

Annual Research Meeting and Knowledge Fair 2005

IWMI's Annual Research Meeting and Knowledge Fair 2005 was held on the 11th and 12th of November. The two-day program focused on both research and non-research issues, with a range of features incorporating knowledge sharing approaches including several Communities of Practice (CoP) and Sharing Spaces.

The rationale behind the CoPs is to provide a semi-formal framework to attract and hold together individuals within the institute who have a common topic of interest. The CoP meetings succeeded in defining specific themes, objectives and action pathways. The first day of the ARM/KF, thus, saw the establishment of several networks of people, which are intended to keep the lines of communication open in order to continue sharing information, insights and experiences, pinpointing good practices that will help each individual in his/her own work.

The highly unconventional, but surprisingly effective, Open Space sessions were participant-led exercises, which generated vigorous discussions. Presented with a particular issue formulated as a question, participants engaged in unrestricted

discussions. Although facilitators were present, their role was limited to providing a brief outline of the topic. Participants set their own agenda, identified and discussed critical issues, and sometimes stumbled upon innovative solutions.

From the Communities of Practice on Day 1...

The Health CoP called by Dr. Priyanie Amerasinghe, drew a small, but highly focused and vocal group. The logic behind this particular CoP was that many research projects across the themes often included a health component that deserved closer attention. The participants confessed to some difficulty in knowing whom to involve in health dimensions of particular projects, admitting the lack of specific details about the professional expertise contained within the institution.

Apart from the challenges in identifying personnel, participants also remarked on the need to bring in this expertise at the very beginning of a project, rather than in the closing stages. It was also agreed that it was necessary to identify the vision and agenda of a CoP on Health, to maintain a pipeline of proposals to



Action from the Sharing Space on the Global Research Agenda

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IWMI joins the Ramsar Partners

On November 12th IWMI joined the Ramsar Convention as its newest International Organization Partner (IOP). Draft Resolution 17 introduced by Secretary General Peter Bridgewater at COP9, or the 9th meeting of the Conference of the Parties to the Convention on Wetlands, at Kampala, Uganda, saw IWMI join the exclusive list of IOPs, which also includes BirdLife International, IUCN—The World Conservation Union, Wetlands International, and the World Wide Fund for Nature (WWF). IWMI is the first organization to join this exclusive list, since the four traditional members were formally accepted as IOPs in COP7 in 1999.

The Convention on Wetlands, signed in Ramsar, Iran, in 1971, is an intergovernmental treaty, which provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources. There are presently 147 Contracting Parties to the Convention, with 1524 wetland sites, totaling 129.2 million hectares, designated for inclusion in the Ramsar List of Wetlands of International Importance.

The Convention's mission is "the conservation and wise use of all wetlands through local, regional and national actions and international co-operation, as a contribution towards achieving sustainable development throughout the world".

The IOPs were instrumental in the drafting of the Convention text in the 1960s and formation of the first secretariat in 1988. They serve as permanent observers on the Standing Committee and full members of the Scientific and Technical Review Panel (STRP), enriching the

implementation of the Convention both through their distinct expertise and through their far-flung offices, centers, and projects on the ground throughout the world.

IWMI representatives have been working closely with the Ramsar STRP for some time and have

served as the Co-Lead of STRP Working Group 3 on Water Resources Management, assisting in the preparation of the water-related issues which were taken up at COP9, as well as participating in the MedWet Committee and the Ramsar/Wetlands International "Tsunami Working Group." Furthermore, the institute has had a role to play in formulating the Millennium Ecosystem Assessment's synthesis

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Perspective

Water taxes and titles in rural Sub-Saharan Africa: killing two birds with one stone?



By Barbara van Koppen

Does it make sense to tie the process of charging water levies for water resources management to the process of centralized state authorization for water use through state-issued water titles? To tie taxation to the issuing of formal certificates—whether they are called licences, permits, water rights or something else—which indicates a water user's name, purpose and site of water use, and some approximate annual volume of water used?

The mushrooming new water laws in Sub-Saharan Africa typically assume that these two birds can be killed with the same stone. But this assumption is a recipe for the failure of both. Charging water levies among the few large-scale water users, who use the bulk of water resources, may work *on its own*—wholly separate from the totally different process of centralized water authorization through titling. In rural Sub-Saharan Africa, water titling is a can of worms one neither needs nor wants to open. The practical and easy implication here is that the current thresholds, below which there is no obligation to register, pay fees and apply for a licence, should be raised significantly and only target the few large-scale users.

Charging levies on water use has captured the imagination of many Sub-Saharan African water departments. As currently stipulated in the new water laws, this brand new water levy to finance water resources management is additional to the service fees already charged to users of public infrastructure, who get the particular service. However, private investors in wells and pumps or irrigators, who abstract water through self-constructed canals and hardly interact with water departments—typically, the majority of Sub-Saharan Africa's informal rural economies—are also obliged to register and pay water levies.

Charging water levies is a form of taxation. Calling it 'fees' or 'levies' instead of 'taxes,' is a strategy to prevent Revenue Departments from claiming the funds collected for the general coffers. Also, retaining a high proportion of the revenue at local level for tasks carried out by local government or future basin management decision-making bodies is likely to improve accountability and service delivery, especially if users have a say in the ways it is spent.

Moreover, the rates of water levies are volume-based. This conveys the message that disproportionately high use of a scarce common re-



Honoring traditional authorities; a woman from Lesotho with the (still ruling) King of Lesotho on her t-shirt (left), a woman from Ga-Masha, with her 'kgoshi' (chief) featured on hers (right), standing with MaTshepo Khumbane who asks the crucial question, 'Did you pay your water bill?'

source amounts to abuse of a privilege, the benefits of which ought to be shared. If high enough, water taxation may even persuade large users to reduce water use.

Early experience shows that charging levies for water resources management works, but only among the few large-scale urban and rural water users, who use the bulk of the water resources. For example, in the Rufiji Basin in Tanzania, transaction costs among this minority appeared low: after invoicing, they were remarkably willing to write an extra cheque or bank transfer of about USD100. For collecting cash, one visit was usually sufficient. The annual revenue collected from water fees was

USD50,000. This is about one-fifth of the total expenses of the Rufiji Basin Water Office (Sokile 2005).

In contrast, charging levies from the large majority of rural small-scale water users drains state resources. The proportion of water used and to be charged is relatively low. For example, in the rural areas of the Olifants basin in South Africa, 0.5 percent of the population uses 95 percent of the water resources. The transaction costs of charging the large number of small-scale, remote, and often illiterate users, without telephones, bank accounts or even post offices, are absurdly disproportionate to the limited amounts to collect.

Further, estimating volumes for volume-based taxation is purely subjective in the absence of infrastructure, control structures, and measuring devices—a situation that is typical for rural Sub-Saharan Africa. On the other hand, a flat rate for the smallest uses would penalize small-scale users for using scarcely any water.

So for water taxation to generate net revenue, accountants and revenue experts should calculate the threshold below which the transaction costs of collecting water fees outweigh the amount collected. Defi-



A village pond in Ethiopia where access to water is crucial to food and livelihood security

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IWMI joins the Ramsar Partners....

report for the Ramsar Convention. IWMI is currently developing a report specifically for Ramsar as part of its lead role in the Comprehensive Assessment of Water and Agriculture (CA), based on a series of key questions developed by the STRP's agriculture cross-cutting group.

From IWMI's portfolio of wetlands-related work

1. Sustainable management of inland wetlands in Southern Africa: a livelihoods and ecosystems approach: To generate knowledge to assist in the sustainable management of wetlands in southern African countries, by (i) helping countries to put in place or to enhance mechanisms that minimize the degradation of wetlands in order to optimize their ecosystem and livelihood benefits (ii) generating generic guidelines, tools and methodologies for sustainable land and water management in wetlands that will also be useful for other parts of Africa.
2. Wetlands-based livelihoods in the Limpopo basin: To contribute to enhancing food security and improving the livelihoods of wetland-dependent communities by increasing productivity of water and optimizing and maintaining wetland ecosystem services, using a detailed investigation of wetlands

The other IOPs at a glance....

Birdlife International

BirdLife International is a global partnership of conservation organisations that strives to conserve birds, their habitats and global biodiversity, working with people towards sustainability in the use of natural resources.

BirdLife Partners operate in over one hundred countries and territories worldwide.

BirdLife's aims are to:

- prevent the extinction of any bird species
- maintain and where possible improve the conservation status of all bird species
- conserve and where appropriate improve and enlarge sites and habitats important for birds
- help, through birds, to conserve biodiversity and to improve the quality of people's lives
- integrate bird conservation into sustaining people's livelihoods

The World Conservation Union

The World Conservation Union is the world's largest and most important conservation network. The Union brings together 82 States, 111 government agencies, more than 800 non-governmental organizations (NGOs), and some 10,000 scientists and experts from 181 countries in a unique worldwide partnership.

The Union's mission is to influence, encourage and assist societies throughout the world to conserve the integrity and diversity of nature and to ensure that any use of natural resources is equitable and ecologically sustainable.

World Wide Fund for Nature

To stop the degradation of the planet's natural environment and to build a future in which humans live in harmony with nature, by:

- conserving the world's biological diversity
- ensuring that the use of renewable natural resources is sustainable
- promoting the reduction of pollution and wasteful consumption

in two subcatchments of the Limpopo River Basin. The project addresses issues of use of wetlands for crop water productivity in wetlands, agriculture in upper catchments, aquatic ecosystems, and integrated basin water management systems. It will generate knowledge on trade-offs among several wetland uses.

3. Effects of Irrigation systems on wetland ecosystems in developing countries: Review of impacts of irrigation and other forms of agriculture on inland and coastal environments in developing countries
4. Developing a digital wetlands database and maps for wetland management in Sri Lanka: A wetland digital database will be developed through inventoring, characterizing and mapping of Sri Lankan National Wetlands. Digital maps of the inventoried wetlands will be used to assist site management.

Wetlands International

Wetlands International works globally, regionally and nationally to achieve the conservation and wise use of wetlands, as a contribution to sustainable development.

Mission: To sustain and restore wetlands, their resources and biodiversity for future generations.

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take advantage of funding opportunities as and when they arise, and identify the gaps on the current portfolio of health-related projects and proposals.

A concern which was also echoed by the CoP on Benchmark Basins was the exact logistics involved in establishing a CoP. As Dr. Sarath Abayawardana remarked, a changing membership is likely to revolve around a hardcore group of enthusiasts. Commenting further, he added that the underlying rationale of a CoP on Benchmark Basins was

to make the concept work better as an IWMI strategy.

The CoP on Institutions and Policies discussed if and how this particular Community of Practice could be institutionalized. The group primarily comprised social scientists, including economists, sociologists, geographers, and researchers from other interdisciplinary social science fields. The discussion was facilitated by Mark Giordano, Head of the I&P Group

There was a general consensus that the CoP is an excellent oppor-

tunity for people to express opinions in an amicable and collegial atmosphere, but it works best when it is less formalized. The group also discussed how to operationalize the CoP: through website discussion forums; monthly meetings; and a contact person in each theme or office who is given a specific period to work on this, and one focal point person to oversee it all.

They also offered a number of ideas for transforming IWMI into a more interdisciplinary research



From the morning session on Day 2, devoted to a discussion of IWMI's strategy and research agenda

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Water Scarcity: Fact or Fiction?

What is it about water scarcity that has the experts unable to agree whether or not the world is running short of water? Who will be most affected by water scarcity? How will the world meet its future needs for water, especially where agriculture is concerned? *Frank Rijsberman* discusses the nature and implications of the global water crisis.

That the world is facing a water crisis is difficult to dispute in the light of the 1.2 billion people without safe and affordable water for domestic use, and most of the 900 million rural poor in developing countries lacking access to water for their livelihoods.

Without safe drinking water and sanitation, standards of personal hygiene deteriorate, exacting a massive toll on public health, particularly through diarrheal diseases, which are estimated to cost the lives of 2.18 million people every year, three-quarters of whom are children less than 5 years old. Denied water for productive purposes, the poorest of the poor are often trapped in a cruel cycle of malnutrition, poverty and ill health. However, while so many human beings experience the degradation and misery caused by a basic lack of water, what is already consumed for domestic, food and industrial purposes has had a destructive impact on ecosystems around the world, even in regions not considered “water scarce”.

Recognizing water scarcity

Consequently, a clearer perception of how and why the situation of scarcity has come about is crucial to convincing users and policymakers of both the urgency and the most effective ways of addressing the water crisis. Nevertheless, determining whether water is truly scarce in the physical sense—a supply problem—or available but should be better used—a demand problem—is a controversial and complex issue, since (surprisingly enough to non-specialists) there is no academic consensus on what precisely constitutes a situation of water scarcity. Whether an area qualifies as “water scarce” depends on a number of considerations. For instance, in a discussion about how much water is available to satisfy people’s needs, what is understood as ‘need’? And, are the needs of the environment taken into account at all? What fraction of the resource is, or could be, made available to satisfy both categories of requirement?

Furthermore, water occurs in a dynamic cycle of rain, runoff and evaporation. That it can be a life-threatening (in floods), as well as a lifesaving resource (in droughts), is obvious. When both conditions occur in *one location and within a single year*, however—as in the large parts of monsoon Asia, which suffer from severe drought—statistics about annual average water availability become meaningless in describing water scarcity. The existence of water infrastructure, connecting resource to user, is a highly significant issue, which must also be factored into an analysis of water scarcity. Spatial scales impact measures of water scarcity, as well. Large countries may experience situations similar to China where water scarcity in the Yellow River basin occurs concurrently with flooding in the Yangtze River basin. Remarkably, many smaller countries can experience the same phenomenon too. The quality of the water introduces more complexity to any attempt to identify water scarcity. As fresh water flows downstream, it may become polluted and unusable. Do we measure it as part of the resources available to satisfy human needs (following treatment, of course)? Or leave it out and conclude that there is a situation of scarcity?

Measuring scarcity—simple or complex indicators?

Positing water scarcity as a relationship between water availability and population, i.e., an annual per capita figure, usually on a national scale, the *Falkenmark Water Stress Indicator* is one of the most lucid conceptualizations of scarcity and, as a result, tends to dominate discussion on the subject, particularly in the public sphere. The logic underpinning this choice is straightforward: if we know how much water is desired to satisfy a person’s needs, then a measure of the volume of water available per person can function as a measure of scarcity. Estimating the volume of water required for household, farming, in-



In many parts of Asia and Africa, while there is sufficient water for domestic needs, growing

dustrial, energy and environmental purposes, the *Falkenmark Water Stress Indicator* identifies 1,700m³ of renewable water resources per capita per year as the threshold below which a country is said to experience *water stress*. When supply falls below 1,000m³, a country enters a situation of *water scarcity*, and below 500m³, *absolute scarcity*.

Its easily accessible basic data and intelligibility make this simple indicator almost unbeatable. Nevertheless, the *Falkenmark Water Stress Indicator* ignores the existence of infrastructure; its annual national averages conceal scarcity at *smaller* scales; and its simple thresholds do not reflect important variations in demand among countries caused

by, for instance, lifestyle, climate etc.

On the other hand, IWMI’s framework of water scarcity is more sophisticated by several orders of magnitude. It considers the share of renewable water resources available for human needs, existing water infrastructure, consumptive use (or the water that is lost through evapotranspiration) and return flows, *plus* potential development of infrastructure and irrigation efficiency through improved water management policies for the period 2000-2025. These multiple levels of reasoning help to pinpoint “*physically water scarce*” countries that will not be able to meet the estimated water demands in 2025, and “*economically water scarce*” countries that *have* sufficient resources of water, but

would have to make very significant investment in infrastructure to get it across to people.

The conflicting claims between water for food and water for the environment, therefore, have given rise to some of the sharpest controversy in the debate on water scar-

city and chemical use that fuelled the Green Revolution has contributed to environmental degradation, threatening the resource base upon which we depend for food and livelihoods. Citing similar international commitments to maintain and improve environmental quality and biodiversity, many in the environmental community see it as imperative that water withdrawn for agriculture is *reduced*, not increased. An environmentally sustainable use of water, therefore, demands an 8 percent decrease of the volume diverted to irrigation.

The difference between the 17 percent increase and 8 percent decrease is in the order of 625 km³ of water ³/₄ close to the 800 km³ of water that is currently used globally for urban and industrial needs, and more than the projected 500km³ required for domestic water supply worldwide in 2025.

Balancing water for food and the environment

Conventionally, rainfed agriculture and irrigated agriculture have been treated as two separate systems, but with the rise of small pump-based groundwater irrigation, micro-irrigation and a host of rain-water harvesting techniques, this no longer makes much sense. Instead of two separate systems, there is a continuum, with pure rainfed irrigation at one end and large-scale, surface water irrigation systems at the other. For this reason, at IWMI we now prefer to speak of water management for agriculture, encompassing all options. This implies, however, that an analysis of water scarcity for agriculture can no longer concentrate on renewable water resources only, but has to look carefully at the use of and interaction among the various sources as well. It also brings into sharper focus the role of the soil moisture reservoir, in the soil-water interaction.

The traditional engineering response to water scarcity has been to construct infrastructure, particularly dams, to increase human control over water resources. Over the last several decades, the growing opposition against water infrastructure investments, particularly from the environmental lobby, has led to a shift from supply to demand

management. An expression of this shift in thinking is the “integrated water resources management” movement that has given birth to organizations, like the World Water Council and the Global Water Partnership. The most tangible proposals that have come out of this direction are to involve users more in water management, often through various water user associations; to price water and/or make it a tradable commodity; and to establish river basin authorities integrating the usually fragmented government branches for water into a single authority responsible for a hydrographically defined area, the river basin.

All three of these approaches have been successfully employed in some areas and have been unsuccessful in others—or as most obviously in the case of pricing water—have become highly controversial. None of these are usually presented as responses to increasing water scarcity, but all have a role to play in the institutional adaptation to increasing scarcity.

Innovative answers—and hope for the future

There is also growing interest in what has been called the “soft path for water” that, in essence, focuses on improving the overall productivity of water, rather than endlessly seeking new supplies, as the best response to water scarcity. Specifically for water and agriculture, IWMI has been calling for a similar focus on increased water productivity. This has culminated in a number of research initiatives that focus on increasing water productivity for food production and rural livelihoods, i.e., the CGIAR system-wide initiative called Comprehensive Assessment of Water Management in Agriculture and the CGIAR Challenge Program on Water and Food. Together, they represent a major effort by the international community to address water scarcity in agriculture.

Perhaps the most important question in the current debate on water scarcity, therefore, is not whether water scarcity is fact or fiction, but whether this debate will help increase water productivity.



scarcity threatens food production.

Photo credit: Sanjini de Silva

Ground realities

The lack of a universal definition of water scarcity does not, nonetheless, stand in the way of general agreement that there is already absolute, or physical, water scarcity affecting food production and productive water use, (although not domestic water supply and sanitation) in the arid parts of the world, particularly in North Africa and Asia Minor). Despite various opinions on the degree and severity of water scarcity in large parts of Asia and Africa by 2025, there is broad consensus that increasing scarcity will turn water into one of or *the* key limiting factor(s) in food production and livelihoods generation, with particularly severe scarcity in the bread baskets of North-West India and Northern China.

city. Despite the successes of the Green Revolution, the task of providing food security to all is incomplete. Malnutrition continues to afflict many, particularly in those regions dubbed “economically water scarce”. The agricultural community, consequently, sees the continued growth of irrigation as imperative to the international community’s goals of reducing hunger and poverty. Under a base scenario that included optimistic assumptions on productivity and efficiency, IWMI has estimated that in 2025 (along with gains in productivity and more efficient water use) the increase in diversions to agriculture will have to be 17 percent. However, the intensification of water

Water taxes and titles in rural Sub-Saharan Africa....

nately, the thresholds currently stipulated in Sub-Saharan Africa's water laws—'domestic uses, not for commercial purposes', or 'irrigation fields below 0.25 ha' or 'abstraction through manually lifted devices'—are far too low. Thresholds have to be raised significantly.

It also makes economic and political sense to avoid taxing smallholders, since upward financing flows discourage them even more from making investments in generating agricultural output, the long-term basis for both taxation and poverty alleviation. Evidently, the exemption of the millions of small-scale water users, who are logistically too cumbersome to tax, should not jeopardize government's accountability and service delivery to them.

In sum, the dollar signs that appear in the eyes of the water law drafters may well materialize, if the thresholds for exemption are raised, and if taxation remains separate from centralized water authorization.

There is no need whatsoever to formally authorize water use through titling in order to charge levies. South Africa, for example, embarked on a voluntary registration procedure and started charging water resource management fees (be-

sides charging those who use public infrastructure for such direct services). The complex question whether the water use that is taxed is lawful or not, is temporarily suspended as the next step.

Similarly, also without authorizing water use, states have sufficient means to enforce taxation through local warnings and courts. They do not have to resort to closing off water streams, just for the sake of enforcing fee payment. Such enforcement is far too resource-intensive, if possible at all, given the limited control of water officials over farmers' infrastructure.

Yet, the new water laws invariably go for centralized state water titling, claiming that this enhances water security. The opposite is true: it is bound to create new water insecurities for the rural majority, at least according to the experiences of post-independence land tenure policy and implementation in rural Sub-Saharan Africa. As widely acknowledged now, decades of costly efforts to introduce centralized land titling to replace existing customary land legislation were a complete failure (UNDP 2005). The colonial minority created formal 'rights' to appropriate

and protect the land and water rights of the formalized urban, mining, industrializing, and large-scale farming sectors. It ruled the African population indirectly through co-opted tribal authorities as the custodians of customary land and water rights systems. Post-independence nation-wide formal land registers became 'by-



A village dam in Adi Daero Watershed, Ethiopia

words for corruption and inefficiency' (McAuslan 2005) and 'cadastre disasters.' Today, mainstream land tenure policy and research recognize that the colonial legacy of legal dualism in resource rights is still the reality in rural Sub-Saharan Africa and has to be taken as the starting point. The challenge is to gradually design fusions of both systems, building on the strengths of customary arrangements, and replacing tribal chiefs by democratically elected land committees or local government, implementing women's constitutional equality, catering for responsible sale of land without threatening poor women's and men's land security, etc. Centralized land titling is hardly seen as a priority anymore. Efforts for registration only continue on a pilot basis for local forms of registration.

Titling water resources is much more complicated than titling land. Water is fugitive and highly variable, so even more difficult to measure and register.

Moreover, annual average volumes are hardly any guide for sharing low flows during the dry season. Water security is a matter of relative priorities, sharing, and assurances of supply. Formal water titles can even erode customary arrangements. In Tanzania, for example, upstream water users who had registered, paid, and obtained their water rights, started legitimizing their excessive water use, depriving downstream users with the argument: 'We paid for the water, so we can use as much as we need!'

The newly proposed water laws, which expand formal water authorization from a colonial minority to the whole nation, thus not only risk repeating but also aggravating the mistakes of the early regime of land legislation. Millions of small-scale water users risk being criminalized as unlawful water users for being unreachable by the state's administrations.

There are situations in which centralized water titling may be useful. It can inform water planners about water use—although in a costly way. Also, titling of the large-scale users who over-use water is indispensable administrative support to governments who seek to curtail over-use, for example in order to redistribute water resources from the haves to the have-nots and redress inequities from the past, as in closing basins in South Africa. These two rationales of formal centralized water titling are, again, best served by targeting large-scale water users only, perhaps by using the water taxation registers.

In other words, water rights on paper have nothing to do with water security. The single most effective way to sustainably improve water security for all is infrastructure development, certainly in most Sub-Saharan African countries that have abundant water resources, but lack the means to develop infrastructure. Instead of diverting efforts even further, water security requires, above all, revived donor funding and engineers for infrastructure development, not lawyers.

(The writer wishes to acknowledge the contributions made by Tushaar Shah to this article).



Sekororo, South Africa; two villagers gathering water from a rivulet for their domestic needs

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institute, including: training or awareness raising during the induction/orientation phase when staff members join IWMI on what interdisciplinarity means; demystification of the different disciplines by establishing a glossary and requesting each discipline to write a self description; building awareness throughout the institution and raising interest through facilitated discussions using ICT tools; introducing an interdisciplinary approach right at the concept note/proposal stage; and using ICT tools (such as share point and blogs) to facilitate archives of discussions and information and to provide reference any time.

From the Sharing Space sessions...

Participants at the Sharing Space on the Global Research Agenda, facilitated by Julie van der Blik (Director, Global Research Division) and Hugh Turrall (Theme Leader, Basin Water Management) considered the global research topics that IWMI should focus on in the future. After intense discussion, Julie and Hugh presented the three research areas that have been identified already, namely: assessment of global impacts; global change impacts on water management; and future scenarios. A longer discussion will be held in the near future to allow staff to elaborate on their views and contribute to building up these proposed areas.

The session on How to Make IWMI More Environmentally Friendly looked at how to reduce

IWMI's environmental footprint by addressing how we consume water, electricity and paper. IWMI HQ currently uses 1 million litres of water a month, 1 million Sri Lankan rupees of electricity a month, and 125 pages of paper per person per day. Participants proposed a long list of measures to

for a whole range of analytical processes and alternative data sources. It was noted that institutional and policy processes are also part of mapping, and that mapping is a technique used in all IWMI's themes as well. Another question was raised on how to ensure capacity building and partnerships and balance this

Another issue raised was how well IWMI works with its sister-CG centres on areas where there is overlap (for example some of ICARDA's research). Meredith said that this is being done, and stressed that natural resource management is one of the CGIAR's major priorities.

There was another question about where water pollution by agricultural practices is considered within IWMI's four themes; the response is that it is an integral part of Theme 4, Water Management and Environment.

The management team—i.e. Frank Rijsberman (Director General), Meredith Giordano (Research Director), Akiça Bahri (Director for Africa), Peter McCornick (Director for Asia) and Julie van der Blik (Director, Global Research Division)—answered questions from staff on IWMI's research agenda and approach. Eighteen questions were selected out of many more for brief discussion, some of which are outlined here. One question addressed how criticism and critique to more senior researchers could be voiced by less senior staff. Frank stressed that IWMI encourages an atmosphere where questions of all sorts can be asked. Another question asked how IWMI evaluates impact. Meredith noted that a new researcher has been employed to help IWMI develop this further. Questions were raised regarding how IWMI incorporates demands from outside partners, such as NEPAD. Akiça Bahri noted that interaction with NEPAD is active. Others remarked that the basin approach is inconsistent with political boundaries, but this is not considered a constraint to successful research and projects. Another question asked why IWMI isn't carrying out more research in Latin America, on which Frank remarked that IWMI has prioritised Africa and poor parts of Asia, as the water-poverty linkage is not as significant in Latin America.

This session thus proved extremely constructive, helping to better inform IWMI's staff about the institute's work.



The Accounts team at the Knowledge Fair

reduce the amounts of resources used. Among other things, participants suggested adjusting the A/C system or installing a new system that allows the A/C in unused spaces to be turned off; ensuring that staff always switch off their lights when leaving their offices or meeting rooms for longer periods; exploring what sort of products are used to clean the floors, take care of the garden and other maintenance activities; cutting down on unnecessary printing; and creating awareness about our consumption. A small committee will be organized to explore how to further these suggestions.

First session, Day 2— Understanding IWMI'S Strategy, Research Agenda and Key Non-Research Issues...

Three of the four theme leaders—Hugh Turrall, Debbie Bossio, and Pay Dreschel—were asked questions by the rest of the staff. One participant took advantage of the opportunity to clarify her doubts concerning the term 'mapping.' Hugh responded that mapping is short-hand

with academic research. Debbie responded that IWMI's work should be demand-driven, not done out of academic curiosity.

Responding to a question on how health aspects could be integrated into themes 1, 2 and 4 (Basin Water Management; Land, Water and Livelihoods; and Water Management and Environment), the theme leaders responded that it is integral to Debbie's theme, but more difficult to incorporate into Theme 1 due to scale issues.

There was some discussion on the meaning and limitation of the concepts 'water productivity' and 'water-poverty,' with theme leaders and audience members noting the various understandings of these concepts, and questioning how narrowly or broadly IWMI is interpreting these.

There was also a question on the consequences of having fewer but larger projects, and concern was expressed about how individual researchers' ideas can be incorporated into these larger projects without getting lost. Meredith Giordano (Research Director) suggested that the new approach of having larger projects should actually facilitate transforming various ideas into project questions.



A Sharing Space session

Reflections from Remo Gautschi, the outgoing IWMI Board Chair

I was a little sad as I left Colombo recently. For a good six years, the IWMI Board meetings took me to Colombo in November and to IWMI's offices in Turkey, South Africa, Thailand, India, Ghana and Iran in May. At this last Board meeting, I had to say farewell, however, as my second term has come to an end. A good moment for some reflection on my time at IWMI, first as a Board member and then as Board Chair for the last three years.

In some ways, my link with IWMI was an accident. As a "development donor" and a staff member of Swiss Development Cooperation, the IWMI Board is not my natural habitat. And I did not have the prerequisite of 25 years experience in the CGIAR. But as an engineer by training, strategist and manager of fairly large and complex development programs and a farmer with a vineyard in a dry part of Italy, I did

have a lot of affinity with IWMI's work. In the end, it all came down to "people", however, as do all important things in life: two Board Chairs (former and current) that I knew and respected, liked even, convinced me that IWMI would be a cause worth investing in, as well as fun and rewarding.

And it has been much fun and rewarding all these years. To see IWMI develop from a small, somewhat marginal, center in a corner of the CG system, worried about its survival, to a medium-sized, self-confident research organization with a large ambition to become a world-class Knowledge Center on Water, Food and Environment—that was fun and very rewarding.

Any casual observer of IWMI as an organization can see how it has changed enormously. For me the most important thing is not size. Of course, it is not unimportant to have

grown from US\$9 million in 2000 to US\$33 million, including the CPWF, in 2005. But the essence of the changes I value most are more subtle. IWMI's core business relates to the Millennium Development Goals (MDGs) on reducing poverty and hunger and protecting the environment—and we do great work in all these areas—but we are now also making an important contribution to the MDG that talks about partnership. IWMI, in 2005, is genuinely interested in building capacity and research partnerships that aim to develop the capacity of its partners in the South to take its place. We can see that everywhere, from the staff we have, to the approach they take in sharing knowledge with others, to the design of the activities we propose. Implementing that change has required a massive shift in attitude and culture of which I am more than a little proud.

I am leaving now, and I am wishing you all the best, but I did tell Frank that when IWMI becomes a world-class Knowledge Center on Water, Food and Environment, I want an invitation. So see you all again, in 2008!

Remo Gautschi



Recent Publications

For on-line access to IWMI Research Reports and Working Papers, see www.iwmi.org/pubs

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