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- Asian Development Bank
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- Canada
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- China
- Denmark
- Ford Foundation
- France
- Germany
- India
- Iran
- Japan
- Netherlands
- Norway
- Peru
- South Africa
- Sweden
- Switzerland
- Taiwan
- Turkey
- United Kingdom
- USA
- World Bank

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

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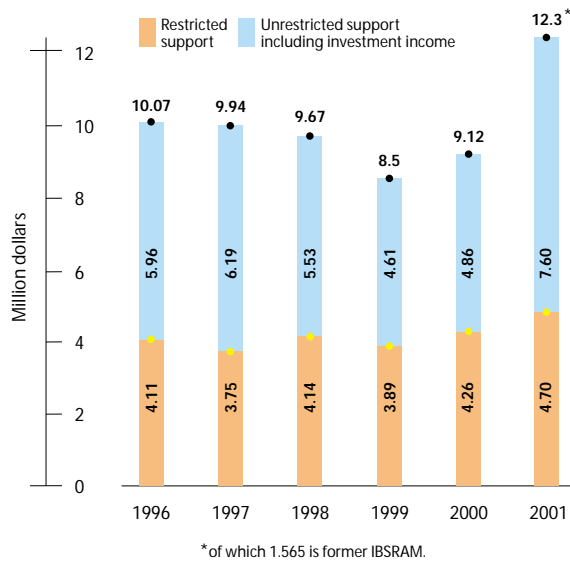
Financial Overview – 2000

In 2000, the net assets of the Institute recorded an increase of \$320,000 compared to the decrease of net assets of \$50,000 in 1999.

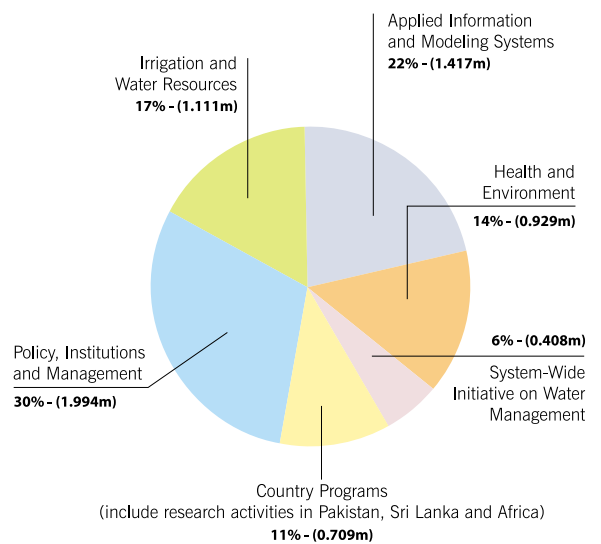
In 2000, the Agreed Agenda revenue amounted to \$9.1 million. Unrestricted income amounted to \$4.3 million.

In 2000, the Institute had 110 research staff, of whom 28 were internationally recruited. The Institute also had 6 associate staff (seconded by donor organizations) and postdoctoral fellows. IWMI's total staff numbered 258.

Income 1996 – 2000.



Research Expenditure by Program – 2000



Restricted Research Contracts over \$50,000 Awarded in 2000

Smallholder water management systems–Promoting innovative water harvesting and Irrigation systems to support sustainable livelihoods in South Asia (DFID, UK)– \$433,000 over 3 years

This research is identifying a pool of promising technologies and practices, suitable for small farmers in South Asia, and short-listing 10-12 innovations for detailed scrutiny. This includes assessing the impact of adopting the innovations on poor households and communities, and identifying the institutional and hydrogeological environment within which each innovation can succeed. The final outcome will be an 'innovation analysis', including guidelines and recommendations for governments and rural communities.

Agro-ecosystem management for human health in the Uda Walawe irrigation scheme, Sri Lanka (IDRC, CANADA)– \$99,300 over 3 years

The goal of this research is to increase the productivity of water in the Uda Walawe basin while reducing human health risks and protecting the environment. Specific objectives are to:

- develop a methodology for an integrated approach to agricultural water management in river basins, taking into account human health and environmental considerations;
- evaluate the impact of different water management regimes on: (i) vector breeding, (ii) availability of water for domestic purposes; and
- estimate the requirements for agrochemical inputs under different water management regimes and cropping patterns.

Global dialogue on water for food and environmental security (World Bank)– \$400,000 over 2 years

The objective of this work is to bring actors together in a decentralized program of activities under the auspices of consortia of key actors, not to develop an "IWMI program". The key activities during the proposed preparatory phase are to:

- initiate development of a broad coalition of interests related to water for food and environmental security for a dialogue on strategic directions;
- bring together the research institutes that can jointly provide a comprehensive assessment of costs, benefits and future directions in irrigated agriculture; and
- facilitate identification and formulation of a comprehensive set of innovative approaches to water management for sustainable food production and rural development at the local and regional level—carried out by a range of actors.

Institutional Development and Policy Reforms for Improving Water Management, Kazakhstan (ADB)– \$56,120 over 1 year

The activities under this grant include:

- reviewing the Government of Kazakhstan's plans, policies, and institutional arrangements for the irrigation subsector
- formulating specific recommendations relating to: amendments to key policies, regulations, plans for the irrigation subsector; division of responsibilities within the irrigation subsector at different levels; institutional mechanism for irrigation management transfer; proposed (or existing) internal structures of water user associations; measures to enhance the role of women; capacity-building initiatives and human resources development
- developing a phased implementation plan incorporating the above.

Systemwide Initiative on Water Management (SDC, Switzerland)– \$90,651 over 1 year

SWIM covers research on a range of policy, institutional, and technical issues. Research involves the combined efforts of IWMI and other CGIAR centers. The most recent SWIM project is "The Changing Face of Irrigation in Kenya", an in-depth study covering the different dimensions of irrigation in the country, the challenges faced by small farmers and the ways in which they are meeting those challenges. The result of this work will be key lessons and research areas for consideration in the ongoing restructuring of the irrigation sector in the eastern and southern Africa region.

Unrestricted, Agreed agenda-2000

	Donor	Grants 2000 US\$'000	Grants 1999 US\$'000	
Unrestricted	Australia	190	128	
	Belgium	61	118	
	Canada	203	204	
	China	10	10	
	Denmark	362	309	
	Germany	196	219	
	India	38	38	
	Japan	215	315	
	Mexico		(10)	
	Netherlands	480	198	
	Norway	116	127	
	Sweden	279	359	
	Switzerland	243	249	
	United States of America	690	552	
	World Bank	825	830	
	Subtotal (Unrestricted)	3,908	3,646	
Other Revenue	Investment income	287	211	
	Sundry income	65	58	
	Subtotal (Other Revenue)	352	269	
	Total (Unrestricted Resources)	4,260	3,915	
Agreed Agenda - Restricted	Asian Development Bank	508	265	
	African Development Bank	120	211	
	Australia	135	105	
	CARE/Nepal	1		
	Canada	59	8	
	Denmark	18	57	
	Ford Foundation	179	408	
	France	156	239	
	Germany	420	341	
	International Food Policy Research Institute (IFPRI)		3	
	International Development Research Centre (IDRC)		34	
	Iran	112	107	
	Japan	755	750	
	Netherlands	68	119	
	Norway		73	
	Pakistan	25		
	Peru	30		
	South Africa	137	6	
	Sri Lanka	14		
	Sweden	134	272	
	Switzerland	91		
	UNESCO	6		
	Taiwan	34	80	
	Turkey	267		
	United Kingdom	239	159	
	United States of America	97	62	
	Water and Power Development Authority (WAPDA)-Pakistan	112		
	World Bank – Pakistan	269	517	
	World Bank	1,103	566	
		Subtotal - Agreed Agenda	4,856	4,615
		Total Income	9,116	8,530

Statement of Financial Position December 31, 2000 and 1999

	2000 US\$'000	1999 US\$'000
Assets		
<i>Current Assets</i>		
Cash and cash equivalents	4,980	5,288
Accounts receivable:		
Donors	1,188	1,157
Employees	120	91
Others	113	117
Inventories	30	40
Prepaid expenses	155	152
<i>Total Current Assets</i>	6,586	6,845
Property and equipment, net	1,207	1,619
Other Assets	1,338	2,188
Total Assets	9,131	10,652
<i>Liabilities and Net Assets</i>		
<i>Current Liabilities</i>		
Accounts payable		
Donors	1,598	3,384
Employees	208	184
Others	347	478
Accruals	114	47
Total Current Liabilities	2,267	4,093
<i>Long-Term Liabilities</i>		
Accounts payable		
Employees	826	840
Total Long-Term Liabilities	826	840
Total Liabilities	3,093	4,933
<i>Net Assets</i>		
Unrestricted		
Appropriated	3,300	3,295
Unappropriated	2,738	2,424
	6,038	5,719
<i>Restricted</i>	-	-
Total Net Assets	6,038	5,719
Total Liabilities and Net Assets	9,131	10,652

The following list is limited to projects with an annual budget over US\$50,000. All budget totals are shown in US dollars.

Theme 1: Integrated Water Management for Agriculture

Comprehensive Assessment of Water Management in Agriculture

Assessing the past societal and environmental benefits and costs of water-management activities for food production, and evaluating possible future directions (contribution to Global Dialogue on Water, Food and Environment).

Budget 2001: \$1,055,720 (restricted and unrestricted)

Iran-IWMI Program of Joint Research Activities

Working with the Iranian Agricultural Engineering Research Institute and Esfahan Research Station to understand interaction of water management practices at different levels in the Zayandeh Rud basin, Esfahan Province.

Budget 2001: \$259,230 (restricted)

Global Dialogue on Water, Food and Environment

Strengthening a viable dialogue at national and local levels; creating a platform for local or basin-scale activities that enhance food and environmental security; encouraging the exchange of experience and the development and identification of best practices.

Budget 2001: \$242,000 (restricted)

Water Productivity in India and Pakistan

Exploring water management and other factors that lead to high water productivity through comparative analyses of irrigation systems in northwest India and Pakistan's Punjab.

Budget 2001: \$200,410 (restricted)

Conjunctive Water Management in South Asia

Developing and testing methods of controlling waterlogging and salinity through effective conjunctive management of surface water and groundwater supplies in Pakistan.

Budget 2001: \$153,580 (restricted)

IPTRID-IWMI Research and Knowledge-Networking Project

Developing strategies and options for smallholder water management systems in Asia and sub-Saharan Africa; benchmarking irrigation performance; promoting the use of water management/food security tools, such as the IWMI Policy Dialogue Model, PODIUM, in Asia and sub-Saharan Africa.

Budget 2001: \$150,000 (restricted)

More Rice with Less Water, China

Documenting and evaluating water-saving practices in China at Zhang He Irrigation System in Wuhan, China.

Budget 2001: \$93,880 (unrestricted)

African Development Bank (AFDB) Program Support

Improving equity and productivity in water-scarce basins in South Africa; evaluating low-cost precision irrigation techniques suitable for small farmers in East and Southern Africa; enhancing the productivity and sustainability of rice-based systems in West Africa; evaluating the impact of alternative irrigation regimes on water productivity and malaria in a rice irrigation scheme in Kenya.

Budget 2001: \$82,990 (restricted)

Hydrology for Environment, Life and Policy (HELP) in the Olifants Benchmark Basin, South Africa

Improving the links between hydrology and the needs of the society through the creation of a decision-support tool, which gives the user access to data collected in the basin, and through capacity building with Catchment Management Agency (contribution to the UNESCO initiative).

Budget 2001: \$76,950 (unrestricted)

Eco-Water Savings, Sri Lanka

Water accounting, testing of water-saving practices, modeling and monitoring activities to understand the impact of various irrigation activities on ecological reserves in the Uda Walawe benchmark basin.

Budget 2001: \$72,030 (restricted and unrestricted)

Monitoring of Water Savings and Competition, Aral Sea Basin

Evaluating the effectiveness of various incentives to conserve water for farmers, cooperatives (water user associations) and water supply organizations.

Budget 2001: \$86,380 (restricted and unrestricted)

Theme 2: Sustainable Smallholder Land and Water Management

Management of Soil Erosion Consortium

Combining biophysical research with socioeconomic research on catchment management by different stakeholders (Indonesia, Laos, Malaysia, Nepal, Philippines, Thailand, Vietnam).

Budget 2001: \$814,280 (restricted and unrestricted)

Management of Sloping Lands for Sustainable Agriculture in Asia

Developing methods of soil conservation on sloping lands through a network of seven countries (China, Indonesia, Laos, Malaysia, Philippines, Thailand, Vietnam).

Budget 2001: \$243,910 (restricted and unrestricted)

Integrated Nutrient Management

Investigating recycling of nutrients from organic waste in cities in the form of compost and wastewater to crops in urban and peri-urban areas.

Budget 2001: \$204,855 (restricted and unrestricted)

Poverty-Focused Smallholder Water Management

Identifying and testing promising smallholder water-management innovations for transfer to other poor areas.

Budget 2001: \$180,130 (restricted and unrestricted)

Peri-Urban Agriculture in Africa

Evaluating economic externalities of agriculture such as soil-nutrient depletion, water pollution, health impacts through pesticides, and displacement of soil by erosion and sedimentation.

Budget 2001: \$143,065 (restricted and unrestricted)

Sustainable Use of Shallow Groundwater in *Dambos* for Smallholder Agriculture, Southern Africa

Examining the long-term sustainability and productivity of the exploitation of low lying shallow groundwater aquifers in Zimbabwe and other Southern African countries.

Budget 2001: \$80,500 (unrestricted)

Appropriate Smallholder Technologies for South Africa

Identifying technologies, such as treadle pumps and bucket and drip kits, that are appropriate to the South African smallholder context.

Budget 2001: \$70,750 (unrestricted)

Sustainable Waste Management, Ghana

Increasing awareness among municipal and national authorities for an improved rural-urban nutrient cycle by identifying recycling options for organic waste stream products that are economically and socially acceptable, sustainable, and that benefit small farmers and the environment.

Budget 2001: \$65,370 (restricted and unrestricted)

Theme 3: Sustainable Groundwater Management

IWMI-Tata India Water Research Program

Collaborative research to develop policy recommendations for sustainable use of groundwater and other water resources in India.

Budget 2001: \$503,870 (restricted and unrestricted)

Rootzone Salinity Management, Pakistan

Evaluating strategies to control salinity levels in soils and groundwater so that the negative impacts on irrigated agricultural production are minimized.

Budget 2001: \$110,900 (restricted and unrestricted)

Groundwater Management, South Africa

Assessing the groundwater economy and ecology in the Olifants Basin.

Budget 2001: \$61,750 (unrestricted)

Secondary Salinization, Pakistan

Evaluating the extent of secondary salinization occurring in Pakistan, modeling the time frame for undesirable conditions to develop, and assessing the risk in different agro-ecological zones.

Budget 2001: \$60,700 (unrestricted)

Groundwater Recharge and Conjunctive Management of Surface Water and Groundwater Supplies, India

Identifying promising strategies for groundwater recharge; developing and testing methods of controlling waterlogging and salinity through effective conjunctive management of surface water and groundwater supplies; building a better understanding of groundwater management in different hydrogeological and social conditions.

Budget 2001: \$56,850 (unrestricted)

Theme 4: Water Resources Institutions and Policies

Effectiveness of Water Resources Management

Developing and supporting the implementation of policies and institutional strengthening programs that will lead to improved management of water used in agriculture.

Budget 2001: \$744,300 (restricted and unrestricted)

Studies in Pro-Poor Interventions in the Irrigation Sector in Asia

Identifying the pro-poor potential of interventions in the irrigation sector by evaluating the impact of past investments in irrigation development and management.

Budget 2001: \$484,250 (restricted and unrestricted)

Institutional Support Systems for Water-short Basins

Developing practical policy guidelines for designing and strengthening support systems for local irrigation management.

Budget 2001: \$231,335 (restricted and unrestricted)

Impact Assessment of Infrastructure Development on Poverty Alleviation

Assessing the impacts of infrastructural development on poverty alleviation in Sri Lanka and Pakistan, developing performance indicators to measure the impact of infrastructure projects.

Budget 2001: \$210,710 (restricted and unrestricted)

Local Water Management in South Africa

Identifying methods to increase agricultural productivity of small-scale irrigation systems and developing improved institutional arrangements for productive, socially equitable and sustainable irrigation systems in the Northern Province of South Africa.

Budget 2001: \$144,790 (restricted)

Institutional Arrangements for Improving Water Management, Central Asia

Evaluating water user associations in the three countries sharing the Ferghana Valley (Kyrgyzstan, Tajikistan and Uzbekistan), analyzing legal and institutional constraints to effective water management, and monitoring variables affecting water productivity and agricultural performance.

Budget 2001: \$82,550 (unrestricted)

Theme 5: Water for Health and the Environment

Improving the Performance of Wastewater Irrigation in Peri-Urban Areas, Pakistan

Evaluating the health and economic impacts of using wastewater from the town of Faisalabad for irrigation; identifying opportunities for increasing the productivity of wastewater irrigation.

Budget 2001: \$152,580 (restricted and unrestricted)

Wastewater Reuse in Agriculture, Vietnam

Examining the water management, environmental, and human health aspects of wastewater irrigation and identifying ways to maximize benefits while reducing risks.

Budget 2001: \$142,000 (restricted and unrestricted)

System-Wide Initiative on Malaria and Agriculture (SIMA)

Uncovering the links between agricultural practices and malaria and identifying effective agriculture-based interventions.

Budget 2001: \$97,750 (unrestricted)

Large-Scale Irrigation Systems and Malaria, Pakistan

Identifying water management options for controlling malaria in canal irrigation systems in Pakistan.

Budget 2001: \$97,400 (restricted)

Malaria Risk Mapping, Sri Lanka

Developing a malaria risk map for Sri Lanka; exploring the utility of IWMI developed information technologies and products in malaria risk mapping and epidemic forecasting.

Budget 2001: \$93,847 (restricted and unrestricted)

Agro-Ecosystem Management for Human Health, Sri Lanka

Determining the impact of different water management regimes, rehabilitation of canals, and cropping patterns on: vector breeding, availability of water for domestic purposes, and requirements for agrochemical inputs in the Uda Walawe Irrigation scheme.

Budget 2001: \$92,100 (restricted and unrestricted)

Pre-Development Biodiversity Assessment of the Uda Walawe Irrigation Extension Project, Sri Lanka

Establishing a biodiversity inventory in the proposed command area of the Uda Walawe Extension Project to evaluate changes that occur during the process of development and in the settled irrigation phase of the project.

Budget 2001: \$87,500 (restricted and unrestricted)

IWMI-Taiwan Collaborative Research on the Impact of Irrigation on Water Resources Systems

Evaluating irrigation performance and environmental functions of paddy rice cultivation in Sri Lanka, Taiwan and Japan

Budget 2001: \$71,500 (restricted and unrestricted)

Irrigation and Domestic Water Supply and Sanitation, Pakistan

Identifying and testing community-based methods to improve water supply and sanitation and reduce diarrheal disease.

Budget 2001: \$68,880 (restricted and unrestricted)

Irrigation and Wetlands, Sri Lanka

Analyzing data on water flows, water quality, flora, fauna and resources use in the Kirindi Oya Irrigation Scheme and wetlands of the Bundala National Park.

Budget 2001: \$ 63,150 (unrestricted)

Water Management for Malaria Control in Tank Cascade Systems

Understanding the links between vector breeding and tank cascade systems and identifying options for control.

Budget 2001: \$58,000 (restricted and unrestricted)

Headquarters

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Nepal

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Researchers: South Africa: Dr. Abdul Kamara**, Dr. Barbara Van Koppen, Dr. Marna de Lange, Herve Levite, Dr. Mutsa Masiyandima

Senegal: Pierrick Fravel

Côte d'Ivoire: Dr. Wilfried Hundertmark

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Post Doctoral Fellow: Dr. Olufunke Cofie

Research Assistants: Lucy Gyiele, Phillip Amoah

Regional Office for Southeast Asia (As of 1 April, 2001)

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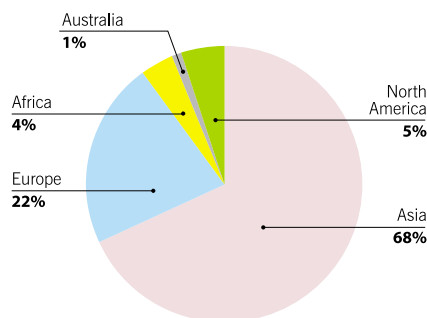
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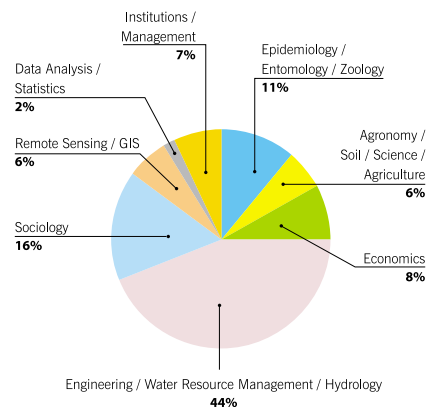
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**IWMI Research Staff
(by Nationality – 2000)**



**IWMI Research Staff
(by Discipline – 2000)**



IWMI Research Report Series:

This series is IWMI's flagship publication. The priority for this series is to present generic thinking and perspectives culled from IWMI research. These reports are validated through a process similar to that of international scientific and research journals. Reports are peer-reviewed by a panel of international experts, covering all aspects of water and land management.

An editorial board is being finalized for 2001. This panel includes senior scientists who have achieved renown in their field. These men and women will help guide the direction of IWMI's work and ensure that IWMI research adheres to the highest scientific standards.

1. **Abernethy, C. L.; Sally, H.; Lonsway, K.; Maman, C. 2000.** Farmer-based financing of operations in the Niger Valley irrigation schemes. Colombo, Sri Lanka: IWMI. v, 36p. (IWMI research report 37)
2. **Vermillion, D. L.; Samad, M.; Pusposutardjo, S.; Arif, S. S.; Rochdyanto, S. 2000.** An assessment of the Small-Scale Irrigation Management Turnover Program in Indonesia. Colombo, Sri Lanka: IWMI. v, 36p. (IWMI research report 38)
3. **Keller, A.; Sakthivadivel, R.; Seckler, D. 2000.** Water scarcity and the role of storage in development. Colombo, Sri Lanka: IWMI. v, 16p. (IWMI research report 39)
4. **Lacroix, M.; Kite, G.; Droogers, P. 2000.** Using datasets from the Internet for hydrological modeling: An example from the Küçük Menderes Basin, Turkey. Colombo, Sri Lanka: IWMI. v, 30p. (IWMI research report 40)
5. **Scott, C. A.; Zarazúa, J. A.; Levine, G. 2000.** Urban wastewater reuse for crop production in the water-short Guanajuato River Basin, Mexico. Colombo, Sri Lanka: IWMI. v, 34p. (IWMI research report 41)
6. **Kite, G.; Droogers, P. 2000.** Comparing estimates of actual evapotranspiration from satellites, hydrological models, and field data: A case study from Western Turkey. Colombo, Sri Lanka: IWMI. v, 32p. (IWMI research report 42)
7. **Kite, G.; Droogers, P. 2000.** Integrated basin modeling. Colombo, Sri Lanka: IWMI. v, 30p. (IWMI research report 43)
8. **Hussain, I.; Marikar, F.; Jehangir, W. 2000.** Productivity and performance of irrigated wheat farms across canal commands in the Lower Indus Basin. Colombo, Sri Lanka: IWMI. v, 28p. (IWMI research report 44)
9. **Shah, T.; Alam, M.; Kumar, M. D.; Nagar, R. K.; Singh, M. 2000.** Pedaling out of poverty: Social impact of a manual irrigation technology in South Asia. Colombo, Sri Lanka: IWMI. vi, 36p. (IWMI research report 45)

Working Papers:

Working papers document other important aspects of IWMI's research. These are not peer-reviewed, but present useful concepts and findings from the Institute's work in many countries.

1. **de Voogt, K.; Kite, G.; Droogers, P.; Murray-Rust, H. 2000.** Modeling water allocation between wetlands and irrigated agriculture: Case study of the Gediz Basin, Turkey. Colombo, Sri Lanka: IWMI. xi, 51p. (IWMI working paper 1)
2. **Kite, G. 2000.** Developing a hydrological model for the Mekong Basin: Impacts of basin development on fisheries productivity. Colombo, Sri Lanka: IWMI. v, 141p. (IWMI working paper 2)
3. **Tren, Richard; Schur, Michael. 2000.** Olifants River Irrigation Schemes. Colombo Sri Lanka: IWMI, iv, 32p (IWMI working paper 3)
4. **Shah, T.; Hussain, I.; Saeed ur Rehman. 2000.** Irrigation management in Pakistan and India: Comparing notes on institutions and policies. Colombo, Sri Lanka: IWMI. v, 15p. (IWMI working paper 4)

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1. **de Fraiture, C.; Rubiano, J.; Alvarez, C. 2000.** Uso real y potencial del agua en la cuenca del río Cabuyal, Colombia. Mexico City, DF, Mexico: IWMI. Mexico Program. xvi, 56p. (IWMI serie Latinoamericana no.12)
2. **Kloezen, W. H. 2000.** Viabilidad de los arreglos institucionales para el riego después de la transferencia del manejo en el Distrito de Riego Alto Río Lerma, México. [The viability of institutional arrangements after irrigation management transfer in the Alto Río Lerma Irrigation District, Mexico] Mexico, D.F., Mexico: IWMI. xviii, 88p. (IWMI, serie Latinoamericana, no.13)

3. **Buechler, S.; Martelo, E. Z. (Eds.) 2000.** Género y manejo del agua y tierra en comunidades rurales de Mexico. Mexico City, DF, Mexico: IWMI. Mexico Program; Colegio de Postgraduados. xiv, 202p. (IWMI serie Latinoamericana no.14)
4. **Flores-Lopez, F. J.; Scott, C. A. 2000.** Superficie agricola estimada mediante analisis de imagenes de satelite en Guanajuato, Mexico. [Estimating agricultural areas using satellite imagery in Guanajuato, Mexico] Mexico, DF., Mexico: IWMI. xvii, 43p. (IWMI serie Latinoamericana no.15)
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7. **Rodriguez-Betancourt, R.; Gonzalez-Aguirre, J. 2000.** El manejo de los recursos hidricos en Venezuela. [Water management in Venezuela] Mexico, DF., Mexico: IWMI. xiii, 40p. (IWMI serie Latinoamericana no.18)
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1. **Brewer, J. D.; Sharma, K. R. 2000.** Conjunctive management in the Hardinath Irrigation System, Nepal. Lahore, Pakistan; Griffith, NSW, Australia: IWMI. Pakistan National Program; CSIRO. vii, 53p. (IWMI Pakistan report no.R-94)
2. **Raju, K. V.; Brewer, J. D. 2000.** Conjunctive management, North Bihar, India. Lahore, Pakistan; Griffith, NSW, Australia: IWMI. Pakistan National Program; Pakistan Council of Research Water Resources (PCRWR); CSIRO. ix, 70p. (IWMI Pakistan report no.R-95)
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5. **Konradsen, F.; Amerasinghe, F. P.; van der Hoek, W.; Amerasinghe, P. H. 2000.** Malaria in Sri Lanka: Current knowledge on transmission and control. Colombo, Sri Lanka: IWMI. xiv, 77p.
6. **Mirza, Z. I.; Saeed, S. (Comp.) 2000.** Institutional reforms in irrigation sector of Punjab, Pakistan: Proceedings of Workshop held at Faisalabad Serena on 10-11 February 2000. Lahore, Pakistan: IWMI; Punjab Irrigation and Drainage Authority. xi, 91p.
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