoras Rurales (2000) 'Ejercicio de la revisión de la perspectiva de género en el Programa de Educación, Salud y Alimentación (PROGRESA)', mimeo, México: Red de Promotoras y Asesoras Rurales

Schüler, D. (2006) 'The uses and misuses of the Gender-related Development Index and Gender Empowerment Measure: a review of the literature,' *Journal of Human Development* 7.2: 161–81

Swiss Agency for Development and Cooperation (SDC) (2006) *Gender and Qualitative Interpretation of Data*, Bern: Swiss Agency for Development and Cooperation (SDC)
http://www.siyanda.org/docs/sdc_qualitativedata.pdf

Social Watch (2005a) 'Gender and Poverty: a Case of Entwined Inequalities', in Social Watch *Roars and Whispers: Gender and Poverty: Promises Versus Action*, Montevideo: Social Watch
http://www.socialwatch.org/en/informelImpreso/pdfs/genderpoverty2005_eng.pdf

Social Watch (2005b) 'No Country Treats its Women the same as its Men: the Gender Equality Index – a New Perspective', in Social Watch *Roars and Whispers: Gender and Poverty: Promises Versus Action*, Montevideo: Social Watch
http://www.socialwatch.org/en/informelImpreso/pdfs/gei2005_eng.pdf

Sweetman, C. (1997) 'Editorial', in Sweetman, C. (ed.) *Gender in Development Organisations*, Oxford: Oxfam

Thomson, K. (2006) ActionAid International Policy Director, at DFID meeting on Human Rights and Social Exclusion Indicators, London, 20 July 2006

United Nations (2006) United Nations site for the MDG indicators
<http://mdgs.un.org/unsd/mdg/Default.aspx>

United Nations Division for the Advancement of Women (UNDAW) (2005) 'Violence against women: a statistical overview, challenges and gaps in data collection and methodology and approaches for overcoming them', report of the Expert Group Meeting, Geneva, 11–14 April 2005
<http://www.un.org/womenwatch/daw/egm/vaw-stat-2005/docs/final-report-vaw-stats.pdf>

United Nations Department of Economic and Social Affairs (UNDESA) (2005a) 'Special report on the world's women 2005: progress in statistics', report prepared for the Commission on the Status of Women, New York, 8th March 2005

United Nations Department of Economic and Social Affairs (UNDESA) (2006b) *The World's Women 2005: Progress in Statistics*, New York: United Nations,
http://unstats.un.org/unsd/Demographic/products/indwm/ww2005_pub/English/WW2005_text_complete_BW.pdf

United Nations Development Programme (UNDP) and BRIDGE (2007) e-discussion summary: Measuring Gender Equality, April 2007, organised and coordinated by UNDP and BRIDGE

United Nations Development Programme (UNDP) (n.d.) 'UNDP Gender mainstreaming scorecard', New York: UNDP

United Nations Development Programme (UNDP) (2004) 'Note on statistics in the Human Development Report', in *Human Development Report 2004: Cultural Liberty in Today's Diverse World*, 251–85, New York: UNDP

http://hdr.undp.org/reports/global/2004/pdf/hdr04_backmatter_2.pdf#search=%22%22Note%20on%20Statistics%20in%20the%20Human%20Development%20Report%22%22

United Nations Development Programme (UNDP) (2005) 'Discussion: revisiting the GDI and GEM', HDR Stats-Net Consolidated Reply, 31 October 2005, UNDP

http://hdr.undp.org/docs/nhdr/consolidated_replies/Revisiting_GDI_GEM_31October2005.pdf#search=%22%22Discussion%3A%20Revisiting%20the%20GDI%20and%20GEM%E2%80%99%22%22

United Nations Development Programme (UNDP) (2006) *Measuring Democratic Governance: a Framework for Selecting Pro-Poor and Gender-Sensitive Indicators*, New York: UNDP

<http://www.undp.org/oslocentre/docs06/Framework%20paper%20-%20entire%20paper.pdf>

United Nations Economic and Social Commission for Western Asia (ESCWA) (2001) 'Third Regional Workshop on gender statistics in the Arab countries,' Tunis, 5–7 July 2001

<http://www.escwa.org.lb/information/publications/edit/upload/stat-01-5-e.pdf>

The United Nations Children Fund (UNICEF) (2000) *Domestic Violence Against Women and Girls*, Innocenti Digest No 6, Florence: Innocenti Research Center

<http://www.unicef-icdc.org/publications/pdf/digest6e.pdf>

The United Nations Development Fund for Women (UNIFEM) (2005) Untitled document

<http://siteresources.worldbank.org/INTGENDER/Resources/UNIFEM.doc>

The United Nations Development Fund for Women (UNIFEM) (2000) *Progress of the World's Women 2000*, New York: UNIFEM

http://www.unifem.org/resources/item_detail.php?ProductID=9

The United Nations Development Fund for Women (UNIFEM) (2002) *Progress of the World's Women 2002 Volume 2: Gender Equality and the Millennium Development Goals*, New York: UNIFEM

http://www.unifem.org/resources/item_detail.php?ProductID=10

The United Nations Development Fund for Women (UNIFEM) (2006a) *Gender and Conflict Analysis*, UNIFEM Policy Briefing Paper: New York

http://www.womenwarpeace.org/UNIFEM_Conflict_Prevention.pdf

The United Nations Development Fund for Women (UNIFEM) (2006b) *Promoting Gender Equality in New Aid Modalities and Partnerships*, New York: UNIFEM

http://www.unifem.org/attachments/products/PromotingGenderEqualityInNewAidModalities_eng.pdf

The United Nations Development Fund for Women (UNIFEM) (2007) *A Life Free of Violence is Our Right: the UN Trust Fund to End Violence Against Women, Ten Years of Investment*, New York: UNIFEM http://www.unifem.org/resources/item_detail.php?ProductID=83

United Nations Research Institute for Social Development (UNRISD) (2005) *Gender Equality: Striving for Justice in an Unequal World*, Geneva: UNRISD
[http://www.unrisd.org/80256B3C005BCCF9/\(httpPublications\)/1FF4AC64C1894EAAC1256FA3005E7201?OpenDocument](http://www.unrisd.org/80256B3C005BCCF9/(httpPublications)/1FF4AC64C1894EAAC1256FA3005E7201?OpenDocument)

van Reisen, M. (2005) *Accountability Upside Down: Gender Equality in a Partnership for Poverty Eradication*, Eurostep and Social Watch: Belgium
http://www.socialwatch.org/en/informeImpreso/images/otrasPublicaciones/Unifem_OECD_RV.pdf

Verdière, B. (2005) *A Change of Course: the Millennium Development Goals through the Lens of the Women's Global Charter for Humanity*, Montreal: World March of Women
<http://wiki.amarc.org/index2.php?action=shownews&id=518&lang=EN&style=win&site=win>

World Health Organization (WHO) (2001) *Putting Women First: Ethical and Safety Guidelines for Research on Violence Against Women*, Geneva: WHO
<http://www.who.int/gender/violence/womenfirtseng.pdf>