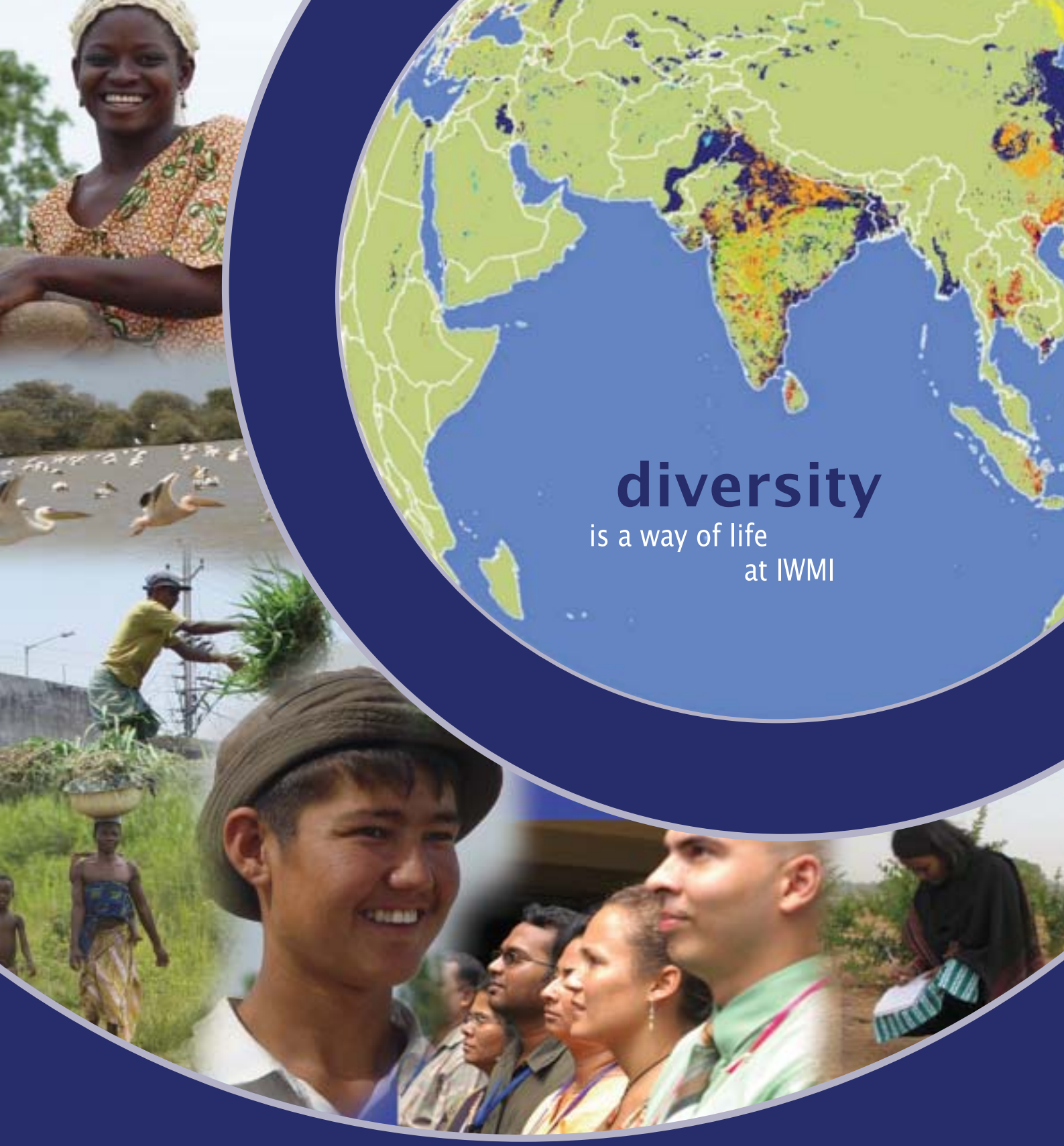


IWMI
International Water Management Institute

annual report
2005/06

Our Mission

Improving the management of water and land resources for food, livelihoods and nature

Our Vision is that in 2008, IWMI is a world-class knowledge center on water, food and environment. It generates knowledge on better water and land management in developing countries, through strategic research alliances with a set of core partners throughout Asia and Africa, and with advanced research institutes in developed countries.

This knowledge is held and maintained as global public goods for the benefit of all mankind.

Core Values

- Excellence
- Impact-orientation
- Partnerships
- Teamwork
- Knowledge sharing
- Respect for diversity

INTRODUCTION:

With headquarters in Sri Lanka, we're a non-profit research organisation that works with national and international partners in Africa and Asia to **improve water and land management in developing countries.**

Our work helps people to **produce more food** and **improve their livelihoods** while safeguarding the environment.

2005 was a very successful year for IWMI, and we'd like to share some of our major achievements with you here. As always, we've worked to address a diverse range of important issues, from fish farming and flood control to irrigation and health.

Diversity and quality are the hallmarks of our work and our staff—as you'll see inside.

LEGEND

- Irrigated, surface water, single crop
- Irrigated, surface water, double crop
- Irrigated, surface water, continuous crop
- Irrigated, ground water, single crop
- Irrigated, ground water, double crop
- Irrigated, conjunctive use, single crop
- Irrigated, conjunctive use, double crop
- Irrigated, conjunctive use, continuous crop
- Non-irrigated areas and ocean

Front cover: ***Global irrigated areas, based on satellite sensor data.***

IWMI's Global Map of Irrigated Areas (GMIA) for the year 2000 is the first of its kind. Multiple satellite sensor data were used to produce a map, at a 10-km scale, of the extent of land and water resources committed to irrigated agriculture across the world. The GMIA distinguishes types of irrigated areas, providing distinct classes of irrigation. This detailed analysis and degree of accuracy will strengthen efforts to make agriculture more productive and sustainable, manage crucial environmental resources better, and reduce hunger.
For more details visit **www.iwmigiam.org**.

Contents

Joint Message from the Board Chair and Director General
Water and Womenomics

IWMI's first work on water and gender, started well over ten years ago, was motivated by a desire to give men and women a fair share of the benefits of water resources development. Women's voices were not heard when water projects were designed. Women were left out when new land in irrigation systems was handed out—by men to men. And, women were not given a seat in water user associations or allowed active participation in irrigation management. IWMI's early water and gender work highlighted these issues and argued for gender balance in water resources development and management. The CGIAR's increasing focus on poverty alleviation further strengthens IWMI's motivation to look at water and gender issues, as the impacts of insufficient access to safe and affordable water are more severely felt by poor women and children.

Womenomics is not only important for our research agenda, it affects IWMI as an organization as well.
Photo Credit Pierre Marchand

A powerful new perspective was coined recently in the Economist[1] as 'womenomics': the future of the world economy lies increasingly in female hands. Economic growth is driven by women. Over the last couple of decades, it concludes, women have contributed more to global GDP growth than have either new technology or the new giants, China and India. In the developing world, the under-utilisation of women stunts economic growth. Inequality between the sexes harms long-term growth. The single best investment in development is, in all probability, the education of girls.

What does this mean for IWMI's research agenda?

Firstly, a key research focus for IWMI is mapping water poverty and water productivity at different scales, from intra-household to household, from farm to irrigation scheme, from landscape to river basin. Not simply producing a map, but understanding the complex spatial and temporal dynamics that govern the relationship between poverty, access to productive land and water resources, and the potential to increase water productivity in a way that alleviates poverty and hunger sustainably. Mapping water poverty needs to be gender specific. Secondly, we analyse the potential of specific interventions or innovations towards alleviating poverty and hunger and this needs to be gender specific as well. Some of the innovations we analyse (or help develop) such as the concept of Multiple Use Systems—where water for domestic and productive purposes is analysed in an integrated manner—clearly focus on women as key decision makers and on men as co-providers for domestic water.

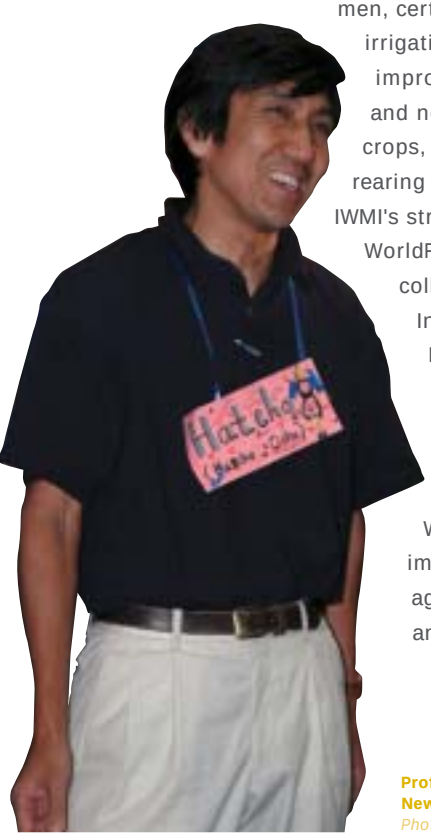
Women's contributions to household incomes is significant but often overlooked. *Photo Credit* Sanjini de Silva

[1]Economist. 2006. A Guide to Womenomics. April 15th, pages 73-74.

Finally, we analyse the impact of scaling innovations up and out to larger scales, such as the basin or national level. At this scale we can analyse the overall contribution of water to development, to the economy, to alleviating poverty in general and the impact on different groups, such as women and girls, in particular.

What 'womenomics' tells us is that we should not only make sure that we involve women to ensure a fair distribution of benefits, but we should focus on increasing the involvement and participation of women because it increases the overall benefits available to all poor people. Involving women is not only fair, it makes economic sense. This follows not just from the Economist article but from IWMI's recent research as well. And a key impact of increasing water productivity for poor people and reducing domestic chores, may well be that it enables more girls to go to school rather than having to provide child labor to make ends meet.
IWMI looks at all ways in which improved water productivity can help poor women and men, certainly not only through irrigation, but also through improved rainfed agriculture, and not only by growing crops, but raising livestock or rearing fish as well. In this light, IWMI's strategic alliance with the WorldFish Center and increased collaboration with the International Livestock Research Institute (ILRI) is expected to directly benefit the poor people we work for.

Womenomics is not only important for our research agenda - it affects IWMI as an organization as well.



Prof. Nobumasa Hatcho,
New Board Chair
Photo Credit Pierre Marchand

All-male teams tend to ignore gender balance issues described above. Mixed teams are more creative, more productive and manage projects better, we believe. Diversity in the workplace in all shapes and forms is a key asset of IWMI. Therefore, we are pleased to have been recognized by the CGIAR Gender and Diversity Program for setting and achieving ambitious gender staffing goals. The share of female researchers at IWMI has gone from about 10 percent to well over 30 percent in the last six years. The majority of IWMI Board members, half the management team, and a third of all managers at IWMI are now female. Our aim is to reach a target of 40% female researchers by 2008.

As the Economist concluded:

"It used to be said that women must do twice as well as men to be thought half as good. Luckily that is not so difficult."

Prof. Nobumasa Hatcho
Chair, IWMI Board

Prof. Frank Rijsberman
Director General

Prof. Frank Rijsberman,
Director General
Photo Credit Dominique Perera

Gender and *Diversity*

Gender and Diversity is Not About Numbers

The idea of 'Gender and Diversity' within IWMI goes beyond merely balancing the numbers, or the distribution of people from different backgrounds. It is about creating an environment where the mixture of cultural backgrounds, genders, perspectives, abilities, beliefs and experiences together helps learning, sharing and growing.

Learning and Sharing

IWMI has focused its efforts on leveraging the talents and abilities of the people that work and make up the organization. The atmosphere at IWMI is one that respects the differences of individuals and also recognizes unique contributions. A range of institutional policies support this effort.
From capacity building programs for junior researchers and students from the countries in which IWMI's projects are based, to the Knowledge Centre Initiative which addresses organizational knowledge sharing, there is genuine commitment to meeting the aspirations of staff on a personal level, as well as those of the institution as a whole.

Acknowledging Work and Life

The work environment at IWMI is built to bridge what people do within the organization and the reality of their daily lives. Over the last five years the institution has transformed, both physically as well as organizationally, taking steps to make this bridge shorter. Physically, this has meant additions to make the workplace more transparent, open and friendly. The most recent of these is the building of a crèche out of an old boardroom. At the organizational end, it has meant creating policies that, for example, acknowledge that people often move great distances with their families to work at IWMI. Partner employment opportunities at IWMI address the needs of dual career families and seek to provide qualified partners with support to conduct their own research, or offer even short-term appointments as professional consultants.

In the end, we place the greatest value on the open exchange between our staff, both research as well as research support, who come from a range of disciplinary backgrounds, home countries and ages. We believe that it is this exchange that improves the quality of the research, our primary product. And it is these interactions that that make our workplace an inclusive one.

'While many Centers are concerned by how hard it is to attract and retain women scientists and managers, IWMI set ambitious goals in this area and then succeeded in surpassing them. The CGIAR Gender & Diversity Program was proud to recognize IWMI's achievement with its 2004-2005 Center-of-the-Year Award for best 'Staffing Goals Achievement'.

IWMI is not only at the forefront of adopting and implementing G&D's models and practices; it actively contributes to their further development and enhancement. Gender and diversity issues at IWMI are always being surfaced and nurtured, and every year is better than the last.'

Vicki Wilde
Leader, CGIAR Gender & Diversity Program

See also:
'IWMI recognized for exceeding its Gender & Diversity staffing goals' Water Figures Issue 1, 2006

Akiça Bahri, Director for Africa, accepts IWMI's award which was presented by Ian Johnson, CGIAR Chairman.
Photo Credit: Sanjini de Silva

Highlights of the Year

WorldFish and IWMI Strategic Alliance

The CGIAR is currently engaged in major reforms to develop more effective and efficient structures of governance, research, research support, partnership and priority setting. Against this backdrop, IWMI and WorldFish pursued the integration of corporate services at the two centers.

As both centers are working on the modernization of processes and systems, both felt this could be done jointly rather than having each center invent the wheel on its own. Following meetings of the WorldFish and IWMI Boards at WorldFish headquarters in Malaysia, in March 2006, the two Boards agreed to further pursue their organisational alliance and took several decisions to align the management and operation of the two centers:

Shared Corporate Services for Organizational Efficiency

The two Boards approved the establishment of a Joint Venture, named "International Research Support Services" (IRSS), from which the two centers will source their finance, HR and ICT support services. They will align their finance and HR policies and processes and share joint applications of SAP for finance and hSENID for HR. Following successful implementation of the finance and HR services for the two centers, the intent is to expand the services and offer the same services to other Future Harvest Centers.

Programmatic Collaboration for More Effective Research

Scientists from WorldFish and IWMI have also explored the potential of increased programmatic alignment between the two centers and recommended that the two centers grow such collaboration 'organically' (bottom-up).

Shared Information and Knowledge Group

The two centers also decided to merge their information and knowledge related services (corporate communication, publishing, libraries, knowledge sharing and knowledge management functions). To develop and implement a shared group, a jointly appointed Head, Deputy Head and Librarian have been recruited and appointed.

The two centers will jointly implement ICT-KM projects such as implementation of the new CGXchange (Aqualogic) platform, and e-publishing and virtual library projects.

Identified Priority Areas for Programmatic Collaboration:

1. Wetlands, agriculture and fisheries in the Mekong basin.
2. Basin synthesis of multiple use water productivity and water poverty, with a focus on the Nile and Ganges basins.
3. Integrated small-scale irrigation and aquaculture in Southern Africa.
4. Shared Geoinformatics support for WorldFish and IWMI research.

Photo Credit: **Challenge Program on Water and Food**

A Parched Planet? Beyond More Crop per Drop

A synopsis of a paper presented by IWMI and partners at the 4th World Water Forum 2006

Poor access to reliable, safe and affordable water for food and livelihoods is a poverty trap for 70% of the world's poor people—the 800 million poor people that live mainly in rural Africa and Asia.

For sustainable increases in food production in Africa agriculture must be intensified. *Photo Credit* Sanjini de Silva

On March 20th, the thematic day on Water, Food and Environment at the 4th World Water Forum 2006 in Mexico, participants debated on "Beyond More Crop per Drop" the theme document released by IWMI with 9 partner organizations. The paper was co-authored by Prof. Frank Rijsberman, Director General IWMI, and Nadia Manning, Communications Coordinator/Researcher, IWMI.

Research shows that it takes approximately seventy times more water to grow the food humans eat every day than what they need for drinking, cooking, bathing and other domestic needs. As much as 2,000 liters of water goes to grow 1 kilo of rice and 11,000 liters for a single quarter pounder hamburger. Many rivers in the arid and semi-arid regions of the world no longer reach the sea. These river basins are closed or closing, with all the water used before it reaches the mouth of the river. Developing water resources in closed basins is robbing Peter to pay Paul.

According to research carried out by the Comprehensive Assessment of Water in Agriculture, meeting the Millennium Development Goals on reducing poverty and hunger, together with increasing trends in food consumption, imply a doubling in the demand for food by 2050, and without improvements in water productivity the demand for water in agriculture also doubles. Doubling the demand for water in agriculture would lead to widespread water scarcity for the large majority of the rural poor.

Water productivity for a rice farmer is the amount of rice produced for every unit of water consumed in the process; the crop per drop. Increasing water productivity implies getting more crop per drop. But if a farmer has not only a rice field but also a fish pond, then the total water productivity combines the amount of rice and fish produced per unit of water consumed. At the river basin level, water productivity needs to be defined beyond more crop per drop, including crop, livestock and fishery yields, ecosystem services as well as social impacts such as on health.

The rapidly expanding requirements of water for food production, both in rainfed and irrigated agriculture, have entailed very large water withdrawals, significant modification of flow regimes, and degradation of water quality—all with major implications for ecosystem health. The challenge, therefore, for water management for food and environment lies in finding water for expanding cities, often taken from agriculture; growing food for a growing population; providing jobs for rural poor while sustaining the environment.

Blue and Green Water

The myopic focus of water resources management on blue water alone needs to be replaced by an approach to manage the complete water cycle, including both green and blue water, was one of the key messages of "Beyond More Crop per Drop". Traditionally, what is defined as renewable water resources is only that share of rainfall that runs off into rivers or recharges the groundwater—this is only 40% of total rainfall (called blue water). Sixty percent of all rainfall never reaches a river or groundwater aquifer; it replenishes the soil moisture and evaporates from the soil or is transpired by plants (this is green water).

Green water cannot be piped or drunk, and is therefore safely ignored by urban water managers. But green water is crucial to plants, both in ecosystems and in agriculture, and needs to be managed carefully. Water managers need to manage the complete water cycle and account for the complete spectrum of management options from pure rainfed, to rainwater harvesting, supplemental irrigation, to full irrigation.

Increasing Water Productivity: Beyond More Crop per Drop

For most regions of the world, increasing water productivity in agriculture, rather than allocating more water, holds the greatest potential to improve food security and reduce poverty at the lowest environment cost. Low productivity rainfed agriculture requires 4000 liters of water to produce a kilogram of cereals, often coarse grains such as sorghum or millet. Irrigation systems in Africa and Asia typically require 2000 liters of water to produce a kilogram of rice or wheat. In the best irrigation systems it takes only 500 liters. This is the challenge for research.

Increasing Water Productivity. How can it be done?

- By enhancing the safe and productive use of wastewater in agriculture: making an asset out of wastewater;
- Through multiple use systems: single water systems for domestic use, agriculture, aquaculture, agroforestry and livestock
- Through supplemental and micro-irrigation: small-scale, low-cost technology that provides an entry level for poor people.

Water action cannot be successful on its own; rather it needs to be incorporated into an overall sustainable development approach that aims to achieve all Millennium Development Goals, not just the water and sanitation target. Vice versa, few Millennium Development Goals can be achieved without progress in the water sector. For achieving the hunger and poverty targets in rural areas, addressing the availability of water for food and livelihoods for poor people is crucial.

For more information see:
www.iwmi.org/wwf4
www.worldwaterforum4.org.mx

Women in developing coutries form the majority of the agricultural labour force. *Photo Credit* Sharni Jayawardena

Performance Indicators 2005

The CGIAR Performance Measurement (PM) System was first piloted in 2004. It has proved beneficial in helping centers like IWMI to understand their own performance and has also brought in an increased level of accountability while helping in decision making for fund allocation.

IWMI has over the past few years put in place policies and procedures which support gender and diversity.
Photo Credit Frank Rijsberman

The indicators fall into two broad categories. The first category comprises 'Indicators of Results', which cover outputs—the products of research, outcomes—the external adoption or influence of research, and impacts—the long range social, environmental and economic benefits consistent with CGIAR goals and IWMI's mission. The second category, "Indicators of Potential to Perform" measures the quality and relevance of current research, through peer-reviewed publications, journal references and Science Council ratings; institutional health measured through governance, change management, training and gender and diversity achievements; and lastly, financial health which covers short and long term financial stability, efficiency of operations and cash management on restricted operations.

From inception, this performance indicator system has been continuously refined to better reflect the performance of centers in the CGIAR system. As a result, some performance indicators have been dropped and new ones developed and tested. In 2006, a more comprehensive "Stakeholder Perceptions Survey" will be piloted covering CGIAR members as well as other partners and stakeholders.

The following data reflect IWMI's achievements for 2005 in 3 key areas—publication outputs, gender and diversity, and training:

IWMI'S ACHIEVEMENTS IN 2005: SELECTED CGIAR PERFORMANCE INDICATORS

INDICATOR	ACHIEVEMENT
PUBLICATION OUTPUTS	
Number of peer-reviewed publications per scientist in 2005	**1.72**
Number of peer-reviewed publications per scientist in 2005, published in journals listed in Thomson Scientific/ISI	**0.67**
Percentage of scientific papers per scientist published with developing country partners in refereed journals, conference and workshop proceedings in 2005.	**23%**
GENDER AND DIVERSITY	
Percentage of Board leadership (Chair, Vice-Chair and Committee Chairs from developing countries)	**69%**
Percentage of Board Leadership positions (Chair, Vice-Chair and Committee Chairs) held by women	**61%**
Percentage of women in management positions	**30%**
Two most prevalent nationalities	French: **16%** Indian: **13%**
Percentage of scientists receiving a PhD in the last five years (2001-2005)	**28%**
INVESTMENT IN TRAINING	
Percentage of overall budget spent on staff training in computer, language, project-management, and leadership skills	**2.7%**

IWMI Research Themes:
A New and Tighter Research Framework

In 2005, IWMI developed a new and tighter research framework to help the Institute better carry out its mission, while contributing to the achievement of the Millennium Development Goals (MDGs) of reducing poverty and hunger and maintaining a healthy environment. Under the new research framework, IWMI's work falls into four blocks or activities:

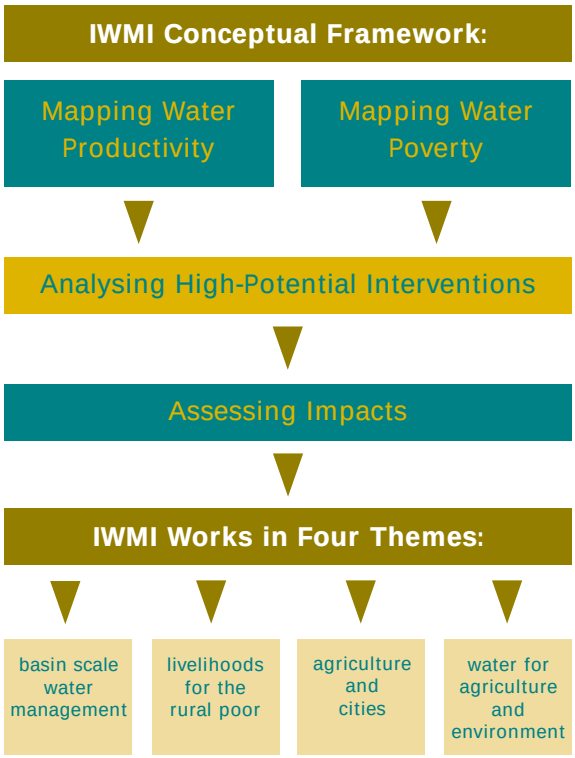
Mapping Water Productivity to assess water productivity at basin level for key crops and complementary livestock/fishery outputs, livelihood strategies and environmental values, spatially disaggregated across the basin. This provides a basis for understanding productive land and water use.

Mapping Water Poverty (WPv) to assess spatial patterns of poverty and poor people's access to productive land and water resources throughout the basin. This helps to identify target groups that could benefit from improved access to land and water resources.

Analysing High-Potential Interventions to identify, assess and possibly develop interventions such as technologies or combinations of technologies, institutions and policies that can improve land and water productivity and access to land and water resources while maintaining the sustainability of natural resource use.

Assessing Impacts to determine the impacts of specific interventions on water and land productivity as well as on water poverty and the potential impact of interventions under different adoption scenarios on areas such as water productivity, livelihoods, health and resource use at basin scale.

This new framework is expected to help tighten the focus of IWMI's research in the years to come.



Women carrying water in Gujarat, India. Water poverty mapping helps to identify target groups that could benefit from improved access to land and water resources.
Photo Credit IWMI - Tata Program

THEME ONE:
Basin Water Management
Understanding Water Productivity

Theme Goal:
Theme One research provides a better understanding of the tradeoffs and options in agricultural water management at the basin scale. It contributes to improved equity and productivity in water use through the development of appropriate tools and methodologies.

Theme 1 research provides a better understanding of the tradeoffs and options in agricultural water management at the basin scale. *Photo Credit* Sanjini de Silva

IWMI's research examines the interlinking hydrologic, socioeconomic and environmental aspects of water management at multiple scales. *Photo Credit* Sanjini de Silva

By growing crop varieties that can tolerate water stress and adopting improved water management methods, farmers can reduce the risk of crop failure. *Photo Credit* Sanjini de Silva

IWMI's research today takes a holistic, basin-scale approach to water management. This approach provides the context for problem identification- sectorally, spatially and temporally -as well as for the impact assessment of proposed solutions.

Research under the theme focuses on water productivity and basin-scale analysis, while incorporating issues of human and environmental health. It examines the links between water and land productivity and identifies opportunities for improved productivity across the entire blue-green, rainfed-irrigated, surface-groundwater spectrum. Research also assesses the impact of water productivity on the alleviation of poverty and hunger.

Focal Points:

- Sustainable water use in agriculture
- Understanding water productivity at basin scale
- Institutions, policies and economic instruments for better water management at a basin scale

THEME TWO:
Land, Water and Livelihoods

Improving Livelihoods for the Rural Poor

Theme Goal:

Theme Two research focuses on high-potential interventions that conserve resources and increase land and water productivity for better livelihoods, health and equity. This covers a range of water management options in different socio-ecological settings.

The new Land, Water and Livelihoods theme was developed in an effort to specifically address high-potential interventions that improve the productivity of land and water resources for the rural poor. *Photo Credit* Sharni Jayawaredena

Food security remains elusive for more than one billion people worldwide. Despite the benefits of the Green Revolution, declines in household food production are a reality for about 60 percent of the rural population in tropical and sub-tropical countries. Poor land and water management practices and policies have contributed to accelerating the degradation of agricultural lands.

Research in Land, Water and Livelihoods examines opportunities for high-potential interventions across the hydrologic cycle which includes green and blue water; surface water and groundwater; water quantity and quality - and rainfed-irrigation. The goal is to improve water and land productivity to benefit the rural poor. The broad range of land and water management solutions includes elements of groundwater management, institutional and policy analysis as well as health impact assessments.

Focal Points:

- Intensifying low productivity systems
- Multiple use catchments and systems
- Rehabilitation of degraded land

IWMI identifies and promotes research on promising technologies and management approaches with potential to increase productivity. *Photo Credit* Sharni Jayawardena

The magnitude of economic gains from investments in microirrigation technologies depends on the type of crop. *Photo Credit* Sharni Jayawardena

THEME THREE:
Agriculture, Water and Cities
Making an Asset out of Wastewater

Theme Goal:
Under Theme Three, IWMI identifies and tests interventions, for the rapidly growing sector of urban and peri-urban agriculture, that take advantage of urban resources. At the same time research looks at how to protect environmental and human health.

Millions of farmers in the developing world depend on marginal quality water for irrigation because they have no better alternative. Wastewater is often the only affordable or reliable water (and nutrient) source. The supply of rice or perishable vegetables to entire cities can depend on irrigation with polluted water—with obvious risks to both farmers and consumers. Although undesirable from a health and environmental viewpoint, wastewater irrigation is a livelihood reality in a large number of countries.

Cabbage grown with wastewater in Accra, Ghana. *Photo Credit* IWMI Ghana

Para grass, a fodder grown with wastewater provides income for poor farmers *Photo Credit* Sanjini de Silva

Nutrient-rich wastewater gives a significant economic advantage to poor farmers *Photo Credit* Sanjini de Silva

IWMI's research in Agriculture, Water and Cities focuses on both costs and benefits of wastewater use—looking at the health, environmental, food chain and livelihoods implications-to achieve efficient and viable interventions along the contamination pathway from 'farm to fork'. A key element on the risks and benefits of wastewater irrigation is identifying practical policy and management options and interventions that can reduce health risks.

Focal Points:

- Enhancing the safe and productive use of wastewater in irrigated agriculture
- Managing urban demands on agriculture and the environment

THEME FOUR:
Water Management and Environment

Balancing Water for Food and Ecosystems

Theme Goal:

Theme Four identifies and tests interventions that safeguard the environment and associated delivery of ecosystem services vital to human well-being, while enhancing land and water resources management for agriculture.

Healthy and resilient aquatic and terrestrial ecosystems provide a range of services to people. They are essential in securing food and livelihoods security, for the rural and peri-urban poor. Yet, such ecosystems typically remain poorly integrated within land and water resources management systems. Many ecosystems, especially inland and coastal wetlands, are subject to increasing degradation—with serious implications for human well-being. Agriculture and irrigation are seen as major drivers of degradation, reducing the capacity of the ecosystems they alter to deliver services to people.

Mountainous areas harbour rich biodiversity that can be preserved or changed by small dams. *Photo Credit* Eline Boelee

Many wetland-dependent bird species are globally threatened, and their status continues to deteriorate faster than that of bird species in other habitats. *Photo Credit* Frank Rijsberman

IWMI's research interests in the ecological aspects of water resources arose out of the realization that all aspects of water use (agricultural, domestic, energy, industrial, and environmental) needed to be taken into account in water resources policies. *Photo Credit* Sanjini de Silva

IWMI's Water Management and Environment research focuses on integrating ecosystems and their water requirements in basin water resources development and management; enhanced integration of policies and practices of the water resource, agriculture and environmental sectors; and improved recognition of the economic value of ecosystem services and their contribution to land and water productivity, and hence, food and livelihoods security.

Focal Points:

- Addressing environmental water requirements in basins
- Enhancing assessment of agriculture-wetlands interactions
- Valuing contributions of ecosystem services to livelihoods

Comprehensive Assessment of Water Management in Agriculture

The Comprehensive Assessment of Water Management in Agriculture (CA) is a multi-institute process synthesizing existing knowledge to guide investment and management decisions to help achieve the Millennium Development Goals of enhancing food and environmental security. The CA critically evaluates the benefits, costs, and impacts of the past 50 years of water development, today's challenges, and solutions people have developed. It aims to contribute to better investment and management decisions in water and agriculture in the near future and over the next 50 years.

The CA addresses the dual challenge of developing and managing water resources to end poverty and hunger, while reversing ecosystem degradation trends. It recognizes the need for a shift in thinking and actions to meet this challenge. A diverse group of over 700 people from around the world have participated in the Assessment. Co-sponsors are the Convention on Biological Diversity, CGIAR, FAO, and the Ramsar Convention.

The Ramsar Convention on Wetlands classifies irrigated rice land as a human-made wetland which can support biodiversity. *Photo Credit* Mats Lannerstad

One of our challenges is to balance the needs of various multiple and often conflicting interests on water. *Photo Credit* Mats Lannerstad

Education, capacity building and awareness raising are three fundamental stepping stones towards better water management. *Photo Credit* Mats Lannerstad

The Comprehensive Assessment has been a learning process, engaging networks of stakeholders to produce knowledge synthesis and methodologies, and to promote capacity building. Many of IWMI's projects contribute to, and in some cases receive support from, the Comprehensive Assessment. This includes research on water productivity, integrated water resources management, rainfed agriculture, land and water degradation, groundwater governance, irrigation impacts, and sustainable wetland management.

In the first three years (2001-2004), the CA conducted literature reviews, identified important gaps in the water-food-environment knowledge basin, and carried out research to fill these gaps. In 2005, multi-disciplinary, international research teams began synthesizing the results into the final Assessment report which will have 15 chapters, including eight thematic chapters on Rainfed Agriculture, Groundwater, Low Quality Water, Fish, Rice, Land, Basins and four cross cutting chapters addressing water productivity, policies and ecosystems, institutions and poverty. In addition, it will include a section on future scenarios and a summary for policymakers. The Report will be launched in 2006.

For further information on the CA and the Assessment Report, visit:

http://www.iwmi.org/assessment

The Challenge Program on Water and Food

The Challenge Program on Water and Food (CPWF) is a multi-institutional, research-based initiative that aims to increase water productivity for agriculture in order to improve livelihoods and leave more water for other users and the environment.

CP Basin Focal Projects identify strategic opportunities for poverty alleviation. *Photo Credit* Yogesh Bhatt

In 2005, CPWF diversified its research portfolio and welcomed several new partner institutions. In addition to on-going first call projects, CPWF objectives are now advanced by input from basin focal projects, small grants for impact, synthesis research and capacity building activities.

Currently active in nine benchmark basins in Africa, Asia and Latin America, 33 first call projects, as well as three others, have made great strides during the first phase of research.

Highlights include:

- Working with farmers to improve the efficiency with which rainwater and soil nutrients are used by a variety of crops and retained by the soil
- Increasing livestock water productivity by using water accounting to determine where in the system water can be freed for other uses
- Demonstrating how multi-stakeholder platforms could bring water policy and policy making into the public domain
- Collecting case study evidence to show the considerable payoffs of systems for multiple water use

Basin focal projects, designed to conduct basin-wide analyses of agricultural water use and identify strategic opportunities for poverty alleviation through improvements in agricultural water use, have moved beyond the inception phase and are currently being executed in the Karkheh, Mekong, Sao Francisco and Volta basins. The projects have established a set of methodological guidelines and open the way to additional projects in another six basins by the end of 2006.

During the last quarter of 2005, CPWF awarded small grants for impact to 14 new projects and associated partners. Projects were selected based on their ability to identify existing small-scale or local-level water and agricultural management strategies or technologies that have the potential to improve agricultural water productivity at some wider scale. The range of technologies and knowledge being investigated include surface, groundwater, runoff and rainwater harvesting; water storage and distribution techniques; training women to increase the water-holding capacity of soil; market-based approaches to on-farm water productivity; farmer to farmer exchange and farmer-led experimentation; and out scaling best practices, among others.

The synthesis research component of the program brings together outputs from a broad range of projects in an attempt to draw out new insights that will be available as international public goods. With inputs from theme leaders and basin coordinators, the first program synthesis document will be released in 2006.

Building on its research portfolio, the CPWF capacity building strategy started in earnest. Researchers in developing countries were identified as the primary target group for capacity building activities and an initial needs assessment of Mekong River Basin organizations was completed in November 2005.

www.waterandfood.org

Year in Review

Overview of IWMI's Research in Africa

IWMI's research in Africa covers three sub-regions: the Nile Basin and East Africa, West Africa, and Southern Africa. Water scarcity, poverty, and transboundary conflicts in water management, along with land degradation and loss of biodiversity, are some of the critical issues Africa faces. IWMI's research in the region aims at improved water management and poverty alleviation.

Investing in Agricultural Water Management to Reduce Poverty and Stimulate Economic Growth in Sub-Saharan Africa

In Africa, agriculture has the potential to be a major force behind economic growth and to improve the livelihoods of millions of people. Agricultural Water Management or "AWM" involves the use of a range of technologies and practices to ensure that adequate water is available in the root zone when crops need it, and this could be the way forward. IWMI is one of seven partners in a program to identify specific areas where investment will support sustainable growth and reduce poverty in the region.

AWM includes support for infrastructure and innovation in irrigation, drainage, watershed management, the use of re-cycled water, water harvesting, and in-field management. Smallholders can benefit through increased productivity and more stable incomes. In addition, AWM creates agricultural employment opportunities. For AWM to take root it is important that a favorable policy environment be created. The impacts of having legal and institutional support for AWM from governments can significantly improve agricultural productivity in Sub-Saharan Africa.

Studies show that, in much of Africa, women are major food producers. In fact it is suggested that 70 to 80 percent of the food produced is generated by women farmers. However, gender-based inequalities in land tenure and poor access to resources inhibit women's productivity and participation in agriculture.

Millions of small-scale water users risk being criminalized as unlawful water users for being unreachable by the state's administrations. *Photo Credit* Barbara Van Koppen

IWMI integrates research and capacity building in its program, creating awareness of its research in areas where PhD research prospects are available. Many students from African universities are contributing to the success of IWMI's research. *Photo Credit* Sanjini de Silva

Targeted investment for vulnerable groups, through credit and capital for women-headed rural households or women-led farms, can have a positive impact on livelihoods and food security while raising agricultural growth rates.

Strengthening institutions and building people's capacities across sectors and skill levels need to happen in parallel and are synergistic. Investment in education will help institutions to be more innovative when in the application of their research. Finally, when investment focuses on strengthening public sector institutional capacity, existing guidelines are better enforced, negative environmental impacts are mitigated and the health and wellbeing of people and their environment safeguarded.

Wetlands—the Interface between Conservation and Agriculture

In Southern Africa IWMI investigates the fragile balance between conservation and agriculture and focuses on wetlands as the delicate interface

In sub-Saharan Africa poverty has worsened over the last two decades. Water resources development must be integrated with national poverty reduction strategies.
Photo Credit Pierre Marchand

IWMI works with farmers to improve the efficiency with which rainwater and soil nutrients are used by a variety of crops and retained by the soil. *Photo Credit* Sanjini de Silva

between these two activities. Here, water management for agriculture needs to look broadly at how farmers—particularly those not using formal irrigation systems—manage water.

IWMI's research on wetlands and agriculture is not mainstream environmental research. The Institute addresses the issue of utilizing wetland water for agriculture without impacting negatively on the many other ecosystem services provided by wetlands. In Sub-Saharan Africa many farmers take to farming in wetlands, as they lack access to irrigation infrastructure or other suitable land for cropping. These farmers face many challenges regarding water and land management for agriculture. In some cases the solutions required are not the same as for rainfed agriculture.

In South Africa IWMI is increasingly engaged in debates on water allocation reform. The Institute's focus on wetlands and agriculture has made governments and conservation-focused agencies in the region aware of the need to move away from purely conservation approaches and look at more holistic approaches to the sustainable management of wetlands. Currently IWMI is working on two projects. The first, supported by the Challenge Program on Water and Food (CPWF) is on "Wetlands-based Livelihoods in the Limpopo Basin: Balancing Social Welfare and Environmental Security". The second is on Sustainable Management of Inland Wetlands in Southern Africa: A Livelihoods and Ecosystems Approach", supported by the Global Environment Facility. Project partners are FAO, IUCN, NGOs and universities in the region.

Overview of IWMI's Research in Africa *continued...*

More reliable water supply allows farmers to invest in better on-farm water management practices. *Photo Credit* IWMI Ghana

Health Impacts of Small Dams in Morocco

In countries with arid and sub-arid climates and erratic patterns of rainfall like Tunisia, Burkina Faso, Morocco, Zimbabwe and Ethiopia, small dams are an important tool in rural poverty alleviation, reduction of rural exodus, aquifer replenishment and the prevention of floods and silting. They are also an important source of water for irrigation, drinking and domestic purposes. However, negative health impacts, such as increased transmission of water-related diseases, may be substantial and the investments do not always result in sustainable development.

IWMI and partners from the Institut National de la Recherche Agronomique (INRA) and the Institut National d'Hygiene (INH) are developing a participatory methodology to examine health impacts. For local communities, health problems would normally refer to actual disease and more complicated health risks may be missed, especially ecological changes that increase health risks. The project views health assessment as a scoping process in which the community and the project team act as facilitators, convenors or catalysts who together evaluate rather than assess the health risks and opportunities associated with small dams using a holistic, "eco-health" approach. The project is funded by the International Development Research Centre, Canada.

"From Farm to Fork"—A Research Approach to Wastewater Agriculture

In and around African cities, many irrigation water sources are heavily polluted with untreated wastewater and run-off. Due to the high cost involved, appropriate wastewater treatment is not a feasible option for many municipalities. Vegetables such as lettuce and spring onion are consumed uncooked in salads and various dishes. Eating contaminated salad can result in worm infections, diarrhea and other diseases. IWMI, the Challenge Program on Water and Food, and local partners are developing integrated strategies to safeguard public health while sustaining the urban food supply of perishable vegetables.

The project is exploring possibilities for alternative cropping areas and safer water sources. Where wastewater treatment remains insufficient or absent, consumers can be protected through different low cost methods such as safer irrigation techniques, low-tech water filters, and simple water treatment methods. The washing of vegetables using hygienic practices is also recommended in household kitchens and street restaurants, through the stakeholder involvement, training and awareness building generated by the project.

Overview of IWMI's Research in Asia

IWMI's research and knowledge management activities in Asia focus on reducing poverty and improving food security through the improved management of water and land resources. The overall portfolio is organized into three sub-regions: South Asia, South East Asia and Central Asia, with Iran being managed separately.

Improving Water Productivity in the Krishna Basin, India

Water scarcity is a serious issue in South Asia. In the Krishna Basin, located in the provinces of Andhra Pradesh, Maharashtra and Karnataka, IWMI is working with partners such as the Jawaharlal Nehru Technological University (JNTU), the Central Water Commission (CWC) and Irrigation Departments in Andhra Pradesh, Maharashtra and Karnataka. IWMI and partners are studying water allocation and identifying opportunities to improve basin-scale water productivity through an integrated framework that takes into account hydrologic, water-resources and economic research.

Using remote sensing techniques, IWMI has mapped irrigated areas to study land/water use and documented spatial and temporal patterns of hydro-climatology and crop water demands. Through water-poverty mapping, IWMI has been able to analyse the relationships between poverty and access to safe water and land resources. These studies will provide generic lessons to address problems related to water management and poverty in closing river basins.

Denied water for productive purposes, the poorest of the poor are often trapped in a cruel cycle of malnutrition, poverty and ill health. *Photo Credit* Sumedha Liyanage

For poor farmers in Uzbekistan the lack of capital and basic resources is a common obstacle for greater livelihood security. *Photo Credit* IWMI Central Asia

Unsustainable farming practices in many regions are causing land resources to degrade.
Photo Credit IWMI Southeast Asia

Overview of IWMI's Research in Asia *continued...*

Through a more structured approach to water management in the Mekong River Delta in Vietnam, fishery production including prawn farming has been significantly improved. *Photo Credit* IWMI Southeast Asia

Enhancing Livelihoods through Structured Water Management in the Mekong River Delta, Vietnam

Surveys undertaken during 2000 to 2005 have shown that, as a result of a more structured approach to water management in the Mekong River Delta in Vietnam, fishery production has been significantly improved. The annual per capita GDP of approximately 800,000 people in the Bac Lieu Province has increased from US$ 248 to US$ 648. In addition, the incomes of poor communities living on acid sulfate soil areas have increased three-fold and there have been no conflicts between shrimp and rice farmers since 2002.

Increased shrimp production in the Mekong Delta of Vietnam once led to conflicts over access to water between rice farmers and fishers. On the one hand, rice farmers require freshwater for the production of rice, while shrimp farmers require brackish water. To expand the fresh water zone for rice production, the Government of Vietnam had built dams and sluices in the Ca Mau Peninsula to prevent the movement of much needed brackish water that is critical for shrimp production. As a result, a conflict erupted in the Bac Lieu Province when, in 2001, shrimp farmers destroyed a major diversion to allow the movement of brackish water upstream to service their shrimp farms.

With support from DFID, the International Rice Research Institute (IRRI), WorldFish, and IWMI initiated a project to establish viable options that would address the conflict between rice and shrimp

farmers and accelerate poverty elimination through the sustainable resource management of coastal lands. Through a participatory process between rice farmers, fishers, water managers and local and provincial authorities, a land use zoning map was developed and agreed upon by all parties, along with a sluice gate operation protocol based on modeling scenarios to regulate salinity in the river and canal systems. Water managers and provincial authorities have adopted these guidelines and management recommendations to manage the conflicting demands for water between the two different interest groups by providing freshwater to rice farmers in the eastern part of the Mekong Delta whilst keeping the western part dedicated to shrimp production.

Making Impacts through IWRM in the Ferghana Valley, Central Asia

IWMI's successful Integrated Water Resources Management (IWRM) Project in the Ferghana Valley is now in its third phase. It is an action research project located in Kyrgyzstan, Tajikistan and Uzbekistan, funded by the Swiss Development Cooperation, and jointly implemented by IWMI and its regional partner in Central Asia, the Scientific Information Center of the Interstate Commission for Water Coordination (SIC-ICWC). In its first two phases, the project developed, tested and adopted major approaches, frameworks and methodologies. It is currently consolidating, improving and up-scaling these achievements.

An important project result was the development and presentation of the IWRM conceptual framework for the project countries. This was agreed upon and approved by the ministries responsible for water management in the three countries. IWMI and partners also developed a comprehensive social mobilization approach to establish Water User Associations (WUAs), providing training to members and encouraging the involvement of all stakeholders in water sector reforms and governance in the countries of the Ferghana Valley. New WUAs are continuously being created along three main pilot canals.

In Asia IWMI focuses on reducing poverty and improving food security through better management of water and land resources. *Photo Credit* Sharni Jayawardena

IWMI Board of Governors 2006

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Standing L-R: **Dr. Fatma Attia; Dr. Margaret Catley-Carlson; Mr. Asger Kej; Prof. Frank Rijsberman; Mr. T.M. Abeyawickrama; Dr. U. Tan-Kim-Yong**
Absent: **Dr. Sunita Narain** *Photo Credit:* staekphotography

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Welcoming Prof. Nobumasa Hatcho as our New Board Chair

Prof. Nobumasa Hatcho *Photo Credit* Pierre Marchand

After bidding farewell to outgoing Board Chair, Ambassador Remo Gautschi (2003-2005), IWMI was pleased to welcome Nobumasa Hatcho as its new Board Chair. Hatcho is a Professor in the Department of Environmental Management at the School of Agriculture in Kinki University, Japan. He began his career as an irrigation engineer in the Ministry of Agriculture, then went on to work as a technical officer in water management with FAO AGL. His expertise also extends to rural development and resource/environment management. Hatcho currently works with numerous development agencies in Japan, including JICA, J-Green, and NGO, and is a member of ICID, PAWE, JSIDRE and others.

"Chance, Challenge and Charity are my mottos in life, and I intend applying those same principles to my work as Chair of IWMI's Board of Governors."

Nobumasa Hatcho

Board Statement on Risk Management

IWMI's Board of Governors has responsibility for ensuring an appropriate risk management process is in place to identify and manage high and significant risks to the achievement of the Institute's business objectives, and to ensure alignment with CGIAR principles and guidelines, which have been adopted by all CGIAR Centers. These risks include operational, financial and reputational risks that are inherent in the nature, modus operandi and location of the Institute's activities, and are as dynamic as the environment in which the Institute operates changes. They represent the potential for loss resulting from inadequate or failed internal processes or systems, human factors, or external events. They include low impact (and therefore irrelevance) of scientific activities; business disruption and information system failure; liquidity problems; transaction processing failures; loss of assets including information assets; failures to recruit, retain effectively utilize qualified and experienced staff; failures in staff health and safety systems; and failures in the execution of legal, fiduciary and agency responsibilities.

The Board has adopted a risk management policy, communicated to all staff, that includes a framework by which the Institute's management identifies, evaluates and prioritizes risks and opportunities across the organization; develops risk mitigation strategies which balance benefits with costs; monitors the implementation of these strategies and periodically reports to the Board on results. This process will draw upon risk assessments and analyses prepared by the Institute's staff, internal auditors, Institute-commissioned external reviewers, and the external auditors. The risk assessments will also incorporate the results of collaborative risk assessments with other CGIAR Centers, System Office components and other entities in relation to shared risks arising from jointly managed activities. The risk management framework seeks to draw upon best practice promoted in codes and standards promulgated in a number of CGIAR member countries, and it is subject to ongoing review as part of the Institute's continuous improvement effort.

Risk mitigation strategies include the implementation of systems of internal control which, by their nature, are designed to manage rather than eliminate the risk. The Institute endeavours to manage risk by ensuring that the appropriate infrastructure, controls, systems and people are in place throughout the organization. Key practices employed in managing risks and opportunities include business environmental scans, clear policies and accountabilities, transaction approval frameworks, financial and management reporting and the monitoring of metrics which are designed to highlight positive or negative performance of individuals and business processes across a broad range of key performance areas. The design and effectiveness of the risk management system and internal controls is subject to ongoing review by IWMI's internal audit service, which is independent of business units and reports on the results of its audits directly to the Director General and the Board through the Boards Audit Committee.

IWMI Donors 2005

During 2005, IWMI's funding support was provided by the following governments, development banks, agencies and foundations:

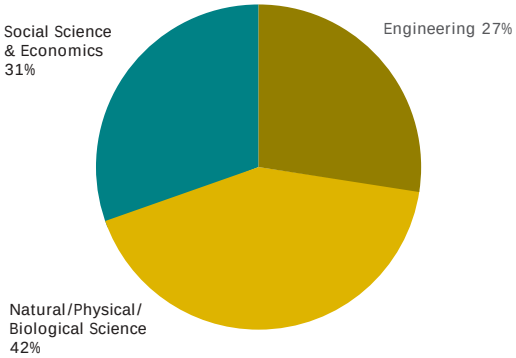
- **African Development Bank**
- **Asian Development Bank**
- **Australia (ACIAR)**
- **Belgium**
- **Canada (CIDA)**
- **CARE**
- **CEMEGREF**
- **Denmark (DANIDA)**
- **European Union**
- **France**
- **Germany (BMZ, GTZ)**
- **Global Environment Facility - GEF**
- **International Fund for Agricultural Development (IFAD)**
- **International Development Research Center (IDRC)**
- **Ireland**
- **Israel**
- **Japan (JBIC, JICA)**
- **National Oceanic Atmospheric Administration**
- **New Partnership for Africa Development - NEPAD**
- **Netherlands**
- **Norway**
- **Sir Ratan Tata Trust**
- **Sweden (SIDA)**
- **Switzerland (SDC)**
- **Taiwan**
- **The OPEC Fund for International Development**
- **United Kingdom (DFID)**
- **United Nations Food and Agriculture Organization**
- **United Nations Educational Scientific and Cultural Organization**
- **United States of America - USAID**
- **Water and Power Development Authority - WAPDA**
- **World Bank**
- **World Health Organization**

The Governments of Cambodia, China, India, Iran, Nepal, Pakistan, South Africa, Sri Lanka, and Thailand provided program support for IWMI-related activities in those countries.

IWMI Staff

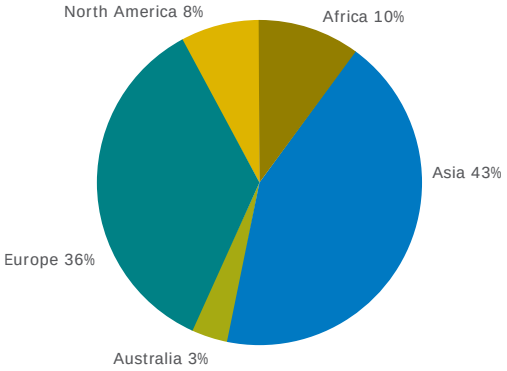
On 31 January 2006, the Institute had 118 researchers of whom 100 were internationally and regionally recruited. The latter includes one Associate Expert seconded by Switzerland (SDC) and 15 Post Doctoral Fellows. On 31 January 2006 IWMI total staff numbered 363. When categorized by broad disciplines, 42% of the researchers are from natural/physical/biological sciences, 31% from social science & economics and 27% from Engineering.

IWMI Researchers (by Discipline, 2006)



Engineering	32
Natural/Physical/Biological Science	50
Social Science and Economics	36
Total	118

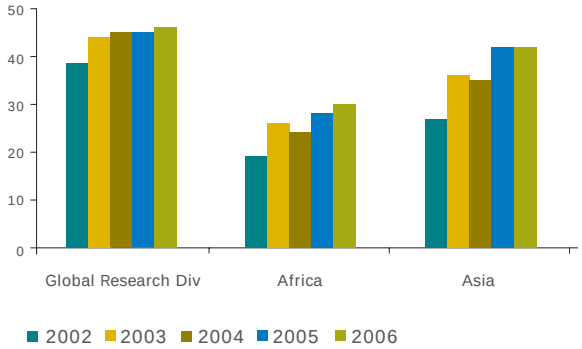
IWMI Researchers (by Nationality, 2006)



Africa	12
Asia	51
Australia	4
Europe	42
North America	9
Total	118

The nationality composition of the researchers is diverse - 3% Australia, 8% North America, 10% Africa, 36% Europe and 43% Asia.

IWMI Researchers (by Region, 2006)



Overview of All IWMI staff (Researchers, Research Support & Non-Research)

(by Nationality, 31 January 2006)

Country	Researchers	Research Support	Non-Research	Total
Australia	3	0	1	**4**
Belgium	1	0	0	**1**
Bangladesh	1	1	0	**2**
Barbados	0	0	1	**1**
China	2	0	0	**2**
Canada	0	0	1	**1**
Denmark	1	0	0	**1**
Ethiopia	2	1	1	**4**
France	17	0	0	**17**
Germany	2	0	1	**3**
Ghana	0	9	13	**22**
India	18	27	16	**61**
Iran	0	0	3	**3**
Italy	1	0	0	**1**
Japan	2	0	0	**2**
Kenya	2	1	1	**4**
Morocco	1	0	0	**1**
Malaysia	0	0	1	**1**
Nigeria	3	0	0	**3**
Netherlands	9	0	1	**10**
Nepal	1	1	1	**3**
Pakistan	5	5	7	**17**
Philippines	1	0	0	**1**
Russia	1	0	0	**1**
South Africa	0	1	5	**6**
Sri Lanka	16	23	105	**144**
Sudan	1	0	0	**1**
Sweden	2	0	0	**2**
Senegal	1	0	0	**1**
Switzerland	1	0	0	**1**
Tunisia	1	0	0	**1**
Thailand	2	1	1	**4**
United Kingdom	6	0	0	**6**
United States	10	0	1	**11**
Viet Nam	1	0	0	**1**
Zimbabwe	2	0	0	**2**
Uzbekistan	2	9	6	**17**
Total	**118**	**79**	**166**	**363**

Gender & Diversity

Staffing

IWMI management together with Human Resources is making steady progress against targets set out in the 2004-2008 Strategic Plan, to further strengthen the Institute's gender and diversity balance. IWMI was the proud recipient of the staffing goals award at the CGIAR Annual General Meeting in Morocco during December 2005, one of the three center-of-the-year awards announced by the G&D Program.

Diversity in the workplace is a key asset.
Photo Credit Pierre Marchard

Following a recruitment drive in the last quarter of 2005, IWMI offered contracts to 14 researchers/ post-doctoral scientists in various disciplines, of which eight offers were made to female researchers/post-docs.

IWMI's goal as set out in its 2004-2008 strategic plan is to have 50% of its researchers from the South. This we have achieved and also maintained over the past several years. IWMI has also shown progress since 2002 in its gender balance. The percentage of female researchers has increased from 24% in 2002 to 31% in 2006 (20 to 36 in absolute numbers) and the number of female researchers (both IRS (internationally recruited) and RRS (regionally recruited) has increased from 23% in 2002 to 34% in 2006 (15 to 34 in absolute numbers).

Policies and Practices

IWMI has over the past few years put in place several policies and procedures which support gender and diversity. IWMI's HR department along with the G&D Associates, work closely with the CGIAR G&D Program to ensure IWMI's policies are in line with best practice. Two IWMI staff spouses, one based in Colombo and the other based in Ghana, have been engaged under the spouse employment policy since its implementation in early 2005. In addition to the several existing family friendly policies (flexi time, telecommuting, etc.,) Management decided to make available crèche facilities to assist IWMI staff members with the care of their children. This decision was taken after carrying out a survey among staff based in Sri Lanka to ascertain the actual need for such a facility. The crèche will be run by a committee comprising voluntary representatives from staff members/parents whose children plan to use the crèche. These family friendly policies and practices should further assist us in increasing our gender and diversity initiatives.

GDA Training

IWMI's 27 G&D Associates, appointed on a voluntary basis, represent all IWMI locations and the group composition is highly diverse - 8 male and 19 female; 12 NRS (nationally recruited staff) and 15 IRS/RRS; 11 research/research support staff and 16 non-research staff. A training program focused on G&D issues including harassment and discrimination is planned for a focal group of the GDAs in 2006. This will equip the GDAs with knowledge, tools and resources to assist and contribute positively towards ensuring IWMI is an inclusive workplace.

Second Mentoring Program

The second round of the G&D mentoring program at IWMI concluded in October 2005 and the third round that commenced prior to the completion of the second round, is still on-going. The objective of this program is to provide structured development input to young staff members by more senior staff members as mentors.

The feedback received from the 10 mentees and 7 mentors on the second round, was positive. Six of the mentees were from regional offices (Tashkent, South Africa and Ghana) and one mentor was from another center (ILRI).

IWMI Leadership Development Program (IWMI LDP)

IWMI LDP is a two-year training intervention where high potential staff across the institute and in particular young male/female staff members from country offices are identified, and inputs through formal courses and close mentoring by senior staff are provided to facilitate their accelerated growth within the organization. The program helps break down barriers, demonstrate mobility across the national-regional-international divides, and thereby contribute to the "one-staff" objective as well as to develop leadership skills at all levels across the organization.

As a result of the highly successful first LDP program, IWMI LDP-2 comprising 12 mentees (along with 4 mentors) commenced with an induction module in March 2005 followed by two 4-day training courses, one focused on 'team-building' and the other on 'managerial styles and organizational climates' in August 2005 and February 2006 respectively. The group composition is highly diverse—6 women and 6 men, 8 researchers and 4 non-research staff, 4 NRS staff and 8 RRS/IRS staff.

Our staff, both research as well as research support, come from a range of disciplinary backgrounds, home countries and ages. *Photo Credit* Pierre Marchand

The Finance Team at IWMI showing their strength.
Photo Credit Pierre Marchand

Increased collaboration between researchers from the South is one of our goals.
Photo Credit Pierre Marchard

STAFF LIST Staff From 1.1.2005 to 31.3.2006

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Non-Research: Ms. Upeka Kariyawasam, Head, Program Office, Mr. Sanjiv de Silva, Program Officer, Ms. Natalia Abeynayake, Donor Relations Coordinator, Ms. B.A.M. Hasinika Piyasena, Quality Management Systems Coordinator, Ms. Nazreen Silva, Conference and Travel Officer, Ms. Arosha Ranasinghe, Secretary

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Accounts: Mr. Amol J. Khisty, Head of Finance, Mr. Gamini Halvitige, Financial Controller, Mr. Ranjith Samarakoon, Accountant, Ms. Sanjeevani Perera, Head, Budget, Mr. Kushan Perera, Accounts Officer - Financial Systems, *Mr. Manoj Gunasekera, Accounts Officer - Financial Systems, Mr. Manjula Rowel, Accounts Officer - Financial Systems, Mr. Shantha Kumara Gamage, Assistant Budget Officer, Ms. Chanchala Kariyawasam, Time Management/Administrative Officer, *Mr. Tissa Rajanayake, Accounts Officer, *Ms. Sriyani G. Seneviratne, Accounts Officer, Ms. Yvonne Weerasinghe, Administrative Officer, Mr. Mahilal Jayawardena, Stores Officer, *Mr. Kumara Dharmasiri, Cashier/Accounts Clerk, Ms. Dhanushi Samaranayake, Junior Secretary, *Mr. D.M. Gunasekera, Stores Helper

Human Resources

Mr. Sharat Kumar Sadashivpeth, Head, Human Resources, Ms. Shanthi Weerasekera, Deputy Head, Human Resources, Ms. Kamani Rajanayake, Personnel Officer, Mr. David Van Eyck, Training, Career Development & Capacity Building Officer, Ms. Anusha De Silva, Human Resources Administrator, Ms. Thushari Dissanayake, Human Resources Administrator

Administration

Mr. Sepala Amarasuriya, Head, Purchasing and Administrative Services, Mr. Upali Karunanayake, Senior Purchasing Assistant, Ms. Shahanaz Makawita, Secretary

Office Support Systems

Mr. S.M.B. Seneviratne, Head - Office Support Systems Office, Mr. Ajith Wijayaratne, Distribution Officer, Ms. Sujatha Dassanayake, Receptionist/Junior Secretary, Ms. Viranga Kularatne, Receptionist/Junior Secretary, Mr. A. Joseph, Junior Clerk, Mr. K. Punchibanda, Junior Clerk, Mr. N.S. Ranjithsinghe, Junior Clerk, Mr. S.M. Edirimanne, Production Assistant/Clerk, Mr. Lal Abeykoon, Junior Clerk, Mr. S.M.H.P. Samarakoon, Office Aide/Steward

Transport & Maintenance

Mr. Eardley De Silva, Acting Head, Building and Transport, Mr. Kapila Pathiraja, Assistant Manager, Building Engineering Services & Transport, Ms. Thusitha Jayatilleke, Administrative Officer, Mr. Ravi Dissanayake, Transport Assistant, Ms. Iresha Dharmawardhana, Administrative Assistant, Mr. S. Arockiam, Plumber, Mr. P.W. Pathirana, Electrician, Mr. S. Krishnarajah, Junior Clerk, Mr. P.A. Rezel, Electrician, Mr. Sunil Jayatillake, Carpenter/Fitter, Mr. K.G.S. Kumara, Driver, Mr. Priyantha Chandrasena, Driver, Mr. Ajith Perera, Driver, Mr. Ajantha Perera, Driver, Mr. K.K.R. Kumara, Driver, Mr. W.D. Upali, General Labourer

Travel Office

Mr. Nihal Silva, Travel & Visa Coordinator

Information & Communications Technology (ICT)

Ms. Ruwanthi Fernando, Head, Information and Communications Technology, Mr. Nirudha Perera, Network Administrator, Mr. M.Z.M. Riazzi, Database Developer/Administrator, Mr. Shaminda Illangatilaka, Assistant Network/Systems Administrator, Mr. Sanjeewa Amarasekara, Help Desk Coordinator, Mr. Arshad Razali Iyne, Help Desk Coordinator, Ms. Woranga Palingu Kumari Atukorale, Software Engineer, Ms. H. Sunari Elizabeth Silva, Software Engineer, Mr. Ranjith Wickremasinghe, Systems Administrator, Mr. Santha Marasinghe, PC Support Technician, Ms. Veronica Lumanauw, Administrative Officer

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Integrated Basin Water Management Systems, Dr. Naoya Fujimoto, Principal Researcher/Deputy Coordinator Comprehensive Assessment, Dr. Max Finlayson, Principal Researcher, Wetland Ecology, Dr. Deborah Bossio, Theme Leader, & Principal Soil Scientist Land Water Livelihoods, Dr. Prasad Thenkabail, Principal Researcher, Head, RS-GIS & Natural Resources Management, Dr. Rathinasamy Maria Saleth, Senior Institutional Economist, Dr. Mark Giordano, Institutions and Policies (GRD),
Senior Researchers: Dr. Robert Zomer, Senior Landscape Ecologist, Dr. Sarath Abayawardana, Head, Sri Lanka Program, Dr. Charlotte de Fraiture, Head, Global Change & Environment, Dr. Intizar Hussain, Senior Economist, Dr. Karen Villholth, Ground Water Modeling Specialist, *Dr. Flemming Konradsen, International Health Specialist,
Researchers: Mr. K. Jinapala, Institutions Specialist, Mr. Manju Hemakumara, Benchmark Basin Coordinator, Mr. S.C Piyankarage, Chemist, *Ms. Dilkushi De Alwis, Junior Hydrologist, Dr. Sitara Atapattu, Coastal Zone Ecologist, Comprehensive Assessment of Water Management in Agriculture, Mr. Parakrama Weligamage, Agricultural Economist, Mr. Dhananjaya Niriella, Environmental Engineer, Ms. Rebecca Tharme, Theme Leader, Water Management & Environment, Ms. Sophie Nguyen Khoa Man, Water & Fisheries, Dr. Pierre Marchand, Researcher/Data Warehouse Architect, Ms. Domitille Vallee, Water, Food, Environment Specialist/Assessment Facilitator- Comprehensive Assessment on Water Management in Agriculture, Dr. Jean-Luc Sabatier, Water Management Specialist, Ms. Yuan Jie Li, Researcher - RS-GIS Expert, Ms. Alexandra Clemett, Researcher-Livelihoods/Water Quality/Waste Water, Mr. Lal Muthuwatta, Hydrologist/Mathematical Modeler, Dr. Mobin-ud-Din Ahmad, Researcher - Hydrologist and Remote Sensing Specialist, Mr. Olivier Briet, Medical Entomologist, Dr. Luna Bharati, Researcher - Hydrology and Water Resources, Mr. Aminul Islam, GIS and Remote Sensing Specialist, Mr. Dheeravath Venkateswarlu, Researcher - RS/GIS, Mr. Velpuri Naga, Manohar, Remote Sensing Specialist, Livelihood Systems Analysis (from 1 May 06)
Post-Doctoral Scientists: *Dr. Nicolas Roost, Irrigation and Water Management Specialist, Dr. Lisa Freja Schipper, Post-Doctoral Fellow - Comprehensive Assessment of Water Management in Agriculture, *Dr. Line Gorden, Post - Doctoral Fellow - Comprehensive Assessment of Water Management in Agriculture, Dr. Yongsong Liao, Post-Doctoral Fellow - Global Modeling, Dr. Vinay Nangia Post-Doctoral Fellow - Irrigation, Dr. Chandrashekhar M. Biradar Post-Doctoral Fellow (Remote Sensing), Dr. Nidhi Nagabhatla, Post-Doctoral Fellow - Landscape Ecology, Dr. Lisa Maria, Rebelo, Post-Doctoral Fellow, Wetlands Remote Sensing
Research Officers: Mr. P.G. Somaratne, Sociologist, Mr. B.R. Ariyaratne, Benchmark Basin Coordinator, Mr. Noel Aloysius, Water Resources Engineer, Mr. Shahriar Pervez, GIS Specialist, Mr. Chandana Gangodagamage, Remote Sensing Specialist, Mr. Neelanga Weragala, Water Resources Engineer, Mr. Deeptha Wijerathna, Agricultural Economist, Mr. Priyantha Jayakody, Agricultural Engineer, Mr. M.G.S.D. Nilantha, Remote Sensing/GIS Specialist, *Ms. K.H. Thushara Abeysekera, Chemist, Ms. Nishadi Eriyagama, Water Resources Engineer, Ms. Priyanka Dissanayake, Environmental Scientist, Ms. R. Wasantha Kulawardhana, Remote Sensing/GIS Specialist & Web Developer, Mr. Jagath Chandralal Vithanage, Remote Sensing/GIS Specialist, Ms. Shyamalie de Silva, Social Scientist, Mr. Markandu Anputhas, Biometrician, Mr. D.G.S. Gunasinghe, Digitizing Operator, Mr. Praveen Noojipady, Geospatial Data and Metadata Specialist, Ms. Charmini Kodituwakku - Research Officer
Research Support: Mr. M. Dayananda, Field Data Collector, Mr. Nihal Dayasena, Field Data Collector, Mr. Sarath Lionalratne, Field Data Collector, Mr. N.G. Indrajith, Field Data Collector, Mr. A.D. Ranjith, Digitizing Operator, Ms. Thushari Perera, Research Assistant
Principal Manager: Ms. Julie Van der Bliek, Director Global Research Division
Non-Research: Ms. Sepali Goonaratne, Administrative Officer, Ms. Mala Ranawake, Administrative Officer, Ms. Janitha Godamuduna, Secretary to Director, GRD, Ms. Himani Elangasinghe, Senior Secretary, Ms. Ashra Fernando, Senior Secretary, Mr. M. Sadir, Software Developer, Mr. S.A. Anjitha Senarath, Intranet/Web Services Developer, Mr. Nishath Yapa, Data Warehouse Database Administrator, Mr. Subramaniam Jeyakumaran, Data Warehouse Software Engineer, Mr. Tharmanathan Ramkumar, Data Warehouse Database Administrator, Ms. Samanmali Jayatillaka, Secretary, Ms. Nilupuli Pethiyagoda, Secretary, Ms. Lakmali Wijesinghe, Metadata Assistant, Mr. D.W. Premachandra, Data Entry Clerk

IWMI USA
Senior Researcher: Dr. Marc Andreini, Hydrologist

IWMI Southeast Asia (Penang, Malaysia)
Principal Researchers: Dr. Andrew Noble, Head, SE-Asia, *Mr. Ian Makin, Principal Water Management Specialist
Senior Researchers: Dr. Chu Thai Hoanh, Senior Water Resources Engineer
Researchers: Mr. Jean-Louis Janeau, Soil Scientist, Dr. Arlene Inocencio, Economist
Associate Experts: *Dr. Mathew Kurian, Institutions/Natural Resources Management Specialist
Post Doctoral Scientists: *Dr. Shinji Suzuki, Soil Scientist
Research Officers: *Mr. Rungnadhee Phonkarm, GIS Assistant, * Ms. Orn Uma Polpanich, Agricultural Scientist,
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Non-Research: Mr. Suparuek Puttakhot, System Network Administrator, *Ms. Sumana Kmolpun, Accountant, *Ms. Naiyana Puranachoti, Administrator, *Ms. Lakana Sangkhakorn, Information Officer, *Mr. Tanadol Compo, Compositor/Graphics Designer, *Mr. Pornchai Luechatmatikul, Administrative Assistant, *Mr. Narin Peeraoranun, Cashier, *Ms. Jutima Anumatratchakit, Office Manager, *Ms. Jirapar Boonyasurakul, Group Secretary, *Ms. Banyen Taruen, Office Service

IWMI Laos
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Researchers: Mr. Jean-Pierre Thiebaux, Hydrologist, Mr. Nobert Silvera, Hydrologist, Mr. Guillaume Lestrelin, Human Geographer, Mr. Emmanuel Bourdon, Soil Scientist,
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IWMI Vietnam
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IWMI Cambodia
Senior Researcher: Dr. Suraphol Chandrapatya, Agricultural Extension & Development Specialist
Researcher: Mr. L.R. Perera, Social Scientist
Research Officer: Ms. Wannipa Soda, Agricultural Scientist

IWMI Pakistan

Principal Researcher: *Dr. Zhongping Zhu, Head, IWMI-Pakistan,
Researchers: Mr. Abdul Hakeem Khan, Head, IWMI Pakistan,*Dr. Muhammad Nadeem Asghar, Senior Agricultural Engineer, *Dr. Waqar Jehangir, Senior Agricultural Economist,
Research Officers: *Mr. Mujeeb Akhtar, Research Officer, *Mr. Zubair Masood, Junior Researcher, *Mr. Muhammad Hamed Khan, Assistant Engineer, *Mr. Muhammad Mukhtar, Junior Researcher (Malaria), Mr. Sarfraz Munir, Junior Researcher (WM), *Mr. Shehzad Ahmad, Junior Researcher, Mr. Amir Nazeer, Economist, *Mr. Abdul Shakoor, Research Officer, Mr. Asghar Hussain, Spatial Data Analyst, Mr. Ilyas Masih, Research Officer,
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Research Support: Ms. Sara Marjanizadeh, Research Fellow,
Non-Research: Ms. Atefeh Davarzaman, Secretary, *Mr. Masood Badarkhani, Driver, Mr. Reza Taramashloo, Driver/Office Assistance, Ms. Soudabeh Gavshanian, Cleaner

IWMI Central Asia - Uzbekistan

Senior Researcher: Dr. Herath Manthrithilake, Head, Central Asia,
Researchers: Dr. Iskandar Abdullayev, Water Management Specialist, Dr. Jusipbek Kazbekov, Researcher, Mr. Alexander Platonov, Researcher (GIS/RS Specialist), Dr. Akmal Karimov, Consultant (Technical Coordinator of Bright Spots Project),
Research Officer: Ms. Nargiza Nizamedinkhodjaeva, Research Officer, Mr. Murat Yakubov, Research Officer, Mr. Qahramon Jumaboev, Research Officer, Mr. Oyture Anarbekov, Research Officer, Ms. Ikbol Yusupova, Research Officer (Project Assistant/Translator),
Research Support Staff: Ms. Mariya Motorina, Consultant (Assistant on Knowledge Sharing), Ms. Yuliya Efremova, Consultant (Assistant to GIS\RS Specialist),
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IWMI Hyderabad

Principal Researchers: Dr. Madar Samad, Principal Researcher/Head - Hyderabad Office, *Dr. Christopher Scott, Director Asia,
Senior Researchers: Dr. Priyanie Amerasinghe, Researcher (Bio-Medical Science),
Researchers: *Dr. Marepalli Sivamohan, Visiting Scientist, *Mr. Shirish Sinha, Researcher (Water - Energy), *Dr. Ranjitha Puskur, Researcher Economics, Dr. Anju Gaur, Researcher - Water Resources Engineering, Dr. Robert Simmons, Soil Scientist, Dr. Petra Hellegers, Researcher - Water Economist (Joint Appointment with IWMI and WUR), Dr. Deepa Joshi, Researcher (Gender and Livelihoods), Dr. Anju Gaur, Researcher - Water Resources Engineering, Ms. Jetske Bouma, Environmental Economist (Joint Appointment with IWMI & University of Tilburg),
Post Doctoral Scientist: Dr. Trent Biggs, Post-Doctoral Scientist/Water Quality
Associate Expert: Mr. Mattia Celio, Associate Expert - Water Management and Policies,
Research Officers: Mr. P. Narayana, Senior Research Officer - Energy Water Management, Mr. Murali Krishna Gumma, Research Officer (GIS & Remote Sensing), Mr. T.P. Gangadhara Rao, Research Officer (GIS & Remote Sensing), Ms. M. Gayathri Devi, Research Officer - Urban Agriculture and Wastewater Livelihoods, Ms. Cecilia Abraham, Communications Officer - Virtual Academy for Semi Arid Tropics,
Research Support: Ms. R. Rama Devi, Research Assistant, Ms. Urmila Matha, Research Assistant, Mr. Sreedhar Acharya, Officer (Data Analysis), Ms. Saba Ishaq, Scientific Officer (Urban & Peri-urban Agriculture), Ms. Sweta Agrawal, Associate (Information Management),
Non-Research: Ms. P. Roja Rani, Administrative Officer, Ms. Judith Christiana, Administrative Associate, Ms. Navanitha Raghupathi, Administrative Associate, Mr. Mohammed Qadir, Driver-cum-General Assistant

IWMI New Delhi

Principal Researcher: Dr. Peter McCornick, Director, Asia, (now based at IWMI HQ)
Senior Researcher: Dr. B.R. Sharma, Liaison Officer/Senior Researcher, Dr. Upali Amarasinghe, Senior Statistician,
Post-Doctoral Scientist: Dr. Anik Bhaduri, Post Doctoral Fellow - Resource Economics,
Research Support: Mr. B.K. Anand, Research Consultant,
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IWMI Anand

Principal Researcher: Dr. Tushaar Shah, Principal Scientist - Ground Water Management,
Senior Researchers: Dr. Sanjiv Phansalkar, Senior Researcher and ITP Leader,
Researchers: Mr. Shilp Verma, Consultant, Mr. M. Dinesh Kumar, Consultant and Project Director North Gujarat Initiative Project, *Mr. Avinash Kishore, Consultant,
Associate Expert: *Ms. Bhawana Upadhyay, Gender Specialist,
Post-Doctoral Scientist: Dr. Sunderrajan Krishnan, Post-Doctoral Fellow in Water Resource,
Research Support: Dr. Rakesh Tiwary, Consultant, Dr. O.P. Singh, Consultant, *Mr. Jayesh Talati, Consultant, Mr. M.M. Kapadia, Field Coordinator, NGI, Mr. Santanu Ghosh, Consultant, Mr. Shekhar Sinha, Consultant, *Mr. Dhaval Pandya, Consultant, Ms. Amrita Sharma, Consultant, Mr. Manoj Kumar Sharma, Team Leader NGI, Mr. Malkit Singh, Consultant, Ms. Archana Purohit, Consultant, Ms. Chaitali Purohit, Consultant, Ms. Trishikhi Raychoudhury,

Consultant, Mr. Debdoot Mohanty, Manager, Clnl Cell, Dr. Rajnarayan Indu, Consultant, Mr. Nirmalya, Choudhury, Consultant, Ms. Zankhana Shah, Consultant,
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IWMI Nepal
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Non-Research: Mr. Sudarshan Pandey, Office Manager (Nepal)

IWMI Southern Africa (Pretoria)
Principal Researchers: Dr. Douglas Merrey, Principal Researcher, *Dr. Frits Penning de Vries, Production Ecologist, Dr. Barbara Van Koppen, Rural Sociologist Poverty, Gender, and Water
Senior Researchers: Dr. Hilmy Sally, Head, Southern Africa, Dr. Cliff Mutero, Senior Researcher and SIMA Coordinator, Dr. Sylvie Morardet, Agricultural Economist, Dr. Dominique Rollin, Agronomist
Researchers: Mr. Yogesh Bhatt, Researcher/Outreach Coordinator, Ms. Gayathree Jayasinghe, Biometrician, *Mr. Litha Magingxa, Ph.D. Fellow, Dr. Mutsa Masiyandima, Hydrologist
Post-Doctoral Scientists: Dr. Amy J. Sullivan, Post-Doctoral Scientist - River Basin Institutions
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IWMI West Africa
Principal Researcher: Dr. Akiça Bahri, Director, Asia, Dr. Pay Drechsel, Theme Leader, Agricultural, Water and Cities
Senior Researcher: Dr. Boubacar Barry, Agricultural Engineer, Dr. Liqa Raschid-Sally, Waste Water Specialist
Researchers: Mr. Mehmood Ul Hassan, Head, IWMI West Africa, Dr. Olufunke Cofie, Soil Scientist, Ms. Eveline Klinkenberg, Water & Health Expert (Joint Appointment with IWMI and the Liverpool School), Dr. Adesola Olutayo Olaleye, Wetland Agronomist, Dr. Regassa Ensermu Namara, Economist, *Mr. Jeroen Ensink, Expert, Health and Wastewater Re-use in Agriculture (Joint appointment with IWMI and LSHTM), Dr. Hammou Laamrani, Researcher - Health
Post Doctoral Scientists: Dr. Adetola Ibidunni Adeoti, Agricultural Economist, Dr. Anne Chaponniere, Post-Doctoral Fellow
Research Officers: Mr. Raymond Kasei, Research Officer, Mr. Bernard Keraita, Irrigation and Water Engineer, Mr. Theophilus Otchere-Larbi, Capacity Building and Training Officer - under RUAF II project, Mr. Philip Amoah, Environmental Scientist, Mr. Ernest Mensah Abraham, Knowledge Management Officer
Research Support: Mr. George Danso, Agricultural Economist, Mr. Emmanuel Obuobie, Water Engineer, Mr. Gerald Forkuor, Research Assistant, Mr. Mark Osa Akrong, Assistant Research Officer, Mr. Kwame Osei Boateng, Research Assistant
Non-Research: Mr. Lookie Amuzu Koji, Office Manager, *Ms. Louise Agyeman-Barning, Admin & HR Manager, Ms. Charlotte Amponsah, Finance Officer, Mr. Eric Korankye, IT Officer, Ms. Linda Beccles, Admin. Assistant, Mr. Daniel Ofori, Admin. Assistant (Glowa Volta), Ms. Lydia Amoah, Admin. Assistant (Challenge Program), Ms. Tonya Schutz, Programe Manager, Mr. Eli Sokpli, Driver (Glowa Volta), Mr. Ebenezer Aboah, Cleaner/Gardener, Mr. David K. Ochard, Driver (Glowa Volta), Mr. Martin Ofori, Driver, Mr. Daniel Twumasi, Driver, Mr. Salisu Adams, Driver (Glowa Volta), Mr. Edward Osei Boateng, Cleaner /Electrician

IWMI East Africa and Nile Basin
Senior Researchers: Dr. Seleshi Bekele Awulachew, Head, East Africa, Dr. Matthew McCartney, Hydrologist, Dr. Eline Boelee, Health and Irrigation Specialist, Dr. Yasir Abbas Mohamed, Senior Researcher
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Post Doctoral Scientists: Dr. Godswill Makombe, Post Doctoral Fellow - Economist, Dr. Michiko Ebato, Post-Doctoral Fellow in Gender in Multiple Use Water Supply Services in Sub-Saharan Africa
Research Support: Mr. Desalegne Simachew, Liaison Scientist MUS Project, Non-Research: Ms. Nigist Wagaye, Senior Program Assistant

HOSTED PROGRAM STAFF
Global Water Partnership Secretariat
Principal Manager: Mr. Lalith Dassenaike, Coordinator, IWMI-GWP Resource Centre

Challenge Program on Water and Food
Principal Researcher: Dr. Jonathan Woolley, Coordinator - Challenge Program on Water and Food
Principal Manager: Ms. Pamela George, Program Manager - Challenge Program on Water and Food
Research Officers: Ms. Priyantha Jayasuriya Arachchi, Data Analyst
Non-Research: Ms. Marcia F. Macomber, Capacity Building Officer, Ms. Amena Mohammed, Communications Coordinator, Ms. Sharon Perera, Executive Assistant, Ms. Marene Abeyesekere, Finance Administrator, Ms. I. Deborah Tracey Koch, Administrative Officer

International Centre for Underutilized Crops
Principal Researcher: Dr. Hannah Jaenicke, Director, International Centre for Underutilized Crops
Research Officer: Mr. A.H.M.Sampath Abeyrathne, Processing and Small Business Development Specialist
Non-Research: Ms. Sushila Rajamanie, Administrative Officer

** Staff left in 2005/2006 (period covered - 01 Jan 2005 to 31 March 2006)*

Financial Comment

For IWMI, years 2000-2003 saw a spurt in activities and funding as the institute grew in size and also repositioned itself as a key player on the global stage. We now are in the process of consolidation. Apart from a healthy growth rate and consolidation of advances of recent years, this also means a continuous change process to keep pace with the rapidly changing external world. Activities in Ghana and Ethiopia continue to increase, with the Nairobi office shifting to Ethiopia in 2006. New projects have come on stream in South Africa, Ghana and India, particularly.

The period 2000-2003 was one of rapid growth for IWMI that registered an average annual increase of 35% in its funding. The period 2004-2005 has been a period of relative consolidation, with an increase in funding for core IWMI activities by 7% in 2004, 14% in 2005 and projected increase of 9% in 2006. In 2005, IMWI recorded total revenues of $30.09 million, an increase of 30% over 2004, including $5.6 million for non-IWMI implemented CPWF funding (and consequently a total of $24.5 million for "core-IWMI"). The revenue included $8.42 million of unrestricted grants, $1.97 million in program restricted grants, and $19.71 million of restricted grants and other revenue. Unrestricted funding increased by 10% over 2004.

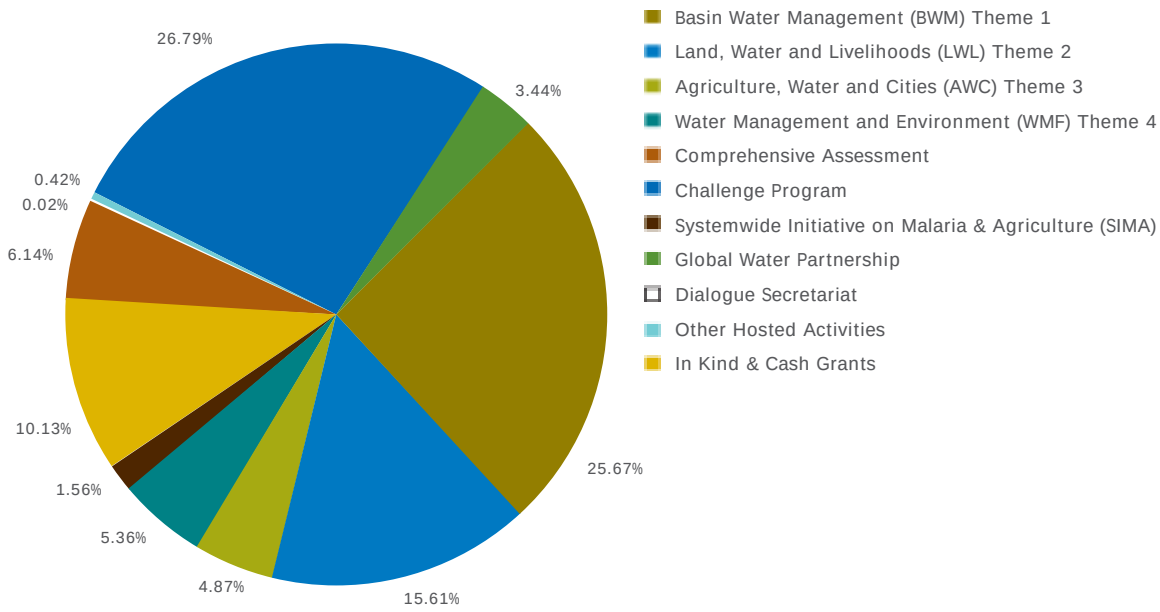
Expenses grew at a similar rate with the income to accommodate the growth and expansion. IWMI's overhead as a percentage of total costs remained at 18% in 2005 as compared 23% for 2001 and 29% for 2000. This is by and large the result of a relatively low increase in support function cost in comparison to the increase in operations that more than trebled in the past years.

IWMI's total reserves at the end of 2005 are $4.6 million, up from $4.2 million in 2004, mainly due to a net surplus of $0.4 million in 2005. The reserves are projected to increase to $5.1 million at the end of 2006. IWMI's financial position is stable and continues to improve.

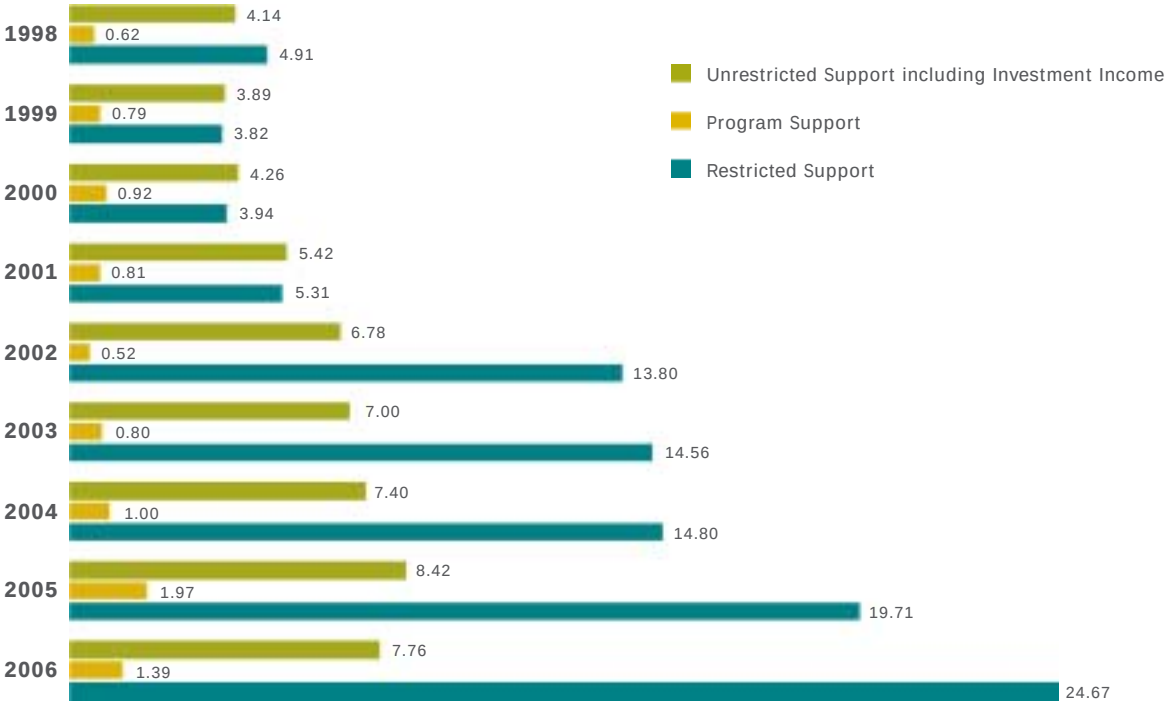
The CGIAR has developed four parameters to measure financial health of the centers. These are—Long term financial stability (recommended range 75-90 days), short term solvency (recommended range 90-120 days), Efficiency of Operations (Indirect cost to Direct cost) and Cash Management on restricted operations ratio. IWMI's short term solvency ratio is 96 days and long term financial stability ratio is 71 days at the end of 2005, projected to increase to 75 days at the end of 2006. The efficiency of operations ratio is 22% as in 2005, projected to be at the same level in 2006 and the cash management on restricted operations is 25%. Most of these ratios are within the acceptable range and IWMI is committed to ensure the adherence to these levels in future as well.

EXPENDITURE (US$'000)	2001	2002	2003	2004	2005
IWMI Core	11,923	16,791	19,452	19,648	21,020
IWMI Challenge Program	-	631	2,321	1,671	4,045
Total IWMI	11,923	17,422	21,773	21,319	25,065
Non IWMI Challenge Program	-	-	2,588	2,106	5,603
Total	**11,923**	**17,422**	**24,361**	**23,425**	**30,668**

Direct Research Expenditure by Program 2005



Income 1998-2006 (US$ Millions)



Auditors' Letter

ERNST & YOUNG

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Colombo 10
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Report of the auditors

To the Board of Governors of International Water Management Institute

We have audited the accompanying statement of the financial position of International Water Management Institute as at 31st December 2005 and the related statement of activities, changes in net assets and cash flows for the year then ended, together with the accounting policies and notes as set out on pages 3 to 24.

Respective Responsibilities of the institute's management and auditors

The institute's management is responsible for preparing and presenting these financial statements in accordance with the recommendations made in the Consultative Group for International Agricultural Research(CGIAR) financial Guidelines series No.2 CGIAR Accounting policies and Reporting practices manual(revised March 2004).Our responsibility is to express an opinion on these financial statements, based on our audit.

Basis of opinion

We conducted our audit in accordance with the International Standards on Auditing, which require that we plan and perform the audit to obtain reasonable assurance about weather the said financial statements are free from material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the said financial statements, assessing the accounting principles used and significant estimates made by the institute's management, evaluating the overall presentation of the financial statements, and determining whether the said financial statements are prepared and presented in accordance with the recommendations made in the CGIAR Guidelines. We have obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purposes of our audit. We therefore believe that our audit provides a reasonable basis for our opinion.

Opinion

In our opinion, so far as appears from our examination, the institute maintained proper books of account for the year ended 31st December 2005, and to the best of our information and according to the explanations given to us, the said financial position and related statements of activities, changes in net assets, cash flows and the accounting policies and notes thereto, which are in agreement with said books and have been prepared and presented in accordance with the recommendations made in the CGIAR financial Guidelines Series No 2-CGIAR Accounting polices and Reporting Practices manual(revised March 2004) and give a true and fair view of the Institute's state of affairs as at 31st December 2005 and of its activities and cash flows for the year then ended. Supplementary information on pages 25 to 35 are not a required part of the financial statements and have not been subjected to audit procedures applied in the audit of the financial statements.

Colombo
10th May 2006

Restricted Research Projects 2005-2006

PROJECTS STARTED IN 2005 WITH A BUDGET OF US $50,000 OR MORE

Project Name	Life Budget US$	Period
Knowledge Base System for Sri Lanka (KBS Lanka) (Uniliver) This project will provide a remote sensing and GIS-based integrated information system and establish a working methodology to use this information effectively, while developing an on-line dissemination service to reduce vulnerability issues and minimize adverse effects on the population in disaster situations.	60,000	over 2 years
Southern Africa Regional Water Financing for Agriculture Workshop (GWPO) The Pretoria workshop was the second regional consultation to be held by the Working Group on Financing Water for Agriculture sponsored by the Global Water Partnership (GWP) and the World Water Council (WWC) and supported by the World Bank, FAO, IFAD and IWMI. The two-day event provided an opportunity for water users, professionals, financiers and other interested parties in Southern Africa to present their views on various agenda items relating to Financing Water for Agriculture. The results of this and the other regional consultations were fed into the final report and presented at the Fourth World Water Forum in Mexico City.	54,000	over 1 year
Study on Agricultural Water Management for Food Security (Food & Agriculture Organization) This project will identify suitable, innovative agriculture water management techniques and approaches which will increase the ability of smallholder farmers and herders to sustain production throughout normal production periods as well as extend seasons of productivity where feasible.	50,000	over 1 year
Improving Productivity & Market Success of Ethiopian Farmers (IPMS) (CIDA) The overarching goal of the project is to contribute to improved agricultural productivity and production through market-oriented agriculture development, as a means for achieving improved and sustainable livelihoods for the rural population.	50,479	over 5 years
Ensuring Health and Food Safety from Rapidly Expanding Wastewater Irrigation in South Asia (BMZ) To identify the risks and benefits associated with the use of wastewater in urban and peri-urban fodder and vegetable cropping systems in India and Pakistan, where wastewater is largely untreated due to lack of public finance .	1,032,570 *Euro 800,000*	over 3 years
International Training on IWRM (Ramboll Natura AB) (SIDA) This project will support and stimulate the development of Integrated Water Resource Management in the participants' home countries, and encourage participants to become involved in and contribute to regional networking for Integrated Water Resource Management.	145,258 *Swedish Kronor 1,127,200*	over 6 months
Urban Agriculture Policy Support in Ghana (Netherlands) This project will identify international, regional and national institutions and programs that have a strong influence on national and urban policies and planning that could be major agents in mainstreaming urban agriculture.	674,559 *Euro 522,914*	over 4 years
Urban Agriculture Policy Support in India (Netherlands) This project will identify international, regional and national institutions and programs that have a strong influence on national and urban policies and planning that could be major agents in mainstreaming urban agriculture.	533,469 *Euro 413,542*	over 4 years
North Gujarat Sustainable Groundwater initiative - Phase II (RTT) The North Gujarat Initiative Project is an action research project led by IWMI on sustainable groundwater management. It is funded through a grant from the Sir Ratan Tata Trust (SRTT), Bombay. The project will demonstrate the impact of land and water management practices in agriculture, groundwater use and farm economy and develop replicable models of sustainable farming systems.	466,368 Irs. 20,800,000	over 3 years

Restricted Research Projects 2005-2006 *continued...*

Project Name	Life Budget US$	Period
Central India Initiative (CInI) Cell (RTT) This project will highlight the importance of improved water control mechanisms for enhancing tribal development. The research suggests that an emphasis on promotion of appropriate water control strategies would lead to far greater impact not only on the livelihoods of tribals but also cause salutary impacts on their health, education, social awareness and the status of tribal women.	340,807 Irs.15,200,000	over 3 years
Global Water Partnership - South Asia This project focuses on water resource management and promotes Integrated Water Resource Management (IWRM) practices. The GWP is active in fora at global, regional and national levels, directed toward facilitating change and the systematic generation, accumulation, and dissemination of knowledge to support the process of change.	550,000	over 2 years
International Water Resource Mgt. - Ferghana Valley (Phase iii) The objective of the project is to promote secure livelihoods, increased environmental sustainability, and greater social harmony, and to support rural restructuring in Central Asian countries through improved effectiveness of water resources management, for example in the Ferghana Valley.	2,438,000	over 3 years
Enabling Communities in Aral Sea Basin to Combat Land and Water Resources Degradation through the Creation of "Bright Spots" (Asian Development Bank) To address poverty, improve food security at the household level, and enhance environmental security by developing, promoting, and adopting strategies that enhance the productivity of existing irrigated farming systems in Central Asia.	700,000	over 3 years
Aggregate Water Technology Inventory Africa (USAID) This project will identify the most promising agricultural water technologies and practices which can be promoted and scaled up in order to contribute to reducing poverty in Africa.	76,759	over 4 months
Sustainable Management of Inland wetlands in Southern Africa (United Nations Environment Program) The overall goal of this project is to generate knowledge and assist in the sustainable management of wetlands.	974,825	over 4 years
Strategic Analysis and Knowledge Support Systems Program in South Africa (USAID) To promote a broader analysis of the impacts of agricultural development programs on poverty alleviation and food insecurity in southern Africa and to build capacity in the region to carry out such analyses through the creation of a "community of practice" among participating researchers, policy makers and development managers.	400,000	over 2 years
Health Impact Assessment of Small Dams (Morocco) (Intl. Development Research Centre) The overall objective of this project is to contribute to improved management of watershed eco-systems for food security, human health and well-being, and better livelihoods of local communities without adverse impacts on nature.	59,339 *Canadian Dollars 73,580*	over 18 months
Groundwater in Arid & Saline Environment - Tunisia & C/Asia (Opec) The specific objective of this study is to identify suitable areas for groundwater development and artificial recharge of underground aquifers, for example in the Ferghana Valley within Uzbekistan.	100,000	over 1 year

Restricted Research Projects 2005-2006 *continued...*

Project Name	Life Budget US$	Period
Creating Synergies Between the CGIAR and Nile Basin Initiative To produce a joint, strategic, demand-driven research program that strengthens the Nile Basin Initiative program, especially in areas of food security, poverty alleviation, equity and natural resources management.	81,000 *Canadian Dollars* 100,000	over 1 year
Narbo Training Course on IWRM This is a training workshop which aims to give officials and professionals from River Basin Organizations and government organizations in South Asia an understanding of the principles of IWRM and IRBM; while providing opportunities to examine strategies and possible solutions applicable to their own countries, and opportunities to develop networks for maximizing training and experience as well as knowledge application.	105,138	over 1 week
Special Funding for Tsunami Activities To rehabilitate tsunami affected communities and carry out a "rapid livelihoods needs assessment" in the coastal areas of Sri Lanka as well as assessments on the salinization effects of groundwater in the East. Groundwater is a primary source of drinking water there, and technical assistance in the recovery of wells followed.	66,297 *Euro 55,000*	over 1 year
Total - Research Projects	**8,958,868**	

CHALLENGE PROGRAM	Life Budget US$	Period
DFID (Department for International Development)	4,400,000 *Sterling Pounds 2,500,0000*	over 1 years
Norway	371,422 *Norwegian Kroner 2,500,000*	over 1 year
SIDA (Swedish International Development Cooperation Agency)	418,976 *Swedish Kronor 3,390,000*	over 1 year
Denmark	332,045	over 1 year
World Bank	2,000,000	over 1 year
SDC (Swiss Agency for Development and Cooperation)	377,346	over 1 year
Deutsche Gesellschaft fur Thechnische Zusammenarbeit GmbH (GTZ)	350,250 *Euro 300,000*	over 1 year
Total - Challenge Program	**8,250,039**	

COMPREHENSIVE ASSESSMENT	Life Budget US$	Period
World Bank	260,000	over 1 year
Japan	78,912	over 1 year
Total - Comprehensive Assessment	**338,912**	

Restricted Research Projects 2005-2006 *continued...*

PROGRAM SUPPORT	Life Budget US$	Period
EU - Water Productivity	988,697	over 1 year
Support to Africa Office & Senegal (Africa)	150,000	over 1 year
Canada Support	433,116	over 1 year
India Support	100,000	over 1 year
France Support	142,442	over 1 year
Total - Program Support	1,814,255	
Grand Total - New Projects 2005	19,362,074	

Restricted / Unrestricted 2005

	Grant 2005 US$'000	Grant 2004 US$'000
UNRESTRICTED		
Australia	363	328
Belgium	0	98
Canada	513	656
China	10	0
Denmark	313	327
Germany	309	290
India	38	38
Iran	95	155
Ireland	746	730
Israel	189	0
Japan	100	253
Netherlands	1,089	1,053
Norway	148	74
Sweden	372	413
Switzerland	331	307
Thailand	0	10
United Kingdom	1,088	536
USAID	759	759
World Bank	1,500	1,200
Subtotal Unrestricted	7,963	7,227
OTHER REVENUE		
Investment income	426	127
Sundry income	29	43
Subtotal Other Revenue	455	170
TOTAL (UNRESTRICTED RESOURCES)	**8,418**	**7,397**

	Grant 2005 US$'000	Grant 2004 US$'000
RESTRICTED		
African Development Bank	127	596
Asian Development Bank	297	320
Austria	213	127
Australia/Australian Centre for International Agricultural Research (ACIAR)	254	212
Canada	456	463
CARE	18	
CEMAGREF	0	0
Denmark	575	228
Food and Agriculture Organization	198	134
France	2,017	2,124
Germany	944	50
International Centre for Research in Agroforestry (ICRAF)	0	59
CIAT	20	
International Fund for Agricultural Development (IFAD)	0	8
India (ICAR)	100	
International Development Research Centre (IDRC)	110	322
ERU	51	
EU	989	
Japan	287	347
Japan Bank for International Cooperation (JBIC)	0	22
IPGRI	18	
Netherlands	1,873	3,364
Norway	150	441
OPEC Fund for International Development	23	91
Other Donors	224	159
Royal Government of Cambodia (RGC)	7	
South Africa	150	225
Sri Lanka	24	54
Sweden (SIDA)	1,416	1,057
Switzerland	1,570	1,973
Taiwan	44	33
TATA Foundation	309	340
ILRI	15	
UNESCO	1	3
United Kingdom (DFID)	4,697	1,793
USAID	565	601
United States Department of Agriculture (USDA)	11	
Volkswagen Foundation	0	16
Water and Power Development Authority (WAPDA)	0	41
World Health Organization	2	3
World Bank	3,629	460
ZEF	294	104
ZIL/Switzerland	0	48
TOTAL (RESTRICTED RESOURCES)	**21,678**	**15,818**
Total Grants	30,096	23,215

Statement of Financial Position December 2005 and 2004

Statement of Financial Position
December 31, 2005 and 2004

	2005 US$'000	2004 US$'000
ASSETS		
Current Assets		
Cash and Cash Equivalents	13,441	15,013
Accounts Receivable: (Net of $100,000 allowance for doubtful accounts)		
Donor	3,121	2,437
Employees	402	93
Other CGIAR Centers	1,251	141
Others	1,280	718
Inventories	43	39
Prepaid Expenses	183	288
Total Current Assets	19,721	18,729
Non-Current Assets		
Property, Plant Equipment, net	2,098	2,050
TOTAL ASSETS	**21,819**	**20,779**
LIABILITIES AND NET ASSETS		
Current Liabilities		
Accounts Payable		
Donor	11,912	12,116
Employees	98	21
Other CGIAR Centers	351	26
Others	1,099	590
Accruals	34	113
Total Current Liabilities	13,494	12,866
NON CURRENT LIABILITIES		
Accounts Payable		
Employees	1,656	1,659
Total Non Current Liabilities	1,656	1,659
Total Liabilities	15,150	14,525
Net Assets		
Unrestricted		
Designated	3,180	3,199
Undesignated	3,489	3,055
Total Net Assets	6,669	6,254
TOTAL LIABILITIES AND NET ASSETS	**21,819**	**20,779**

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IWMI Publications List 2005

PEER REVIEWED OUTPUTS

RESEARCH REPORTS

1 **Amarasinghe, Upali; Samad, Madar; Anputhas, Markandu.** 2005. Locating the poor: Spatially disaggregated poverty maps for Sri Lanka. Colombo, Sri Lanka: IWMI. v, 33p. (IWMI research report 96)

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3 **Lestrelin, G.; Giordano, Mark; Keohavahn, G.** 2005. When "conservation" leads to land degradation: Lessons from Ban Lak Sip, Laos. Colombo, Sri Lanka: IWMI. v, 25p. (IWMI research report 91)

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5 **Molle, François.** 2005. Irrigation and water policies in the Mekong region: Current discourses and practices. Colombo, Sri Lanka: IWMI. v, 38p. (IWMI research report 95)

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10 **Smakhtin, Vladimir; Shilpakar, R. L.** 2005. Planning for environmental water allocations: An example of hydrology-based assessment in the East Rapti River, Nepal. Colombo, Sri Lanka: IWMI. v, 20p. (IWMI research report 89)

COMPREHENSIVE ASSESSMENT RESEARCH REPORTS

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