International Water Management Institute (IWMI)

Pledge for Action in support of
Nairobi Work Programme on impacts, vulnerability and adaptation to Climate Change

Introduction

Entering the 21st century, we face two major, and closely related, challenges with regard to water. The first: How do we divide a fixed amount of water among a variable and growing number of users? The second: How do we manage water in response to climate change?

With each passing year we gather more evidence of changes in rainfall patterns, snowmelt, glacial retreat, shrinking ice caps, methane-laden permafrost, disrupted ecosystem functioning, biodiversity loss, new and expanding disease vectors, and increasingly frequent and extreme weather-related disasters.

What is less visible, but no less alarming, is the growing threat to our capacity to produce enough food under new and uncertain climate conditions. Food production and food prices are pillars of social stability. If we compromise the ability of hundreds of millions of small farmers to grow enough food to feed us all, we are courting a grim future. Changes in the climate system amplify the many drivers already undermining that capacity.

This action pledge describes IWMI's efforts to improve land and water management for food, livelihoods and the environment with a particular focus on the role of water and agriculture in climate change adaptation and mitigation policies and practice.

Overall objectives

IWMI's carries out research into land and water management to improve food security worldwide. In its strategic plan (http://www.iwmi.cgiar.org/About_IWMI/PDF/Strategic_Plan_2009-2013.pdf), IWMI specifically emphasized the issue of climate change impacts on land and water management as one of its new research directions. At the same time, Climate Change (CC) is effectively a cross-cutting issue in IWMI research, cutting through all four of IWMI Research programs (Themes-see below).

IWMI research programs help to meet the objectives of the NWP to: improve understanding and assessment of impacts, vulnerability and adaptation to CC; and, to make informed decisions on practical adaptation actions and measures to respond to CC on a sound scientific, technical and socio-economic basis, taking into account current and future CC and variability.

NWP work areas to which the pledge respond

IWMI action pledge responds, in the first place, to work area 7: *Research* – which is the core business of the organization. However, IWMI's ongoing research also responds to NWP areas:

- Methods and Tools,
- Climate related risks and extreme events
- Socio-economic information,
- Adaptation planning and practices,
- Technologies for adaptation
- Economic diversification

Program purpose

IWMI's adaptation and mitigation responses to changes in the climate fall under four main research themes (http://www.iwmi.cgiar.org/Research_Impacts/Research_Themes/index.aspx):

Theme 1 Water Availability and Access: Understanding water availability and access, climate change, water and agriculture, and adaptive management strategies and tradeoffs.

Theme 2 Productive Water Use: Revitalizing irrigation, managing water in rainfed systems and sustainable use of wetlands.

Theme 3 Water Quality, Health and Environment: Managing impacts of agricultural and urban land use on water quality, health and environment.

Theme 4 Water and Society: Reforming water governance, building evidence-based arguments for change, and assessing the impacts of research and water interventions.

All the above themes are portfolios of many individual research projects, which collectively address the overarching issues of better water management and adaptation under conditions of CC, climate variability and increasing water scarcity globally.

Activities

Increase insights into the role of water and the functioning of agro-ecosystems in relation to CC adaptation; facilitate the development of comprehensive research programmes.

Contribute to the development of monitoring tools for assessing the role of water and the adaptive capacity of agro-ecosystems.

Facilitate sharing of insights on water productivity and agro-ecosystems functioning in relation to CC adaptation among research institutes, NGOs, the private sector and governments.

Ensure that the role of water and agro-ecosystems functions are included in adaptation policies and plans through contributions to scientific and technical panels and processes of relevant

conventions and global fora, local and national policy and plan development and international expert groups.

Promote the inclusion of traditional community adaptation practices in water management and agro-ecosystems in national and international policies and plans.

Analyze CC adaptation strategies between conflicting water users and in rivers that cross national boundaries.

Replicate and upscale successful water management practices and adaptation measures.

Stakeholder involvement

The International Water Management Institute works with partners at all levels by:

- Including partners in research projects and programs
- Freely sharing research findings and informing policy makers of local, national and international governments, and leaders in the private sector on the relevance of land and water management in CC adaptation.

Expected results

Research findings and information products for scientific and policy audiences on the potential contributions of water management in agro-ecosystems reducing vulnerability and increasing community resilience to CC

Tools for assessing adaptive capacity and mitigation potential of improved land and water management

Formal and informal expert groups and partnerships established for sharing knowledge on water management practices and improved agro-ecosystems functioning

Improved land and water management practices considered in local, national and international adaptation and mitigation strategies.

Indicators of achievement

Scientific assessments of land and water management practices in relation to climate change adaptation and mitigation.

Increased consideration of the role of water and sustainable agricultural practices in convention agreements and local, national and international policies and plans

About International Water Management Institute

IWMI is one of 15 international research centers supported by the network of 60 governments, private foundations and international and regional organizations collectively known as the Consultative Group on International Agricultural Research (CGIAR). It is a non-profit organization with a staff of 300 and offices in over 10 countries across Asia and Africa and Headquarters in Colombo, Sri Lanka.

IWMI's Mission is to improve the management of land and water resources for food, livelihoods and nature.

IWMI's Vision, reflected in the Strategic Plan is to be a world-class knowledge center on water, food and environment.

IWMI targets water and land management challenges faced by poor communities in the developing world/or in developing countries and through this contributes towards the achievement of the UN Millennium Development Goals (MDGs) of reducing poverty, hunger and maintaining a sustainable environment. These are also the goals of the CGIAR.

Research is the core activity of IWMI. The research agenda is organized around four priority Themes including Water Availability and Access; Productive Water Use; Water Quality, Health and Environment; and Water and Society. Cross cutting activities in all themes include, assessment of land and water productivity and their relationship to poverty, identification of interventions that improve productivity as well as access to and sustainability of natural resources, assessment of the impacts of interventions on productivity, livelihoods, health and environmental sustainability.

IWMI works through collaborative research with many partners in the North and South and targets policy makers, development agencies, individual farmers and private sector organizations.