



**Report of the**  
**Third External Program and Management Review**  
**of the**  
**International Water Management Institute**  
**(IWMI)**

**Overview Documents**

1. EPMR Report Summary and Recommendations
2. IWMI Response
3. Science Council Commentary
4. CGIAR Secretariat Commentary



## SUMMARY AND RECOMMENDATIONS

### **IWMI and the World Water Challenge**

The world faces a growing list of challenges associated with the management of its scarce water resources. Those challenges largely arise because of temporal, spatial and social variations in the supply of water as the demands for water for agricultural, domestic, industrial and environmental purposes steadily grow. Addressing the challenges requires research effort at multiple levels: local through global, basic through applied, upstream through downstream, private through public, etc. In this multi dimensional space, IWMI has identified its research niche as being holistic and hence interdisciplinary, international, basin-scale focused and public good orientated.

This niche has evolved considerably since the last EPMP under the guidance of the current Director General. IWMI has taken into account changes in the research community's understanding of the issues underpinning the world water challenge, the strategic direction taken by the CGIAR, funding circumstances and the capacities and requirements of its partners.

IWMI has emerged from this evolution as a larger, more diverse, more proactive and generally stronger research organization, with enhanced human resource management.

### **Mission, Vision and Strategy**

A key part of the Institute's evolution has been the refinement of its Mission and Vision Statements. IWMI now aims to be a world class Knowledge Center pursuing research generation, sharing, brokering and application as it seeks to improve the management of land and water resources for food, livelihoods and nature. This Vision and its associated Mission are wide-ranging and ambitious. They correctly encompass the holistic nature of water management as part of the bio-physical and social systems. However, they do not provide a sufficiently strong focus for the research activities of the Institute. A necessary review of this focus should involve not only the requisite consultation with stakeholders but also an analytical assessment of comparative strengths, particularly noting those established in current and prior research initiatives. The role of IWMI in the upstream-downstream research continuum also requires monitoring given the CGIAR requirement that in the order of 80 per cent of the Institute's efforts should be devoted to the delivery of system priority research outputs.

A further component of IWMI's evolution has been the specification of an overarching research hypothesis and a conceptual framework within which the hypothesis can be tested. This is an important step in generating the research rigor that must be a feature of IWMI's future. Some further refinement of the conceptual framework is required, particularly to assist in furthering the analytical elements of IWMI research and to distinguish the impacts of interventions from the impacts of research.

### **Research Programs**

IWMI's research effort is categorized into four themes and two systemwide initiatives. The array of research projects being undertaken by IWMI independently or with partners is extensive and wide ranging. A considerable element of the spectrum of research issues posed by the world

water challenge has been addressed by IWMI research work. This has caused IWMI's research effort to be thinly spread. This is demonstrated by the proportion of the Institute's work that has remained at a descriptive rather than an analytical level and by the relatively low number of papers that IWMI staff members have published in peer reviewed journals as well as the relatively low standing of many of the journals that have been targeted. To do better, IWMI must focus more in areas where it has comparative advantage and develop more analytical depth in those focal areas. Groundwater management, institutions and policy and the holistic treatment of water, environment and health are suggested as research fields where IWMI's strengths were apparent or where further strengthening would yield strong results.

### **Cross-Cutting Issues and Disciplines**

Research on the relationship between water and poverty and gender should be at the core of IWMI's research effort and has been an important comparative advantage of IWMI research. Much excellent work continues to be pursued within IWMI on this topic yet there is some concern that a relative decline in social science capacity within the Institute has meant that relatively less is being done now than previously. Mainstreaming of both gender and poverty research issues would help deliver the required re-orientation of research across all themes. In contrast, IWMI resources have been directed to the generation of data bases and GIS capacity. An impressive array of research products with International Public Good (IPG) characteristics have resulted. The next challenge for IWMI is to ensure these elements of knowledge can play a meaningful part in its analytical research efforts across the Themes.

The representation within IWMI of some disciplines relevant to the water-food-environment nexus that is IWMI's research niche is lacking. In particular, there are relatively few economists and other experienced social scientists in the Institute. Their skills are clearly in demand from both within IWMI's project teams but also from its partners. Other discipline areas have shown considerable growth in numbers. More natural scientists have been employed to assist with the development of IWMI's capacity to tackle environmental issues. Getting the discipline mix right should be the subject of a strategic review of staffing.

### **Research Management**

IWMI has made remarkable progress in improving gender and north/south equality in its staffing mix. It has implemented a matrix management system that appears to be working well, with some caveats. Its staff capacity in terms of research publication record remains below CGIAR average levels. The research record of the senior research decision making team as a whole is also relatively weak, demonstrating the relative lack of research experience in that team. Boosting the level of research experience in that team is seen as an important way of allowing IWMI to increase its overall research performance and this could be achieved by having more experienced and specific discipline oriented Theme Leaders. A highly experienced and internationally recognized Deputy Director General would take specific responsibility for the research task. This would leave the Director General, Regional Directors and regional Office Heads with clear fund raising responsibilities.

Research quality improvements could also be gained through a program of professional development based on individual disciplines. This would strengthen staff members' capacities to contribute to interdisciplinary teams. Quality gains are also likely to come from tightly set research priorities that are regularly monitored. CCERs are important to this process and IWMI is

encouraged to continue with their regular use and to take measures to ensure their rigor. Assessing the impacts of research is also key. IWMI has taken some limited measures in this regard but its importance warrants far greater attention.

### **Research Partnerships**

Partnerships are integral to IWMI's Knowledge Center vision and the Institute has responded strongly to that need by assembling an impressive list of partner organizations. The decentralization of IWMI offices has been an important contributor to this success. The partnerships are particularly important in allowing IWMI to stay upstream in the research continuum and thus to the generation of impacts from IWMI's' research outputs. Making the most of these partnerships will be a challenge for IWMI because of the numbers involved and their diversity. A clear strategy including a prioritization of partners is required. Some specific issues involving relationships between IWMI and other CGIAR centers require resolution particularly in relation to the Challenge Program.

### **Governance**

IWMI's well balanced Board has provided active oversight and support to the Center in the implementation of its many change initiatives over the past five years. However, the breadth of IWMI's activities makes this role a difficult one, especially in terms of providing leadership on programmatic issues. The Board may therefore consider moving in the direction of seeking independent outside advice in the form of a Center Science Council or Advisory Board so as to ensure adequate coverage of program matters while freeing time for the consideration of governance issues. The Board should also be more active in commissioning CCERs rather than leaving this function mostly to management. The Board has been diligent in examining its fiduciary duties and in assessing its own performance. A better flow of information to the Board through timely provision of informative Board documentation and meeting minutes is critical and would allow the Board to function even better.

### **Management and Administration**

IWMI has benefited greatly from the leadership of a strong and dynamic Director General since 2000. Many innovative and highly successful managerial initiatives have been introduced such as the creation of Regionally Recruited Positions, leadership development programs, performance management and the use of multiple feedback instruments at the individual and unit levels. The Center has also significantly increased the diversity of its staff in terms of gender and origin; as a result it received a CGIAR diversity award in 2005. The CCER on HR Management considers, and the Panel concurs, that IWMI is at the forefront of CGIAR centers in the HR management area. The joint venture with WorldFish is another example of such managerial innovation at a scale that will require careful monitoring but has the potential for significant benefits. Some issues remain, particularly as management and administration relates to the research function. A long term staffing strategy is needed to reflect perceived imbalances in the staffing profile. Also, the current HR policy that limits employment beyond 10 years is at odds with the Institute's need for an increase in the proportion of staff who have the necessary experience to provide mentoring to less experienced colleagues and to direct the research effort. In view of recent issues in the Challenge Program, IWMI will also need to ensure that that appropriate monitoring and control policies and procedures are in place.

## **Finance**

Donor funding of IWMI almost tripled during the review period. This is an impressive record and has put the Institute into a reasonably sound financial position despite a significantly reduced proportion of unrestricted funding. IWMI's working capital is within the CGIAR accepted norms and a shortfall in reserves is being addressed through an annual reserve set aside. Budget planning protocols are sound and sufficiently flexible to meet contingencies. Some improvements have been suggested in the financial accounting and treasury operation such as cash flow monitoring, recording of foreign currency transaction, or the safekeeping of financial information. The switch from EPICOR to SAP software (as part of the WorldFish joint venture) will help improve project budget monitoring as well as management reporting and should allow for quarterly reporting of financial information to the Board rather than bi-annually. The audit function is also sound and provides management and the Board with an annual assessment of the risks the Center faces, including the monitoring of the risks associated with the outsourcing of its Finance and HR function to the IWMI/WorldFish Joint Venture.

## **The Way Forward**

IWMI has made considerable advances over the period since the 2<sup>nd</sup> EPMR. It has expanded its staff numbers and improved their research performance in tackling a much broader set of research topics. It has taken numerous steps forward in improving its management performance, especially in human resource management. In many of its innovations, it has been at the forefront of developments across the CGIAR system. Its research performance has improved but remains behind the average of the CGIAR centers. To progress beyond this point the Institute will require a refinement of the approach taken over the past five years. This review has made some specific recommendations in an attempt to help IWMI make these refinements. In particular, recommendations are aimed at improving the focus of IWMI's research effort so that it can deepen its analysis of key issues where it has a comparative advantage. To further develop the skills required to undertake this deeper level of research, an injection of research experience is required along with a renewed focus on the development of specific disciplinary skills.

## **List of Recommendations**

### **Mission, Vision and Strategy**

*Recommendation 1.* The Panel recommends that IWMI should enter into a research planning exercise that would carefully define its mission, vision, priorities and research themes. The exercise should provide focus for IWMI's research activities and ensure the Institute takes advantage of its established comparative strengths so that only the most highly prospective potential areas of research are explored. An objective analysis of IWMI's research specializations within the context of the CGIAR system priorities would be required to inform that exercise.

### **Research Programs**

*Recommendation 2.* The Panel recommends that IWMI completes and phases out the focus on urban agriculture in the current Theme 3, and simultaneously that it merges Theme 3 and 4 together to constitute a theme on Water, Health and Environment.

*Recommendation 3.* The Panel recommends that IWMI's efforts be more directed at analytical research. Furthermore IWMI will need to develop a more tightly focused research agenda within each of its themes.

*Recommendation 4.* The Panel recommends that IWMI give priority to addressing critical water management issues and opportunities identified from past IWMI programs. This would include an emphasis on sustainable groundwater management. IWMI should explicitly include research into groundwater depletion as sub themes of both Themes 1 and 2.

*Recommendation 5.* The Panel recommends that IWMI re-establish its theme on Institutions and Policies.

*Recommendation 6.* The Panel recommends that IWMI develop an effective Publication Strategy to improve its performance and influence its target audiences.

### **Cross-cutting Issues and Disciplines**

*Recommendation 7.* The Panel recommends that the cross-cutting issues of poverty and gender be clearly conceptualized, meaningfully integrated and mainstreamed into research by appointing a Task Force and specifying core resources for this purpose. IWMI should articulate the expected intermediate and long term impacts of this research and the milestones for measuring progress.

### **Research Management**

*Recommendation 8.* The Panel recommends that IWMI appoint four experienced and well respected researchers to the positions of:

- Principal Physical Scientist;
- Principal Natural Scientist;
- Principal Economist; and,
- Principal Social Scientist/Policy Analyst,

who would have responsibility across the Institute for research strategy development including research staff recruitment, staff development in their discipline area including mentoring junior staff, selection of PhD candidates and Post Doctoral Fellows, ensuring rigor in the application of their discipline, 'trouble shooting' discipline-based issues, and providing advice in project development. The Panel further recommends that IWMI appoints a Deputy Director General-Research. The person filling that role should be a highly experienced researcher with an established international reputation for excellence. It is also recommended that the four 'Principal Scientists' be appointed as the Theme Leaders to further strengthen the discipline focus they will bring to IWMI.

*Recommendation 9.* The Panel recommends that at least five days per annum for discipline-based professional development be allocated in the time-tracker system.

*Recommendation 10.* The Panel recommends that IWMI ensures the CCERs it commissions are rigorous, regular and with coverage across all Themes.

*Recommendation 11.* The Panel recommends that IWMI appoint its own specialist professional in the field of impact analysis and undertake a systematic evaluation of its research portfolio both past and future.

## **Partnerships**

*Recommendation 12.* The Panel recommends that IWMI prioritize its list of partners and develop a new partnership strategy that is linked to this list. IWMI must further make its decentralized research structure work in favor of improving relationships with its partners including sharing credit for outputs.

*Recommendation 13.* The Panel recommends IWMI make a stronger effort to link up with top-tier universities/research institutes that have a reputation in the water resources area, and develop opportunities for their staff to play an active role in IWMI, including supervising PhD students, mentoring junior staff and assisting in the development of a strengthened research program.

## **Governance**

*Recommendation 14.* The Panel recommends that informative Board documentation be made available to Board members at the latest two weeks prior to each meeting as per Board rules, in hard copy if members so request, and that draft minutes of the meetings adequately reflect Board decisions and that they be sent at most one month after the meeting.

*Recommendation 15.* The Panel recommends that the Board provide more strategic guidance to management on science and programs, that it keep more abreast of the programs' major strengths and weaknesses without getting involved in routine operational matters, and that it use the budget approval process as one tool to influence focus and priorities. The Center should also consider the creation of a Center Science Council or Advisory Board along the model used by other CGIAR centers.

## **Management and Administration**

*Recommendation 16.* The Panel recommends that the Center prepare a long term staffing strategy immediately after the completion of its next strategic plan.

*Recommendation 17.* The Panel recommends that the policy limiting employment at IWMI to ten years be replaced with a policy stating that contracts beyond ten years of employment be subject to an in-depth review by management which would take into account IWMI's long term staffing profile needs and the staff's performance.

## **IWMI RESPONSE TO THE THIRD EXTERNAL PROGRAM AND MANAGEMENT REVIEW OF IWMI**

### **Introduction**

IWMI much appreciates the careful and in-depth evaluation the Panel has undertaken of its work over the period under review. IWMI is pleased that the Panel's overall conclusion is that IWMI has emerged from its period of rapid growth as a larger, more diverse, more proactive and generally stronger research organization. IWMI agrees there is now an opportunity for refinement, clear specification of research questions, deeper partnerships and a focus on generating and better measuring outcomes and impacts through this larger, stronger organization.

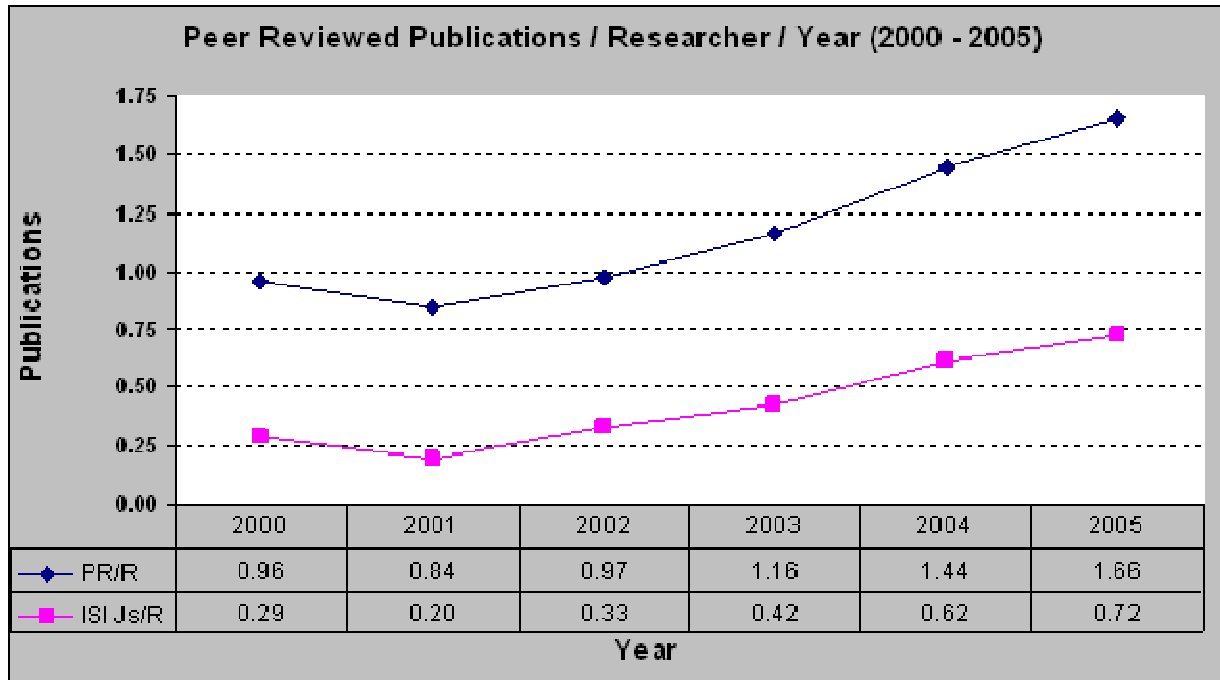
IWMI agrees with the large majority of the Panel's recommendations and fully intends to use the Panel's careful analysis as a guide for the way forward in the years to come, starting with a new Strategic Plan exercise in 2008.

In 2007 the center is recruiting a new Director General who will be charged with the implementation of the EPMP's recommendations; first and foremost the development of a new strategic plan that will be the primary vehicle for the implementation of many of the Panel's recommendations.

The review has also raised a number of questions, however, that appear to be going further than the review of IWMI alone, but touch directly on the mission and vision for the CGIAR as a research for development system as a whole. It may be a good moment to debate, as part of the IWMI review process, the difference in perspective on what the role and purpose of a CGIAR research institute is, and how that differs from a university, and how that may require a different approach to staffing and management.

In some ways the well-thought out advice the Panel is giving IWMI is to reform itself more in the direction of a university, with disciplinary departments that favor "deep science" and where publication records dominate all else.

IWMI agrees that publications are one indicator of research quality. IWMI has instituted during the period under review a policy that sets clear expectations that every researcher generates at least 2 peer-reviewed publications every year and this is evaluated carefully as part of every researcher's performance evaluation. As a result IWMI's publication performance has improved and is currently better than at any time in its history (see Figure 1). IWMI also agrees with the Panel that there is still room for improvement and it expects to see such improvement through carefully targeted research and publication policies.



**Figure 1. Peer-reviewed publications and publications in ISI-ranked journals per researcher at IWMI in the period 2000-2005.**

Where IWMI disagrees with the Panel is that the publication record should not be seen as the single most important test of the quality of the individual, the performance of the institution, or the suitability of individuals to be research managers. IWMI sees the publication performance as a necessary but not sufficient condition for the more important question: does the organization have impact on the ground. Particularly, IWMI does not believe that the publication record is the key indicator to determine the quality of a research manager. Some very good researchers have shown themselves to be lousy managers; this has been widely recognized in many formal research and education institutions. IWMI has deliberately recruited a small number of people who are better people managers and understand both project management and “development”, without necessarily being well-published researchers. We also propose that making decisions about research and the impact of research is strengthened by mixing staff with managerial competence with those with research competence. We believe this is in line with management training and practice that encourages team results from the best use of individual skills from different people.

A key issue for IWMI is that it prides itself on being a multidisciplinary center; where research is formulated in terms of the problem (rather than the disciplinary research question) and where people are selected who are willing and able to look over disciplinary boundaries. In its recruitment, therefore, IWMI examines the range of experiences, both pre- and post-PhD, of its applicants and has selected several with non-standard career paths, which gives them a demonstrated edge in a multidisciplinary work and being able to relate to partners and beneficiaries of the research. This is in the midst of an era where integrated solutions to the important problems we face with water management are being encouraged

at an international level as well as locally. The Panel takes the traditional view of counting only the discipline of a researcher's PhD and their experience as years after the PhD was obtained. The reference to 'time since PhD' is also somewhat narrow culturally and reflects a standard western academic research career, i.e. the person studies and enters academia and thence builds a research-based career, whereas other degree and training schemes build on prior or parallel learning and research with the PhD being an outcome of research development, and not a ticket into research. Further, IWMI has also purposefully recruited some scientists who have taken the time to gain experience in management, or gaining wider multi-cultural understanding of the areas where they work, hence strengthening their roles and capability in a research institution; this would seem to support the Panel's emphasis on sound management, but does not follow the singular pathway that they have opted to promote and recommend for IWMI.

As a result, the Panel and IWMI have some differing perspectives on the disciplinary mix at IWMI; the suitability of the management team to manage the organization; and the question of whether there are enough disciplinary specialists at IWMI to mentor junior scientists.

CGIAR centers also differ from top-tier universities in that they serve the interests of both the research community as well as the CGIAR members to whom the relevance of the science to development and the ultimate impact on the ground are a very high priority. The bottom line is whether IWMI's final output is only measured in terms of ISI-journal publications, or whether CGIAR centers ought to go further downstream in ensuring that the knowledge they generate can be used, and is. This debate is not new and will continue and IWMI encourages its pursuit throughout the CGIAR: IWMI intends to remain at the centre of this debate and through experience and ongoing excellence in science *and* knowledge exchange to contribute through action, not just philosophy. IWMI has developed a strategy to become a "knowledge center", to ensure that its knowledge gets used and has impact, and we welcome the Panel's advice on placing more emphasis on how we assess impact. In IWMI's view the knowledge sharing activities are not a diversion of research funds to other purposes, but are intended to change the research itself, so that it becomes a more effective process in pursuit of our mandate. The panel favors an approach where IWMI leaves knowledge sharing and associated activities, that are "post-research functions" in its view, to other specialists and stick with its core function: generating knowledge and publishing that in ISI journals.

We accept that we need to continuously assess the balance and the effectiveness of these conjoint approaches and welcome comment by applied and more academic researchers and stakeholders.

## Response to Recommendations

### Mission, Vision and Strategy

**Recommendation 1.** The Panel recommends that IWMI should enter into a research planning exercise that would carefully define its mission, vision, priorities and research themes. The exercise should provide focus for IWMI's research activities and ensure the Institute takes advantage of its established comparative strengths so that only the most highly prospective potential areas of research are explored. An objective analysis of IWMI's research specializations within the context of the CGIAR system priorities would be required to inform that exercise.

#### Response:

**Agreed.** IWMI agrees that it is time to undertake a new strategic planning exercise and it will task the incoming DG, currently under recruitment, with the development of a new strategic plan in 2008.

### Research Programs

**Recommendation 2.** The Panel recommends that IWMI completes and phases out the focus on urban agriculture in the current Theme 3, and simultaneously that it merges Theme 3 and 4 together to constitute a theme on Water, Health and Environment.

#### Response:

**Noted.** IWMI does not agree that the issue of re-use of wastewater in urban and peri-urban agriculture is not important enough to be a strategic priority for the institute, particular given increasing competition between agriculture and urban uses for limited water. To the contrary, IWMI feels that the very important issues of water quality and pollution will be of strategic importance for decades to come. For IWMI, the most important water quality issue we have selected to prioritize is the interface between agriculture and cities (and the large flows of nutrients and pollutants both ways), with key impacts on human health and on agriculture, and at the same time with important opportunities for wastewater re-use as well. It is around this theme that IWMI feels it can break through a key disciplinary barrier in the water sector, i.e. the complete separation between sanitation and sewerage on the one hand and irrigation and agriculture on the other hand.

At the same time, we agree that as these relatively young themes (for IWMI) evolve, the environment and health research activities are being more focused on specific priorities that fit IWMI's agriculture-food-environment agenda as well as the GCIAR system priorities. Whether the agriculture-urban interaction ought, or ought not, to be a separate theme, IWMI would like to defer to the strategic planning exercise scheduled for 2008, in order not to change the theme structure twice (now in response to the EPMP and possibly again after the strategic planning exercise).

**Recommendation 3. The Panel recommends that IWMI's efforts be more directed at analytical research. Furthermore IWMI will need to develop a more tightly focused research agenda within each of its themes.**

Response:

**Agreed.** IWMI agrees with the Panel that IWMI's efforts should evolve in the direction of analytical, rather than descriptive research. As the Panel noted, IWMI has spent much effort in the development of (public good) water-related databases, the development of Remote Sensing and GIS methods to deal with water data-sparse environments, and the development and use of hydrologic and water resources models, exactly to enable it to conduct more analytical work, as opposed to some of the social science work conducted in the past that tends to be more descriptive. It also agrees that within the broad themes IWMI works on, the research questions need to be tightly focused. This is an ongoing process, driven by the MTP cycle and the new set of CGIAR system-wide priorities, and the development of the staffing profile and expertise that IWMI has worked hard to establish since the last review; this is poised to build on the base established and to conduct more analytical and cross-disciplinary research.

**Recommendation 4. The Panel recommends that IWMI give priority to addressing critical water management issues and opportunities identified from past IWMI programs. This would include an emphasis on sustainable groundwater management. IWMI should explicitly include research into groundwater depletion as sub themes of both Themes 1 and 2.**

Response:

**Agreed.** IWMI agrees with the panel that IWMI's current program should be based on critical water management issues and opportunities identified from past programs. IWMI recognizes that groundwater depletion and groundwater management is indeed a key strategic priority for IWMI in both Themes 1 and 2 and IWMI agrees that it should explicitly remain so. It could also be seen as a key strategic issue for Theme 4 given recent recognition of the inter-connectedness between ground and surface water ecosystems and human livelihood.

IWMI also recognizes that it needs to respond to emerging issues and to regularly address the balance between maintaining past program streams and adapting to the new. The strategic planning process will address this.

**Recommendation 5. The Panel recommends that IWMI re-establish its theme on Institutions and Policies.**

Response:

**Agreed in part.** IWMI agrees with the Panel that Institutions and Policies is a critical priority for IWMI. IWMI proposes that the decision whether that is best served as a separate theme

or as a cross-cutting issue (as it is currently structured) should be addressed explicitly as part of the next strategic plan exercise.

***Recommendation 6.*** The Panel recommends that IWMI develop an effective Publication Strategy to improve its performance and influence its target audiences.

Response:

**Agreed.** IWMI will develop and communicate a clearer Publication Strategy. IWMI's notes that its performance in terms of publications (both peer reviewed publications generally, and articles in ISI journals specifically) has improved steadily under the period under review (see Figure 1). However, IWMI agrees that its publication performance should be on par with that of other CGIAR centers, and will work hard to achieve this benchmark.

### **Cross-cutting Issues and Disciplines**

***Recommendation 7.*** The Panel recommends that the cross-cutting issues of poverty and gender be clearly conceptualized, meaningfully integrated and mainstreamed into research by appointing a Task Force and specifying core resources for this purpose. IWMI should articulate the expected intermediate and long term impacts of this research and the milestones for measuring progress.

Response:

**Agreed.** IWMI agrees with the Panel recommendation to appoint a Task Force to conceptualize, integrate and mainstream the key cross-cutting issues of poverty and gender into IWMI's research and will allocate core resources for this purpose. It is agreed that the work of this Task Force should lead to well defined expected impacts and milestones. IWMI will appoint a second Task Force to address the same issues for "institutions and policies".

### **Research Management**

***Recommendation 8.*** The Panel recommends that IWMI appoint four experienced and well respected researchers to the positions of:

- Principal Physical Scientist;
- Principal Natural Scientist;
- Principal Economist; and,
- Principal Social Scientist/Policy Analyst,

who would have responsibility across the Institute for research strategy development including research staff recruitment, staff development in their discipline area including mentoring junior staff, selection of PhD candidates and Post Doctoral Fellows, ensuring rigor in the application of their discipline, 'trouble shooting' discipline-based issues, and providing advice in project development. The Panel further recommends that IWMI appoints a Deputy Director General-Research. The person filling that role should be a highly experienced researcher with an established international reputation for excellence. It is also recommended that the four 'Principal Scientists' be appointed as the Theme Leaders to further strengthen the discipline focus they will bring to IWMI.

Response:

**Noted.** We have indeed replaced one of the Theme Leaders with a more senior researcher (who was earlier working as a senior scientist and mentor within the theme). With that move we are of the opinion that the current group of four theme leaders has the appropriate seniority required by their position. We note that in our view, some very senior scientists are better employed in (free) senior, intellectual, mentoring roles, rather than as managers (with the associated managerial and administrative burden), although they regularly assist with developing and implementing managerial decisions. The disciplinary match of the current group of theme leaders is not divided along the lines of the four disciplines, as recommended by the Panel, since the suitability to lead the problem area of the theme was considered a more important selection criterion than the disciplinary background of the individuals involved. IWMI will indeed undertake a strategic staffing plan (recommendation 16) and will ensure that the IWMI group of scientists has an appropriate disciplinary and seniority balance. We value the mix of benefits that comes with experience and seniority alongside that of youthfulness and awareness of new technologies.

IWMI agrees with the Panel's recommendation concerning the appointment of a DDG Research.

***Recommendation 9. The Panel recommends that at least five days per annum for discipline-based professional development be allocated in the time-tracker system.***

Response:

**Agreed.** Currently each researcher has 20 days of "un-allocated" time for various purposes, including professional development, IWMI agrees with the recommendation of the panel to allocate at least 5 of these days explicitly for professional development.

***Recommendation 10. The Panel recommends that IWMI ensures the CCERs it commissions are rigorous, regular and with coverage across all Themes.***

Response:

**Agreed.** IWMI will implement the recommendation through development of a program of CCERs, led by the Board.

***Recommendation 11. The Panel recommends that IWMI appoint its own specialist professional in the field of impact analysis and undertake a systematic evaluation of its research portfolio both past and future.***

Response:

**Agreed.** IWMI agrees with the recommendation and will implement it.

## Partnerships

**Recommendation 12.** The Panel recommends that IWMI prioritize its list of partners and develop a new partnership strategy that is linked to this list. IWMI must further make its decentralized research structure work in favor of improving relationships with its partners including sharing credit for outputs.

### Response:

**Agreed.** IWMI agrees that IWMI's strongly increased emphasis on a partnership-based approach to research has led to a very large expansion of the number of partners IWMI deals with, which may not almost lead to the most effective partnerships possible. IWMI proposes to develop a new partnership strategy, and work out the roles of each of the partners more clearly, as part of the new strategic plan. While IWMI is convinced that its decentralized, benchmark-basin focused structure has helped tremendously in forging closer links with partners and increasing IWMI's impacts, it agrees with the Panel that relationships with partners can continuously be improved and particularly the sharing of credit for outputs – as measured by publications co-authored with partners – can and should be improved considerably.

**Recommendation 13.** The Panel recommends IWMI make a stronger effort to link up with top-tier universities/research institutes that have a reputation in the water resources area, and develop opportunities for their staff to play an active role in IWMI, including supervising PhD students, mentoring junior staff and assisting in the development of a strengthened research program.

### Response:

**Agreed.** IWMI agrees that a good relationship with top-tier universities is important; likewise IWMI plays a capacity building role with other, less strong universities, building their expertise in the water resources area. IWMI has traditionally had strong relationships with a small group of top-tier universities (Cornell and Wageningen, particularly). Under the period under review, IWMI has strongly expanded the number of universities with which it has joint PhD students; universities in Asia, Africa, Australia as well as the US and Europe. IWMI agrees that as part of a more focused partnership strategy (recommendation 12), it should also more clearly define its relationship with its partner universities.

## Governance

**Recommendation 14.** The Panel recommends that informative Board documentation be made available to Board members at the latest two weeks prior to each meeting as per Board rules, in hard copy if members so request, and that draft minutes of the meetings adequately reflect Board decisions and that they be sent at most one month after the meeting.

Response:

**Agreed.** IWMI agrees with this recommendation and will implement it.

***Recommendation 15.*** The Panel recommends that the Board provide more strategic guidance to management on science and programs, that it keep more abreast of the programs' major strengths and weaknesses without getting involved in routine operational matters, and that it use the budget approval process as one tool to influence focus and priorities. The Center should also consider the creation of a Center Science Council or Advisory Board along the model used by other CGIAR centers.

Response:

**Agreed in part.** IWMI generally agrees with this recommendation. The Board did consider appointing a Center Science Council, but has decided that rather than creating a new and external group, it has reformed the Program Committee from a committee-of-the-whole to a smaller, more focused and probably more effective Board Committee that is intended to meet the recommendation of the Panel.

We also agree that there should be more consistent Board involvement in the approval of program strategic directions and more regular strategic guidance to management on programs.

## **Management and Administration**

***Recommendation 16.*** The Panel recommends that the Center prepare a long term staffing strategy immediately after the completion of its next strategic plan.

Response:

**Agreed.** IWMI agrees with this recommendation and will implement it.

***Recommendation 17.*** The Panel recommends that the policy limiting employment at IWMI to ten years be replaced with a policy stating that contracts beyond ten years of employment be subject to an in-depth review by management which would take into account IWMI's long term staffing profile needs and the staff's performance.

Response:

**Agreed.** IWMI agrees with this recommendation and will implement it.

## SCIENCE COUNCIL OF THE CGIAR

### **Commentary on the Third External Program and Management Review (EPMR) of the International Water Management Institute (IWMI)**

*April 20, 2007*

The Report of the 3<sup>rd</sup> EPMR of IWMI was discussed at the Seventh Meeting of the Science Council (SC), held at ICRISAT, Patancheru, India. Dr. Jeff Bennett on behalf of the review team presented the main findings and recommendations of the Report. IWMI Board Chair Dr. Nobumasa Hatcho and the Director General of IWMI, Frank Rijsberman responded on behalf of the Center. The SC thanks the Panel for its comprehensive, perceptive and analytical assessment of the Center and, in particular, for its careful strategic analysis and forward looking perspective. The review report is well written and the conclusions clearly documented. The SC notes that the Center has responded positively to the review report's major findings and recommendations.

The SC commends the panel for the novel approach used to measure the quality and performance of the center, offering ideas for use in future EPMRs. In particular, it considered it both innovative and instructive for the Panel to request IWMI to nominate the key papers that illustrate the outputs of each program and to identify the key outcomes and impacts from each. The Panel in this case was able to make perceptive suggestions for refinements in research designs in order to improve the relevance and impacts of the outputs as a result of reading the nominated papers.

The 3<sup>rd</sup> EPMR has assessed an institute that has been largely restructured in response to the 2<sup>nd</sup> EPMR six years earlier. Since 2000, IWMI has undergone a substantial growth in funding – an almost tripling of its budget – with a corresponding expansion in research capacity. The panel found that the Center has become a more vibrant and more viable institution; it has improved its management, administration and research publications performance, and has produced a number of important achievements. In addition to improving its research publication rate, the report highlights IWMI's leadership and global influence through activities such as the Comprehensive Assessment of Agricultural Water Management, the WWF discussions and agenda, the Hyderabad Declaration, membership in the RAMSAR Conventions and the DG's paper on small scale water management selected for the Copenhagen Consensus. IWMI and its Director General are to be commended for these achievements.

The panel, however, concludes that IWMI has the potential to do much better, and has made 17 recommendations aimed at helping the Center become stronger. The key issues identified by the panel requiring IWMI's attention include: clarifying its specialized research niche (current niche and mission are wide ranging and ambitious), deepening the analytical component of its research, injecting a stronger disciplinary base in its research, and demonstrating impact. The SC believes that the report has highlighted key challenges facing IWMI that require a research effort at multiple levels, i.e., from local to global, from basic to applied, from upstream to downstream and from private to public. None of these are polar choices, but rather reveal the complexity of mixtures along the multiple continuums. The main recommendations of the panel, aimed at pushing IWMI above the CGIAR average, are related to the need for: (i) strategic planning, staffing and partnership review exercises, (ii) a more tightly focused research agenda, (iii) more effort directed to analytical research, (iv) recruitment of experienced and well established scientists and research leaders, (v) the development of an effective publications strategy, (vi) changes in the programmatic structure, and several others related to poverty, gender and impact.

Based on the panel's assessment and evidence provided, the SC endorses the panel's 17 recommendations.

The Center agrees with the vast majority of the report's recommendations and the SC notes that steps are already underway at IWMI to implement these, with a few exceptions. There were two recommendations 'noted', but not 'agreed to' by the center: #2 on merging of the Water and Cities theme into the Health and Environment theme, and #8 to appoint four experienced and well respected researchers in major disciplines (although agreeing to appoint a DDG for Research). These are discussed below.

### **Priorities and Strategy**

With respect to its re-defined mission and mandate, IWMI has evolved from a Center focused on water management issues in irrigated agriculture to a Center with a greatly expanded scope that now embraces nature in its mandate and, accordingly, has re-oriented itself as a Center for Water, Food and the Environment. In doing so, IWMI has captured the concerns of the day, and is attempting to carve out a new niche for itself in a world with multiple institutions addressing the water sector at large. The SC believes the pendulum must swing back through the process of prioritizing the research agenda within this institutional context. The Panel recommends that IWMI initiate a strategic planning exercise in 2008 with the arrival of the new DG, and through this process identify clear priorities for itself that can serve the staff in more carefully defining their research programs. The SC strongly endorses this recommendation and urges the Center to pay particularly attention to the panel's strategic analysis and perspective on IWMI provided on pages 1-10 of the report. The assessment of IWMI's conceptual framework and poverty mapping merits careful consideration. The need for IWMI to reexamine the breadth of its mission within the context of a strategic planning exercise is of paramount importance.

IWMI has indicated that three of the panel's recommendations will be considered in the context of the strategic planning exercise, i.e., #4 which emphasizes greater priority on critical water management issues (e.g., sustainable groundwater management, groundwater depletion); #5 on reinstating the Policies, Institutions and Management theme; and #15 on constituting an Advisory Science Council for the Board. The SC agrees with this response but encourages the Center to consider during that process the issues and concepts put forward by the panel in their assessments and recommendations.

On the specific recommendations themselves, SC concurs that IWMI should enhance its effort on sustainable groundwater management. The need to strengthen IWMI's institutions and policies work is well made but care is required to ensure that this theme is pursued in close collaboration with other themes like water allocation and environmental flows in rivers to exploit the synergies that the panel correctly articulates. Finally, the Panel has expressed concerns about the vision and oversight functions of the Board and recommends that an external Scientific Advisory Board be put in place to provide more guidance. The SC endorses the notion of a need for such oversight, but accepts that the Board could take other action that could be equally effective and less costly. The strategic planning exercise would presumably also address issues of comparative advantage raised by the Panel, e.g., should wastewater management issues be addressed at all and if yes, should they be restricted to periurban agriculture or to disposal issues within a full-basin environmental context. At this point, the SC considers that IWMI's wastewater research was catalytic but that the health aspects may be now getting beyond its comparative advantage.

## **Research Leadership**

The criticism of the senior research leadership team and generally insufficient experience among its scientists is a major strategic issue for the center. This is the motivation for the panel's lengthy and strong recommendation (#8) to appoint four experienced and well respected researchers in major disciplines and hire a DDG for Research, which the SC endorses. IWMI has been purposeful in the choice of a relatively young team with project management skills in preference to research experience. It has strongly defended this strategy. The SC was not convinced by the Center's response to the criticisms of the panel in this regard, i.e., that a focus on strong disciplinary skills comes at the expense of a multi-disciplinary approach. Strong research leadership can foster the desired multi- and inter-disciplinary interactions required of a mission-oriented institution like IWMI. Additionally, there are an increasing number of reputable journals that encourage multi-disciplinary innovations in research.

A related concern is the panel's assessment that too many studies at IWMI are descriptive and the need to be more dynamic, interdisciplinary, analytical and directed to outcomes and impacts by the addition of institutional and policy analysis. In the SC's view, the panel has provided an excellent analysis of descriptive vs. analytical research at IWMI, and correctly highlighted the need for more rigor and depth, and how this depends critically on having strong disciplinary skills as a necessary condition for establishing strong and effective interdisciplinary teams (rather than grouping generalists together – who may work nicely with each other but not necessarily produce the rigorous results). Thus, the SC strongly supports the panel in their recommendation on this issue.

## **Publications**

IWMI questions the use of ISI as a primary indicator of a Center's performance, especially considering the multi-disciplinary nature of their work, i.e., not as easy to publish interdisciplinary research. The SC maintains that publications is one of the most widely accepted basis for evaluating research quality, and assuming the work is relevant, is likely to be a strong indicator of the potential for future impact. The SC does not agree with the Center's characterization of the Panel as giving IWMI advice to reform itself in the direction of "a university with disciplinary departments that favour 'deep science' and where publications dominates all else". Rather, in the SC's view, the Panel is urging the Center to establish a solid basis for conducting good, rigorous science such that results emerging are valid and robust that is more likely to lead to improved technologies, policies and institutions and, ultimately, to impact on the ground. The SC believes that good science and impact go together and suggests that lack of impact at IWMI may at least in part be explained by a slow drift away from good disciplinary-based science.

The Center's response to the adverse comments of the panel about their peer publication record by resorting to the argument that impacts are more important than publications is unconvincing. Firstly, these should not be viewed as substitutes but complements and secondly, and more importantly, IWMI is one of the poorest performing centers as far as the documentation of its impact is concerned in the 3a and 3b components of the PM exercise.

## **IWMI as a 'Knowledge Center'**

At the time of the 2<sup>nd</sup> EPMP the Center had a strong research orientation and was focused on increasing the amount of 'crop per drop'. In the past six years this focus has changed to that of a

Knowledge Center that involves not only IWMI's outputs but those of multiple partners. In-depth (disciplinary) research was de-emphasized in favour of inter-disciplinary research with its ancillary complexities and transaction costs. The Panel rightly suggests that this shift threatens the ability of the Center to "deliver cutting edge research outputs" and makes a number of remedial propositions such as improved mentoring of younger staff, restructuring of the leadership team and a professional development program. The SC accepts the analysis and agrees that some of the suggested remedies might alleviate the problem, but sees room for alternative measures that the new DG might wish to pursue.

The report suggests a move back to a stronger disciplinary-oriented scientific research paradigm. The SC concurs with the Panel that roles such as brokering, sharing, application should be complements to IWMI's research along the impact pathway and not alternatives. The forthcoming meta-review of EPMRs should assess whether such "pendulum swings" are justified or not.

Also, in the context of becoming a Knowledge Center, IWMI has inevitably greatly expanded its partnerships and drifted rather far downstream on the research – development continuum. The Panel questions whether IWMI could legitimately claim that 80% of its activities could be placed in the SP agenda that should lead to IPGs. Indeed, the panel's analysis of several of the IWMI's research programs indicates that much of the research is not IPG oriented and does not build on past research and comparative advantage sufficiently by way of synthesis reports. This requires attention. The SC would agree with the panel that the R-D balance be reconsidered in the context of developing a new strategic plan.

### **Partnerships**

The panel noted that relatively few of IWMI's publications are with partners. It is of concern that IWMI's partnerships are questioned in a number of places by the panel. There are issues of their number and type and the need for IWMI to be more strategic and selective if it is to pursue an IPG agenda and if it is to become a center of preference for collaboration by other research providers. Of concern to the SC also is the apparent tensions between IWMI and IFPRI resulting in competing rather than collaboration in water policy research; and there are poor host country relationships.

There are tensions between the CP on W&F and IWMI as evidenced by the recent criticisms of the CP competitive grants process by some partners. The Steering Committee arrangements require scrutiny and the forthcoming review of the CP is timely. It is fortunate that Dr Bennett has agreed to be involved in the CP review as he now has a full understanding of IWMI and can approach the review of the CP with full information.

### **Scope of effort, devolution and critical mass**

The Center decided that its new scope required a new basis of analysis and moved from perimeters to river basins. Though sensible and commendable, IWMI then proceeded to adopt a rather large number of river basins in many parts of the world, some of which are highly complex. The result is that a critical mass is absent in many of the basins and the outputs in the Basin theme are disparate and require more focus and prioritization. The Panel suggests that IWMI revisits its decision to get involved in so many basins and the degree of decentralization that this implies. The SC concurs.

The SC agrees with the need to review the value and desirability of the massive decentralization that has occurred in recent years. It questions whether this phenomenon may have contributed to the decline in IPG research outputs.

### **Impact Assessment**

The Panel believes and SC concurs that there is probably more influence or adoption of management practices derived from IWMI's work that could well be assessed and more effort by IWMI needs to be given to its documentation. The Panel was aware that IWMI is making a serious effort to explore a number of different approaches, such as outcome mapping, impact pathway monitoring, etc but encouraged the Center to keep the effort focused on documentation and limit experimentation with new methods.

In the SC's view it is clear IWMI requires a more conventional impact assessment team than it has now. It lies towards the bottom of the PM ranking in this regard and could push the frontiers on policy oriented research impact assessment vis-a-vis water institutions and policy research with a strengthened IA capacity. The panel is rightly critical of the center for a lack of ex ante and ex post impact assessment to inform priorities. The SC agrees with the recommendation about the need for a senior staff member in this area and a systematic evaluation of its past and future portfolio.

**CGIAR Secretariat's Comments on the Governance, Management and Finance  
Aspects of the Report of the Third EPMP of the International Water Management Institute  
(IWMI)**

The CGIAR Secretariat thanks the IWMI EPMP Panel for its report. Four out of a total of 17 recommendations made by the panel are on governance and management; two on Center Board's functioning and two in relation to management and administration. The Secretariat notes from IWMI's response that the Center fully agrees with three of the recommendations and partly agrees to one (Recommendation 15).

**Governance**

- We compliment the center for having a diverse and multidisciplinary Board. While we agree with the Panel's recommendation that the Board provide more strategic guidance to management on science and programs without getting involved in operational matters, especially using the budget approval process to influence strategic focus, we do not think that creation of a Center Science Council/Advisory Board is the only way to sharpen the strategic guidance that the Board needs to provide the center. Rather we concur with IWMI that another possible way of achieving the same objective could also be through a smaller, more focused Program Committee. We would however, recommend that the center also monitor the experience of other centers which have experimented with a Center Science Council and compare its experience with that of other Centers in the future.
- We strongly encourage IWMI to strengthen professional financial expertise on its Board, as also brought out by the Performance Measurement data for 2006.
- We strongly support the panel's suggestion to make it mandatory for new Board members to participate in the CGIAR Board orientation program and for the center to also develop a center-specific Board orientation for new members. The panel noted that this recommendation from the last EPMP has not been fully implemented.
- We fully agree with the panel's advice for the Board to strengthen its role in formulating a schedule for CCERs, and also in ensuring that lessons learnt from CCERs are applied by the center, as part of its oversight function.
- Supporting the Board with timely and adequate documentation is critical for effective functioning of the Board. We are therefore pleased that IWMI agrees with the panel's recommendation for further strengthening this support to the Board.

**Management**

- IWMI has taken some pioneering initiatives in the field of human resources-including the One Staff concept, designing its own Leadership Development Program, introducing a performance management system, conducting a 360 degree feedback exercise for its management team, improving diversity among its staff and also conducting staff satisfaction surveys.

- We congratulate the two Centers - IWMI and WorldFish for their innovative efforts at cooperation and closer alignment by setting up a joint venture on corporate services. We do agree with the Panel that IWMI should monitor closely the implementation of the agreement.
- We fully agree with the panel's emphasis on the need to clarify the roles and responsibilities between IWMI and the Challenge Program on Water and Food (CPWF) and the risks it carries as the lead institution in implementing the CP. We agree that IWMI should clearly distinguish its own programs (operationally and financially) from the CP, and that the IWMI Board needs to be diligent in its oversight of IWMI's roles and responsibilities in the CP. This issue is also expected to be examined in depth from the CP perspective by the panel that is currently conducting an external review of CPWF.

The Science Council Chair and the CGIAR Chair and Director received a confidential note from the panel regarding some management issues at the center. The CGIAR Director consulted with the IWMI Board Chair and was assured that due diligence was done and the matter was adequately resolved.

## **Finance**

While the panel did not make any formal recommendation on finance, we encourage IWMI to further strengthen financial risk management with emphasis on:

- continued focus on improving the adequacy of reserves indicator
- close monitoring of the implications of migration from one financial information system to another managed by the new joint venture between Worldfish and IWMI.
- further clarifying and separating financial information on IWMI from that of CPWF.
- Further strengthening the risk management strategy on key areas like staffing, financial information system, and control environment.