



CGIAR Challenge Program on  
**WATER & FOOD**

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Executive Committee  
Of the Consultative Group on  
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## LIST OF ACRONYMS

AGM	-	Annual General Meeting
ARC	-	Agricultural Research Council
AREO	-	Agricultural Research and Education Organization
ARI	-	Advanced Research Institute
BBC	-	British Broadcasting Corporation
BLC	-	Base Line Conference
CA	-	Comprehensive Assessment
CAPRI	-	Collective Action and Property Rights
CARE	-	CARE International
CGIAR	-	Consultative Group on International Agricultural Research
CIAT	-	Centro Internacional de Agricultura Tropical
CIMMYT	-	International Maize and Wheat Improvement Center
CN	-	Concept Note
CNN	-	Cable News Network
CP	-	Challenge Program
CPMT	-	Challenge Program Management Team
CPWF	-	Challenge Program on Water and Food
CSC	-	Consortium Steering Committee
CSIRO	-	Commonwealth Scientific and Industrial Research Organisation
DAD	-	Deliverables, Accountability, Deadlines
DBNS	-	Data Base Networking Software
DfID	-	Department for International Development
DHI	-	DHI Water & Environment
EC	-	European Commission
EMBRAPA	-	Brazilian Agricultural Research Corp
FAO	-	Food and Agriculture Organization of the United Nations
FRIEND	-	Flow Regimes from International Experimental and Network Data
GECAFS	-	Global Environmental Change and Food Systems
GIP	-	Gender, Institutional Analysis, & Participation Advisory Panel
GIS	-	Geographic Information System
GLOWA	-	Global Change in the Hydrologic Cycle
GMT	-	Greenwich Mean Time
GWSP	-	Global Water System Partnership
HELP	-	Hydrology for Environment, Life, and Policy
ICAR	-	Indian Council of Agricultural Research
ICRISAT	-	International Crops Research Institute for the Semi-Arid Tropics
ICSW	-	International Commission on Surface Water
IDIS	-	Integrated Data Information System prototype
IFAD	-	International Fund for Agricultural Development

IFPRI	-	International Food Policy Research Institute
IGBP	-	International Geosphere-Biosphere Program
ILRI	-	International Livestock Research Institute
IPGRI	-	International Plant Genetic Resources Institute
IPR	-	Intellectual Property Rights
IRD	-	Institut de Recherche pour le Développement
IRRI	-	International Rice Research Institute, Philippines
IWMI	-	International Water Management Institute
JIRCAS	-	Japan International Center for Agricultural Sciences
LUCC	-	Land Use and Cover Change
M&E	-	Monitoring & Evaluation
MOU	-	Memorandum of Understanding
MRC	-	Mekong River Commission
NARES	-	National Agricultural Research and Extension Systems
NGO	-	Non Governmental Organization
NWRC	-	National Water Research Center
ODS	-	Operational Data Store
PL	-	Project Leader
SARS	-	Severe Acute Respiratory Syndrome
SEI	-	Stockholm Environment Institute
SIWI	-	Stockholm International Water Institute
WRI	-	World Resources Institute
WWAP	-	World Water Assessment Program
YRCC	-	Yellow River Conservancy Commission
ZEF	-	Center for Development Research University of Bonn

## Executive Summary 1

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In the months since approval in November 2002, the Challenge Program on Water and Food (CPWF) has evolved at a tremendous pace. Much has been achieved. Governance, management, personnel and procedures are in place and operational. The first call for proposals under the competitive mechanism for contracting was developed and undertaken. As a result, 21 projects are under negotiation from among 50 approved projects available for support. While the donor base is expanding with the EC, DfID and IFAD showing strong interest in joining our current supporters (the World Bank, Netherlands, France, Switzerland, Germany, Denmark, Norway and Sweden), more funding is vital to maintain the reputation and reap the potential of the CPWF. Awareness of the program has been raised through a very successful Baseline Conference in Nairobi and informative written materials and media events. These activities have strengthened the research 'community of practice' being built around the CPWF themes and benchmark basins and helped inform public opinion. Monitoring and evaluation systems for all aspects of the program are under development. Contract documentation has been developed that is supportive of the collaborative approach to research management and implementation that the CPWF promotes. Extensive ground work for an integrated data sharing network has been developed and is being taken forward in 2004. The CPWF catalyzed further discussion on an agreed set of global indicators for river basin assessments through a workshop at the Nairobi Conference as one of a number of initiatives to link itself to global change research networks. A capacity building program continues to be developed aimed at the increased involvement of NARES partners, including strengthening their capability to identify key research and development needs, and to have the confidence and ability to articulate those demands. The twin goals of the program are the improvement of water productivity in food production and the reform of research management in the CGIAR.

CPWF activities have been guided by a 19 member consortium of partners whose representatives constitute the Consortium Steering Committee. All consortium partners have signed a Joint Venture Agreement that defines their responsibilities. The Steering Committee operates autonomously from the Board of IWMI (the CPWF lead member) with no reporting obligations. The year has seen the maturation and consolidation of the Steering Committee, working together to provide oversight to the program activities. Similarly, members of the Challenge Program Management Team (CPMT) have worked collectively to formulate program-wide procedures and activities, set priorities, promote the program, and develop individual output-based work plans. The CPMT continues to broaden and share team responsibilities under the guidance of the Coordinator, including those to guide decisions for future research and procedures. This has involved analysis of questionnaire responses about experiences of participants in the first competitive call, a 'gap analysis' and harmonization and rationalization of research priorities through construction of a 'concordance'.

The CPWF represents the largest, most comprehensive investment in the world on water, food and environment research. Through the paradigm of water productivity, it offers a new approach to natural resources management research within the CGIAR. It also has broad influence on the way a wide range of institutions conduct research in this area, work together in partnerships and seek meaningful impact for research users.

## Background 2

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### 2.1 Goals and Objectives<sup>1</sup>

The rural poor, identified in this case as those living on less than one dollar per day (in purchasing power parity) are estimated to number 1.2 billion in developing countries. Water scarcity is increasingly recognized as a key constraint to development for some 75% of them and for significant numbers of the peri-urban poor too. Water scarcity is important not only because of access to water and sanitation but because of its effect on agricultural production. Although many of the poor are landless, there is evidence that increased production has its effect through increased opportunities for employment, increased income and hence improved nutritional status. There is also evidence that many of the poor benefit from income earning opportunities in fisheries and other ecosystem services that are adversely affected by water scarcity.

The water demand of cities worldwide is estimated to increase 150% by 2025; the increased demand in developing countries will be even greater. There are, however, few remaining options for increasing the supply of water to developing countries in many locations other than re-allocation of water currently used by agriculture. Water for drinking and sanitation has a higher value and so will “win the battle” for supply with use for agriculture and ecosystem services. Agriculture in developing countries is anyway already estimated to account for 70-90% of water diversions for human use.

So that water for productive purposes is available to the poor without further jeopardizing ecosystem services, it is necessary to increase the productivity of water in agriculture and fisheries. This therefore is the primary goal of the CPWF, which is elaborated in the intermediate goal.

#### 2.1.1 Primary Goal

To increase the productivity of water for food and livelihoods, in a manner that is environmentally sustainable and socially acceptable.

#### 2.1.2 Intermediate Goal

To maintain the level of global diversions of water to agriculture at the level of the year 2000, while increasing food production, to achieve internationally adopted targets for decreasing malnourishment and rural poverty by the year 2015, particularly in rural and peri-urban areas in river basins with low average incomes and high physical, economic or environmental water scarcity or water stress, with specific focus on low-income groups within these areas.

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<sup>1</sup> Section 2.1 is based on Rijsberman, F. (2003). Can development of water resources reduce poverty? *Water Policy* 5, 399-412 and Lipton, M et al (2003). The effects of irrigation on poverty: a framework for analysis. *Water Policy* 5, 413-427.

### 2.1.3 Purposes

The CPWF is expected to contribute to the Millennium Development Goals on eradication of extreme poverty and hunger, on health and on environmental sustainability. These are the impacts reflected in the Program logical framework at the level of purposes:

- Food security for all at household level
- Poverty alleviation, through increased sustainable livelihoods in rural and peri-urban areas.
- Improved health, through better nutrition, lower agriculture-related pollution and reduced water-related diseases.
- Environmental security through improved water quality as well as the maintenance of water-related ecosystem services, including biodiversity.

### 2.1.4 Outputs and Outcomes

Water, food and environment interactions are high on the international political agenda. However, a paradigm shift is required in the thinking of most researchers and decision makers: to use a comprehensive approach to water productivity (including germplasm, production practices, soil and water management, aquatic ecosystem management; institutional arrangements, marketing, governance and policy) in place of concentrating on water savings. The shift is required because of scale and integration issues. For example, water saved by one farmer's more efficient practices may not be available for other farmers a few kilometers away. As another example, using more water to obtain greater production might be highly justified in terms of local returns for a community in an upper catchment, but may be inefficient if productivity of the whole basin is viewed because they employ water that beneficiaries in the lower catchment could have used even better.

The Challenge Program therefore addresses the water-food-environment issues at river-basin level through a comprehensive systems approach that recognizes 5 key sub-systems as priority research themes. This approach enables the new knowledge gained to be synthesized and analyzed for its potential global application to enhance water productivity in crop, tree, livestock, and fish production systems. Increased access to food and an equitable and predictable lifestyle that is also environmentally sustainable is sought as an end product. In future annual reports, synthesis reports will be provided in Section 3.4.

The program outputs are expected to lead to the following outcomes, initially in parts of the nine benchmark basins, later more widely in those basins and beyond: higher water productivity; greater access to water for productive use that helps poor people; maintained or improved quality of aquatic and agricultural environments – or, at the very least, slowed environmental degradation.

To achieve these outputs and outcomes, there are two unique contributions from the CPWF that this approach represents and which are a major justification for focusing a Challenge Program on food and water. First, to apply an integrated perspective at basin level that has usually been absent. Second, to seek partnership among institutions working on research on agriculture, on fisheries, on environment and on water that previously had little or no contact with one another.

The CPWF represents the largest, most comprehensive investment in the world in research and development on the water-food-environment nexus. It provides a new approach to natural resources management research within the CGIAR but, even more important, it has broad influence on the way a wide range of institutions conduct research in this area, work together in partnerships and seek meaningful impact for research users.

## **2.2 Themes and Benchmark Basins**

A thematic approach has been adopted by the CPWF to achieve the Program outputs. The themes and their main areas of action are expressed as outputs in Table 1. The theme approach also encourages the drawing of generic lessons across different geographic locations. The Program handles geographical variation and the need for integration on the ground by focusing at least 75% of its investment in nine benchmark basins. This is important to integrate research across themes and to help achieve concrete impacts.

**Table 1. Outputs from principal research areas of the CPWF**

**Crop water productivity increased without increasing water diverted for agriculture over that in 2000**

- 1.1 Plant breeding undertaken to identify means of obtaining higher water productivity.
- 1.2 New opportunities investigated for integrated natural resource management at the crop and field levels.
- 1.3 Research undertaken to integrate land and water management at broader agro-ecological scales.
- 1.4 Policies and institutions investigated to facilitate adoption of improvements.

**Improved water use for multiple purposes in upper catchments**

- 2.1 Water, poverty and risk issues investigated in upper catchments.
- 2.2 Research undertaken on the potential for improved water management.
- 2.3 Ways identified for enabling people to benefit from improved management of land and water resources

**Aquatic ecosystems maintained and fisheries optimized**

- 3.1 Improved options for policies, institutions and governance identified.
- 3.2 Ecosystem goods and services, and the costs of degradation, valued.
- 3.3 Environmental water requirements understood.
- 3.4 Options for improved water productivity investigated.

**Productivity of water improved through integrated basin water management systems**

- 4.1 Interactions and scales of analysis investigated.
- 4.2 Integrated decision support tools designed.
- 4.3 Options for improved governance identified.

**Policies, institutions and processes of change improved in the global and national food and water system**

- 5.1 Implications of globalization, trade macroeconomic and sectoral policies investigated.
- 5.2 Investment and financing options for agricultural water development and water supply identified.
- 5.3 Mechanisms of transboundary water policy and institutions researched.
- 5.4 Adaptations to changes in global water cycles investigated.

Individual research projects selected may, for example, focus on a specific thematic area and address this across a number of benchmark basins in a comparative fashion (as indicated by project Y in Figure 1), or alternatively, focus on a specific basin and integrate across themes (as indicated by project X in Figure 1). Other alternatives are possible, including single theme and basin projects, and projects that cover multiple themes and multiple basins.

Themes	Agro-ecosystems	Upper catchments	Aquatic ecosystems	River basins	National and global policies
Basins:					
Yellow River	←				→
Mekong				Project X	
Indo-Gangetic					
Limpopo		Project Y			
Volta					
Nile					
Sao Francisco					
Andes					
Karkheh					

**Figure 1. The matrix approach of the CPWF**

### 2.3 Contracting Mechanisms

As suggested above, the CPWF intends to utilize a range of contracting mechanisms. As the CPWF Full Proposal identifies competitive funding programs as being a major element in identifying research teams, a major activity in 2003 has been the design, launch, assessment, approval and contract negotiations for the first portfolio of projects. This is a resource intensive method of contracting but is very effective in mobilizing the research community, particularly to capture expertise beyond the traditional providers, including within the CGIAR system. Not only can any institution submit a proposal, but it can also be involved as a partner in a larger team and therefore be exposed to other disciplines, methodologies, and procedures of designing and managing research that Team Members may not be familiar with. It is, in itself, a method of capacity building and is used often by the World Bank in institutional reforms. Should full competitive funding be appropriate for the second call (expected later in 2004), the submission procedures will be redesigned to respond to lessons from the first call. These will be drawn from our own experiences during and since the first call, as well as a survey that was sent to of all project leaders that submitted concept notes.

The program may find competitive tendering useful as an element in future calls. This approach continues to be competitive but enables both a more prescribed approach to be required of submitters, and/or enables direct contact to assess the interest of a number of known teams. Current analysis by the CP Management Team (CPMT) of the gaps in the present research portfolio could point the program in this direction. Very focused knowledge gaps could be required to add value to the current research and knowledge base. Direct commissioning is already being used by members of the CPMT for synthesis papers in their particular disciplines.

### 2.4 Governance and Management Structure

#### 2.4.1 Consortium Steering Committee

The Consortium Steering Committee (CSC) was constituted as the governing body of the Challenge Program. Eighteen members signed a Joint Venture Agreement in July 2002, joined later by the Mekong River Commission in order to capture their experience as an international river basin

governance body. The Steering Committee consists of the following institutes (with a note of their particular responsibilities in the CSC):

- **Five CGIAR Centers:** Through leadership in thematic areas, act as the focal points for synthesizing results and producing generic conclusions from all basins and regions. Responsible for driving the sharing of knowledge at the international levels (IWMI - Chair; CIAT; IFPRI; IRRI; and WorldFish).
- **Six National Agricultural Research and Extension Systems (NARES):** Through leadership in the benchmark basins, coordinate all work in the basins, working closely with local communities, community based organizations, universities and government agencies. Provide the link to regional and locally defined priorities and help drive implementation. (ARC; AREO; EMBRAPA; ICAR; NWRC and YRCC).
- **Four Advanced Research Institutes (ARIs):** Ensure that knowledge produced through the CP links into the global change research agenda (CSIRO, IRD, JIRCAS and UC Davis).
- **One International River Basin Organization:** In addition to benchmark basin leadership, also provide a management perspective on transboundary water issues (MRC).
- **Three International NGOs:** Expand the outreach of the program and help disseminate research findings and lessons learned on a broad scale (CARE, SEI and WRI).

A copy of the Joint Venture Agreement is at Attachment 1.

#### 2.4.2 Management Team

The CPWF management team is chaired by the Program Coordinator and is composed of the Theme Leaders from each of the five CGIAR centers, nine Basin Coordinators from NARES, and the Program Manager. This approach is an attempt to ensure that regional priorities are addressed and that stakeholders are actively involved in the CPWF. Some CGIAR members of the CPMT are attempting to increase efficiency and diversify the human resources by appointing experienced national personnel – itself a capacity building exercise.

#### 2.4.3 Secretariat

The secretariat is hosted at the headquarters of IWMI in Colombo, Sri Lanka. IWMI has provided the CPWF with office space, and access to the administrative and maintenance facilities of IWMI. The Secretariat negotiates Service Agreements with various IWMI support facilities such as computing, media and communications and data base expertise. Secretariat staffing has evolved as the program has matured and presently consists of two senior international appointees, the Coordinator and Program Manager. In March 2004 an Executive Assistant to the Program Coordinator and a Data Analyst were appointed. The Program Manager is assisted by a budget and administrative officer who also provides logistical support to meetings and seminars. A Secretary provides support for a wide range of administrative requirements. The Secretariat is kept purposely lean, opting to contract short term support and expertise as it is required.

## 2.5 Partnerships

### 2.5.1 Research Partnerships

The CPWF brings together water and food research expertise from various CGIAR centers. By linking complementary activities, the CPWF helps create the connection between research on diverse disciplines. The river basin is the core of this integrated natural resource management approach to water resource management. It links downward to the field and farming system and upward to the regional and international scales.

The proposal's partnership aspect is also designed to encourage innovation in the collaboration among the CGIAR, NARES, ARI and NGO communities. NARES and NGO partners play the vital link to the field and community level for broad implementation of results and as drivers of impact. Participation in projects is open to all interested national research and extension organizations and universities, NGOs, international research groups and CGIAR centers.

As an example, all proposals to the first competitive call had to satisfy the following three basic rules about collaboration:

- The participation of at least one of the five Future Harvest centers (CIAT; IFPRI; IRRI; IWMI, World Fish) that lead CPWF themes.
- At least two NARES partners.
- At least 33% of the budget requested from the CPWF assigned to NARES partners.

The CPWF aims to harness the expertise of the Comprehensive Assessment (CA) and the Dialogue on Water, Food and Environment through partnership activities. It is joining with the CA to support specific activities in the Yellow River Basin. Both are joining with the Dialogue program in undertaking mutually supportive activities at the Stockholm World Water Week .

### 2.5.2 Dissemination and Uptake Partnerships

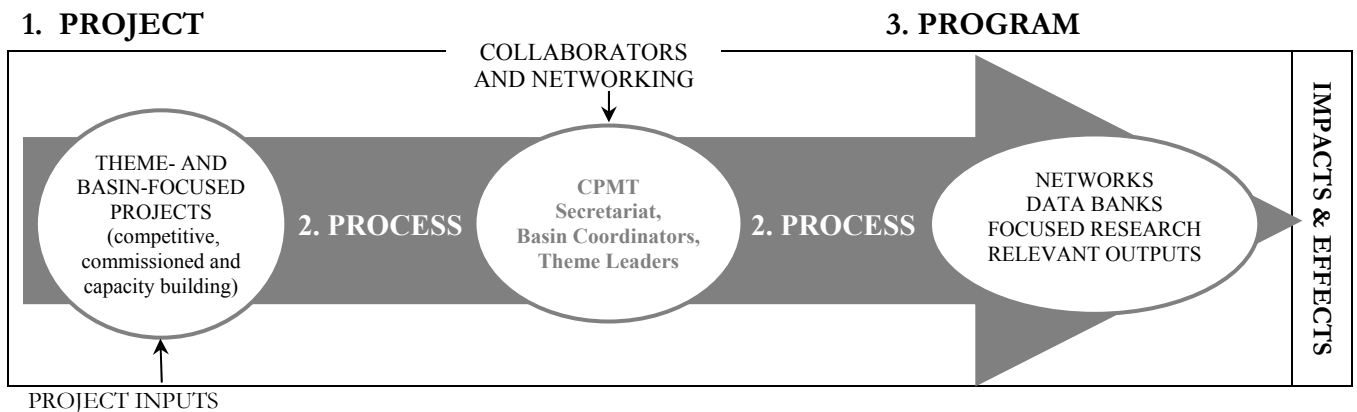
While the CPWF focus is on applied and adaptive research, many of the proposals submitted contain ambitious plans for scaling up and scaling out of activities that may go beyond the scope of the institutions involved—including the non-governmental organizations that many projects are working with. For this reason, similar partnerships to those already formed may in the future require the active participation of other institutions outside that of the agricultural and water agencies already involved. There is also greater need for the increased involvement of the private sector for commercial development aimed at small scale farmers. The CPWF will opportunistically promote the involvement of non-traditional partners, including that of the off-farm rural sector such as input suppliers, and more commercially oriented non-governmental agencies, in an effort to lay the foundations for future large scale uptake schemes. To this end we are seeking the advice of the Private Sector Committee of the CGIAR.

## 2.6 Monitoring and Evaluation Approach

The Challenge Program contains three distinct interlinked operational areas, each of which requires a different monitoring and evaluation approach (see Figure 2). These are contained in a draft working document on M&E which is at Attachment 2. Firstly **Project** level: the contracted research,

whether from the competitive fund, commissioned or capacity building. Second the **Process** level: CP Management Team administrative, concertation and research operations by the Secretariat, Theme Leaders and Basin Coordinators. Third, the **Program** level, at which the effects and impacts of the previous two levels are observable; here it should be possible to detect the longer term changes that the program has initiated.

Running through each of the three levels of operations are two main elements. These are described for the purposes of monitoring as: **Reforming** procedures, through which the CP is changing research management within the CGIAR system; and **Outcomes**, in which the CP-funded research is contributing to the greater productivity of water in agriculture. Within each element, there are various ethical considerations that must be followed: these are listed as pro-poor, gender equitable, pro-actively seeking the integration of natural resource management and participation by stakeholders, and focusing on impact.



<p><b>Reforming Question 1:</b> Is each Project addressing its objectives?</p> <p><b>Outcome Question 1:</b> How are each Project's research results being used?</p>	<p><b>Reforming Question 2:</b> Does the CPMT add value to the whole Process?</p> <p><b>Outcome Question 2:</b> How is the Process contributing to changes in research practice?</p>	<p><b>Reforming Question 3:</b> Is the NEW SYSTEM greater than the sum of its parts?</p> <p><b>Outcome Question 3:</b> How has the PORTFOLIO contributed to more food with less water?</p>
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Figure 2. Summary of the monitoring and evaluation structure of the CPWF.

For the monitoring and evaluation system to follow the objectives set out by the original CPWF Full Proposal, the program's incomplete logical framework has been re-ordered and revised to demonstrate how certain actions can lead to specific ends through a logical sequence. This now forms a dynamic tool to measure achievement using a standard "if..., then..." hypothesis scenario.

## 2.7 Public Awareness Strategy

The CPWF Secretariat negotiates the services of IWMI staff from the Information and Knowledge Group to provide communications and media expertise to the CPWF, the strategy being that as the program matures, appropriate services can be sought on a needs basis. At the same time the CPWF can take advantage of IWMI permanent staff who are connected with the wider water and food research community as well as their CGIAR counterparts in other centers. The 2004 work plans for communications and media are at Attachments 3 and 4 respectively.

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### 3.1 Overview

The research agenda of the CPWF was developed through the work of the Thematic Advisory Groups in 2002, before the commencement of the Inception Phase. It is contained in the CPWF Full Proposal and elaborated in the Background Papers to that proposal. It builds directly from the goals and objectives of the Program whose rationale and content was described in Section 2.1 of this report.

The theme agendas target what appear to the CPWF Advisory Groups to be the most promising pathways to improving water productivity. The nine benchmark basins permit us to conduct research of relevance to beneficiaries in single basins or across basins and to connect research with development and adoption. Of course, the research agenda has to be realized through the projects that are offered by researchers. In the inception phase, research was initially sought through a competitive call for proposals, so as to get the process started.

For the first call for research proposals, the published theme priorities were the sixteen “sub-themes” already shown in Table 1 (Section 2). Research priorities for the basins were elaborated in the ‘kick-off’ workshops. Many of the basin workshops did not take place in time to feed information into the first call. The initial theme and basin priorities against which concept notes were submitted are at Attachments 5 and 6 respectively.

A two stage process was utilized of brief concept notes, and, for those whose concept notes were selected, more developed full proposals. Following the construction of submission guidelines and rules, the first call for concept notes went out on the internet in December 2002. Information included the selection criteria for concept notes and funding rules. An online concept note submission tool was developed during January and February 2003 and added to the web site. This enabled text input, editing and final submission of concept notes directly into a central CPWF database. The option was left open for Word documents to be submitted by email for those with slow or unreliable internet access. This approach was not without technical issues and problems of duplicate submissions. Following the evaluation process rules and guidelines were provided on the internet for the full proposal stage. During both stages, information was supplemented by continually updated ‘Frequently Asked Questions’. The deadline for the submission of full proposals was 15 September 2003. Because of the complex attachments typical of full proposals, electronic submissions were not allowed, only hard copy.

An independent evaluation process was designed and utilized at both concept note and full proposal stage. The process involved five evaluation panels based on thematic areas supplemented by a Gender, Institutional Analysis and Participation Panel and an Environment Panel (drawn from the same members). Assessment criteria were identified for concept notes and proposals and weightings applied against which panelists nominated a score. Panelists were encouraged to provide constructive comments for proponents and were also able to provide confidential comments to guide panel discussions.

As a result of the call for proposals, 343 concept notes were received representing all themes and basins, 60% led by non-consortium members. More concept notes were received from NARES than CGIAR Centers. The evaluation panels were convened in May 2003 resulting in a set of recommendations for presentation to the Consortium Steering Committee at their meeting in June 2003. This resulted in 99 concept notes being selected to move to full proposal stage. A proposal writing workshop was subsequently held in August 2003, aimed at less experienced NARES, although all Project Managers were invited to attend.

All 99 concept notes approved to proceed to full proposal preparation submitted eligible proposals by the due date of September 15, 2003. This we consider a major endorsement of the CPWF and the competitive fund process. 98 full proposals were actually received because two concept notes working in the Limpopo basin (led by ICRISAT and CIMMYT) combined formally. No proposal was eliminated because of important violations of the submission rules. The evaluation panels were convened again (using 13 out of the original 28 members, plus 7 new members) in late September 2003 to assess the full proposals, resulting in a set of recommendations to the CSC at their meeting in November 2003. This resulted in a portfolio of 50 projects being selected for support. Copies of the concept note and full proposal guidelines are at Attachments 7 and 8 respectively. Copies of the Assessment Process for Concept Notes and Proposals are at Attachment 9 and 10 respectively. Reports on the selection process are at Attachment 11 and 12.

In the fifty approved projects all five research themes are represented (see Table 2). Themes one (Crop Water Productivity Improvement) two (Water and People in Catchments) and four (Integrated River Basin Management) achieved similar prominence, while themes three (Aquatic Ecosystems and Fisheries) and five (Global and National Food and Water System) were less well represented. The lower number of approved projects that have Theme 5 as the principal theme is partly compensated by its more common presence as a subsidiary theme (Table 3). Among concept notes originally submitted, similar trends may be seen, showing that the selection process tended to reflect somewhat the patterns of original submission – except for Theme 3, and, particularly, Theme 2, that were better represented in approved projects than among submitted concept notes.

**Table 2: Principal themes of proposals and concept notes (number of projects)**

Theme number and title	1. Crop Water Productivity Improvement	2. Water and People in Catchments	3. Aquatic Ecosystems and Fisheries	4. Integrated Basin & Water Management systems	5. Global and National Food and Water System
50 approved projects	17	14	7	15	4
98 submitted proposals	33	25	11	38	11
342 submitted concept notes	129	57	38	109	35

Note 1: rows do not sum to the exact number of proposals because projects with shared principal theme are counted in each theme they cover.

All benchmark basins are represented in the approved projects (Table 4), those in Africa, the Indo-Gangetic and the Mekong particularly well. There was a strong ‘leveling’ effect of the competitive

selection process. Those basins for which more concept notes were submitted did not dominate the final selection. The Sao Francisco, Karkheh and Yellow River are relatively under-represented in the final set. One of the reasons for this was the exclusive focus of many non-approved proposals on those basins alone. In these basins, capacity building in project preparation will be part of the CPWF’s future input.

**Table 3. Coverage of themes by proposals and concept notes (number of projects with theme as principal or subsidiary)**

Theme number and title	1. Crop Water Productivity Improvement	2. Water and People in Catchments	3. Aquatic Ecosystems and Fisheries	4. Integrated Basin & Water Management systems	5. Global and National Food and Water System
50 approved projects	24	26	9	28	12
98 submitted proposals	46	42	16	57	25
342 submitted concept notes	193	115	57	199	76

Note: All projects with at least 20% in a theme are counted

**Table 4. coverage of benchmark basins by proposals and concept notes (number of projects)**

Basin Name	Andean	Indo-Gangetic	Karkheh	Limpopo	Mekong	Nile	Sao Francisco	Volta	Yellow River	Other
50 approved projects	5	11	3	9	11	16	4	11	7	7
98 submitted proposals	7	32	8	18	22	29	8	17	11	11
342 submitted concept notes	17	136	59	46	50	72	27	43	57	27

Note: All projects with at least 10% in a basin are counted. Because of projects conducted in more than one basin, rows do not sum to the exact number of proposals.

### 3.2 Technical Outputs

The principal technical outputs described in this section result from projects selected by the competitive fund. However, as described in various parts of this report, the CPWF has many elements: building communities of practice in research themes; building diverse partnerships within and among benchmark basins; synthesis research; developing data platforms; developing links to global change research networks; and capacity building. Approximately one quarter of the CPWF budget is presently invested in these activities.

These first outputs from the competitive fund depend on the content of those 50 approved projects from the first call that are eventually funded. The titles of these projects are presented in Table 5. The expected outputs from the 25 projects likely to be funded first are summarized in Table 6

below. Obviously, the breadth of outputs and potential impact is somewhat limited in these first products of the inception phase of the Program. However, they do illustrate the varied ways in which the CPWF aims to achieve its impact. They range, to take examples, from identifying a drought-tolerant barley for part of Eritrea in the Nile basin; to studying in the Andes how lower-basin water users can pay communities in the upper catchment for water services; to balancing social needs and environmental security in parts of the Limpopo basin; to improving water use efficiency in crop-livestock systems; to understanding how participatory land and water governance functions and could function in the Mekong basin.

Just how well projects from the first call cover the research agenda depends partly on how many we are able to fund. Not all of the fifty good quality proposals selected in the first call can be funded although good progress is being made on identifying additional donors (EC, DfID, IFAD) – an activity made more critical following a substantial decrease in financial support originally announced by the Netherlands. It is therefore particularly important to inject new funding as soon as possible to support many of the 50 approved projects, and maintain the commitment and interest of the participants in the first call – particularly those from over 220 institutions involved in those projects. While IFAD have identified specific projects for support, it is not known whether the EC and DfID will go that route, or provide core funding. Germany and Denmark are providing funds to selected projects, while the Government of France is considering funding three projects from the portfolio.

A spreadsheet on the status of project negotiation with the initial 16 core funded projects and potential five restricted funded projects is at Attachment 13. Again, due to the newness of the program this section provides limited information from project leaders on early activities – mainly on implementation workshops that the CPWF is supporting prior to the projects entering into full project status. A brief status report of each of the 18 projects under active negotiation is at Attachment 14. In future reports a brief summary of progress will be provided showing key achievements.

**Table 5. Titles of approved projects**

1	Increased food security and income in the Limpopo basin through integrated crop, water and soil fertility options and public-private partnerships
2	Improving water productivity of cereals and food legumes in the Atbara river basin of Eritrea
3	Barley improvement in the Upper Blue Nile river basin and the Atbara river basin in Ethiopia.
4	Increasing crop water productivity in the Victoria Nile basin using stress-tolerant maize and bean varieties in conservation agriculture systems
5	Enhancing rainwater and nutrient-use efficiency for improved crop productivity, farm income and rural livelihoods in the Volta basin
6	Empowering farming communities in Northern Ghana with strategic innovations and productive resources in dryland farming
7	Development of technologies to harness the productivity potential of salt-affected areas of the Indo-Gangetic, Mekong, and Karkheh river basins
8	Improving on-farm agricultural water productivity in the Karkheh river basin
9	Increasing the productivity, sustainability, and water use efficiency of rain-fed cereal-based systems in the Karkheh river basin through conservation agriculture
10	Managing water and land resources for sustainable livelihoods at the interface between fresh and saline water environments in Vietnam and Bangladesh
11	Rice landscape management for raising water productivity, conserving resources and improving livelihoods in upper catchments of the Mekong and Red river basins
12	Conservation agriculture for the dry-land areas of the Yellow river basin: Increasing the productivity, sustainability, equity and water use efficiency of dryland agriculture, while protecting downstream water users
13	Developing cereal and pulse cultivars for sustainable cropping systems, increased food security and community well-being in the São Francisco basin
14	Improving water productivity and assessing agricultural-induced environmental problems in the São Francisco river basin
15	Quesungual slash-and-mulch agroforestry system (QSMAS): Improving crop- water productivity, food security and resource quality in the subhumid tropics
16	Developing a System of Temperate and Tropical Aerobic Rice (STAR) in Asia
17	The challenge of integrated water-resources management for improved rural livelihoods: Managing risk, mitigating drought and improving water productivity in the water-scarce Limpopo basin
18	Sustainable management of tree-based systems in East African highlands through bottom-up research and development interventions
19	Improved water and land management in the Ethiopian highlands and its impact on downstream stakeholders dependent on the Blue Nile
20	Sustaining inclusive collective action that links across economic and ecological scales in upper watersheds (SCALES)
21	Ensuring benefits for those who need them most: Building strong institutions for managing inclusive multi-stakeholder processes for watershed development
22	Payment for environmental services as a mechanism for promoting rural development in the upper watersheds of the tropics
23	Linking community-based water and forest management for sustainable livelihoods of the poor in fragile upper catchments of the Indo-Gangetic basin
24	Strengthening livelihood resilience in upper catchments of dry areas by integrated natural-resources management
25	Companion modeling for resilient water management: Stakeholder's perceptions of water dynamics and collective learning at the catchment scale
26	An integrated analysis of the impact of current and planned re-vegetation on the food security, hydrology, and sedimentation in the Yellow river basin
27	Forests, water and land-use mosaics: Catalyzing change in upper catchments
28	Models for implementing multiple-use water supply systems for enhanced land and water productivity, rural livelihoods and gender equity
29	Scaling water use, quality and equitable water distribution issues in the Andes and Himalayas
30	Wetlands-based livelihoods in the Limpopo basin: Balancing social welfare and environmental security
31	Integrated land-water management and fish yield sustainability: Lake Kyoga and its basin
32	Enhancing diverse wetland benefits in the Upper Nile and Volta basins through integrated catchment management
33	Effects of water-control schemes on water productivity and multi-scale impacts: Tools for assessment and management
34	Improved fisheries productivity and management in tropical reservoirs
35	Community-based fish culture in irrigation systems and seasonal floodplains
36	Improved planning of large dam operation: Using decision-support systems to optimize livelihood benefits, safeguard health and protect the environment
37	Increasing water-use efficiency for food production through better livestock management: The Nile river basin
38	Safeguarding public health concerns, livelihoods and productivity in wastewater irrigated urban and peri-urban vegetable farming in Ghana
39	Decision support for agricultural investment strategies in the Volta basin with special reference to informal smallholder irrigation
40	Integrating knowledge from computational modeling with multi-stakeholder governance: Towards more secure livelihoods through improved tools for integrated river basin management
41	Energy supply, pricing and power infrastructure management: Indirect tools for groundwater management in the Indus-Ganges basin (IGB)
42	Groundwater governance in Asia: Capacity building through action research in the IGB and the Yellow river basin (YRB)
43	Water allocation in the Yellow river: Balancing water withdrawals and ecological water requirements for food security and environmental sustainability
44	Mitigating water stress in the Yellow river basin: Strategies for agricultural water savings and improved water productivity
45	Agricultural management of water resources through modeling to enhance food security and sustainable development in the Paracatu basin
46	Planning and evaluating ensembles of small, multipurpose reservoirs for the improvement of smallholder livelihoods and food security: Tools and procedures
47	Transboundary water governance for agricultural and economic growth and improved livelihoods in the Limpopo and Volta basins: Towards African indigenous models of governance
48	Strategic analysis of India's National River-Linking Project (NRLP)
49	Revisiting the impacts of irrigation: Implications for poverty reduction, environment, financing, and water management at irrigation-system level
50	Multi-scale Mekong water governance: Interdisciplinary research to enhance participatory water governance from local watersheds to regional scales

**Table 6. Projected outputs from the 25 approved projects most likely to be funded**

Priority Area code *	Output (and project number)	Andes Basin	Indo-Gangetic Basin	Karkheh Basin	Limpopo Basin	Mekong Basin	Nile Basin	Sao Francisco Basin	Volta Basin	Yellow Basin	Other basin
1.1	First generation and prototype aerobic rice germplasm (16)		x			x				x	x
1.1	Improved drought tolerant sorghum, cowpea and cassava varieties (6)								x		
1.1	Improved drought tolerant varieties of barley, wheat, chickpea, lentil, faba bean, cowpea (2)						x				
1.1	New generation of salt-tolerant breeding lines and varieties (7)		x			x	x				
1.2	Crop production in wetlands (30)										
1.2	Developments of alternative seed delivery mechanisms (2)						x				
1.2	Improved rice based cropping systems (11)					x					
1.2	Options for rainwater harvesting (6)								x		
1.2	Strategies for efficient cropping systems (7)		x			x	x				
1.2	Technologies for improving crop water productivity (8)			x							
1.2	Technologies for improving water and nutrient use efficiency and crop productivity (5)								x		
1.2	Tools for evaluating water, nutrient and crop management technologies (5)								x		
1.2	Vegetable production using waste water (38)								x		
1.3	Crop production risk management strategies (17)				x						
1.3	Decision support tools for integrating multiple uses of water (10)		x			x					
1.3	Drought detection and mitigation strategies (6)								x		
1.3	Ecologically friendly rice-aquaculture production systems (10)		x			x					
1.3	Enhanced adoption of drought-tolerant crops (1)				x						
1.3	Options for regulating soil water cycle and carbon storage (15)				x		x		x		
1.3	Spatial and temporal variability of water and impact on crop yield (10)		x			x					
1.3	Strategies for validation and diffusion of technologies (7) + (11)		x			x	x				
1.3	Tools and methods for quantifying water quality (15)				x		x		x		
1.3	Trade-off between water use and yield of aerobic rice (16)		x			x				x	x
1.4	Impact of regional and farm level resources on livelihood at farm level (10)		x			x					
1.4	Institutional and policy options for improved crop water productivity (8)			x							
1.4	Institutional arrangements for enhancing livelihood resilience in arid lands (24)			x							
1.4	Institutional framework for rice-aquaculture systems (10)		x			x					
1.4	Market institutional innovations (5) + (1)				x				x		
2.1	Impacts of payment of environmental services on poverty (22)	x									
2.1	Methods of assessing diversity and dynamics of livelihoods (24)			x							
2.1	Options for enhancing forest and water based livelihoods (23)		x								
2.2	Guidelines for allocation wetland resources (3)				x						
2.2	Guidelines for catchment management (17)				x						
2.2	Guidelines on scaling up integrated forest and water management (23)		x								
2.2	Options for managing watersheds in arid lands (24)			x							
2.2	Participatory planning of land and water management for conflict resolution (11)					x					x

\* Codes refer to principal research areas (Table 1)

(Continued on next page)

**Table 6. (Continued)....**

Priority Area code*	Output (and project number)	Andes Basin	Indo-Gangetic Basin	Karkheh Basin	Limpopo Basin	Mekong Basin	Nile Basin	Sao Francisco Basin	Volta Basin	Yellow Basin	Other basin
2.3	Guidelines for multiple use water supply systems (28)	x	x		x	x	x				
2.3	Impact of slash and mulch agroforestry on farmer's livelihoods (15)				x		x		x		
2.3	Options for payments for environmental services (22)										
2.3	Water sharing mechanisms (25)					x					
3.1	Institutional mechanisms for integrating fish and crop production (35)		x			x					x
3.2	Ecological goods and services of wetlands (30)				x						
3.4	Co-management strategies for reservoir fisheries (34)		x					x	x		
3.4	Methodologies for assessing water productivity in fisheries (35)		x			x					x
3.4	Methodologies for integrating fish and crop production (35)		x			x					x
4.1	Basin/Watershed water assessment tools (46)	x			x			x			
4.1	Economic-Hydrologic models (40)	x							x		
4.1	Hydrologic and agronomic models (25)					x					
4.1	Livestock and environmental decision support systems (37)						x				
4.1	Water allocation/management negotiation tools (50)					x					
4.1	Reservoir planning and management tools (46)	x			x			x			
4.1	Stakeholder communications tools and models (40)	x							x		
4.1	Tools for land use decision making (22)	x									
4.1	Tools for reservoir management for fisheries (34)		x					x	x		
4.1	Trade-off analysis tools (30)				x						
4.2	Health risk reduction strategies (38)								x		
4.2	Impacts of intensification and diversification on water quantity and quality (15)				x		x		x		
4.2	Livestock production hotspots and solutions options (37)						x				
4.2	Options for waste water utilization (38)								x		
4.2	Wetland management strategies (30)				x						
4.3	Institutional arrangements for water and forest management (23)		x								
4.3	Institutional innovations (47)				x				x		
4.3	Institutional models for water governance (17)				x						
4.3	Livestock management policies (37)						x				
4.3	Options for enhancing water governance (40)	x							x		
5.3	Options for enhancing transboundary water governance (17) + (23) + (37) + (40) + (47)	x	x		x		x		x		

\* Codes refer to principal research areas (Table 1)

### 3.3 Institutional and Partnership Outputs

One of the most impressive features of the first competitive call is the wide range of institutional participation that it has stimulated. CGIAR centers, NARES (about half of which were universities), International River Basin Organisations (IRBO), ARIs, NGOs, international public organizations and projects and consultancy firms all participated in the submission of concept notes and were selected to submit full proposals. Of these, all types will participate in the 50 approved projects and the first four types lead them. Although the CPWF is a program established by the CGIAR, its inclusiveness is visible in the fact that 22% of approved projects are led by non-CGIAR institutions, especially NARES, and 38% by non-members of the CPWF joint venture consortium (Table 7). In fact, among concept notes and submitted proposals, the majority were from non-Consortium institutions – 59% - and nearly half were from NARES.

**Table 7. Number of CPWF projects led by different types of institutions.**

CPWF projects competitive call	1 <sup>st</sup>	CG Center	NARES or IRBO	NGO	ARI	Other Institutions <sup>1</sup>	CPWF Consortium Members
50 approved projects		39	10	0	1	0	31
98 full proposals		60	22	3	9	4	53
342 concept notes		127	166	7	36	6	139

Note 1: Other institutions include international public organizations, private consulting firms and international projects.

Twenty three different institutions, of which eight are CPWF consortium members, lead the 50 approved projects – 13 CGIAR centers, eight NARES, one IRBO and one ARI (Table 8)

**Table 8. Number of different institutions that lead CPWF projects**

CPWF projects competitive call	1 <sup>st</sup>	CG Center	NARES or IRBO	NGO	ARI	Other Institutions <sup>1</sup>	CPWF Consortium Members
50 approved projects		13	9	0	1	0	8
98 full proposals		13	18	2	6	4	13

Over 400 different institutions (of those, 270 NARES) participated in the 98 submitted proposals (Table 9). Of these, nearly 230 are represented in the 50 approved projects, including 158 NARES, 20 NGOs and over 30 ARIs. All submitted and approved projects include North-South and South-South partnerships, because of the requirement that at least one consortium CG Center, and two NARES, participate in each project. Of more impact still is the ‘reversal’ of typical roles in international research and development – in all the ten NARES-led approved projects, a CGIAR center is the partner in a project led by a NARES.

**Table 9. Number of different institutions that participate in CPWF projects**

CPWF projects competitive call	1 <sup>st</sup> CG Center	NARES or IRBO	NGO	ARI	Other Institutions <sup>1</sup>	Total
50 approved projects	14	158	20	31	5	229
98 full proposals	14	270	46	62	12	405

On average, each approved project includes seven institutions – 1.7 CGIAR centers, over 4 NARES and one NGO or ARI – of which an average of 1.7 out of 7 are consortium member institutions.

Equally as impressive are the results of the distribution of funds. NARES and CGIAR centers are the main recipients of funds. NARES exceed the 33% target set out in the CPWF guidelines. ARIs received 7% while NGOs less than 2%.

**Table 10. Distribution of funds between 4 institution types (prior to negotiation)**

Partner Institution	25 projects		50 projects	
	USD (thousands)	%	USD (thousands)	%
CG Centers	13,623	44%	26,069	42%
NARES	14,531	46%	30,099	49%
ARIs	2,395	8%	4,513	7%
NGOs	747	2%	806	1%
TOTAL	31,295	100%	59,123	100%

The following conclusions can be drawn against the objective of the Challenge Programs to open up the CGIAR to external partners:

- The CPWF competitive call has attracted a very wide interest from a very large number of research institutions around the world. Forty three research organizations led the 98 submitted full proposals, and over 400 organizations participated.
- The CPWF is not closed to the Consortium members: 45 of the 98 submitted full proposals, and 19 of the 50 approved projects are led by research organizations that do not belong to the Consortium.
- The CPWF has attracted system-wide attention from the CGIAR centers. Thirteen CG centers lead one or more of the 50 approved projects and 14 centers participate.
- Nearly half of the budget of approved projects as a whole (and at least a third in each) is allocated to 158 NARES partners in the 50 approved projects. Nine of these projects are led by NARES partners. The share of projects led by NARES partners is not very high, but is considered a good start.

The CPWF also stimulates public-private partnerships. An early example is a partnership with DHI whose sponsorship, through free software use (which has an estimated value of 1.1 million Euro) will be of major benefit for all research activities that require the application and development of numerical models. This is of particular importance for researchers in developing countries. Not only

will the participants be able to apply the software, but DHI will support individual partners that require specific developments of the existing code and the possibility to link their own developments to the DHI software environment. This innovative cooperation between DHI and CPWF provides new options for multidisciplinary collaboration among scientists from different research organizations around the world. It will allow specialized scientific software programs to be linked up to state-of-the-art water resources software, including use of GIS technologies, platforms for on-line systems, optimization, among others.

Building from the baseline conference (BLC) and from other contacts, the integration plans for the CPWF with advanced institutions have expanded considerably. A workshop on indicators for river basin assessments was held starting on the last day of the BLC with the participation of 22 specially invited experts from advanced institutions around the world. More information on how this activity is progressing is contained in Section 4 of this report.

The CPWF and its partner CPs on Biofortification (“HarvestPlus”) and Unlocking Genetic Diversity (“Generation”) are arranging more frequent contacts. Howdy Bouis from Harvest Plus provided an overview of the program at the CPWF Theme Leaders’ meeting in Washington D.C. Bob Zeigler from Generation took part in the Steering Committee Meeting in Brazil, where Joachim Voss also made a presentation on behalf of the HarvestPlus program. Representatives from the three CPs are taking part in a workshop 28 June – 1 July, focused on intellectual property rights, with an extra day for sharing information and ideas on other topics including reporting and monitoring and evaluation.

The CPWF has arranged to co-organise the following events, or seminars within them:

- Stockholm Water Week from 15-21 August 2004, where seminars have been proposed on environmental experiences from Andean basins, integrated management of the Indo-Gangetic basin, Keeping the Yellow River Healthy (in collaboration with the YRCC and China Ministry of Water Resources), Environmental Aspects of Aquatic Systems (co-sponsored with the Comprehensive Assessment on Water, Food and Agriculture, WorldFish and SIWI), Integrated Basin Management (co-sponsored with the Comprehensive Assessment).
- American Society of Agronomy, Seattle 1-4 November 2004. Jim Hill (UC Davis), Colin Chartres (CSIRO) and Simon Cook (CIAT) will co-organise a half-day seminar on the CPWF at the invitation of the organizers who are promoting the links of the Society to the Challenge Programs.
- The Conference “North South Analysis of Global Change Impacts on Watersheds” expected for early 2005 (CPWF was invited by ZEF to co-organise with several others and Deborah Bossio attended a planning meeting 19 March).
- InterDrought II scheduled for May 2005 in Rome, where the CPWF will be a co-sponsor.
- The International Rice Conference to be held in Vietnam in late 2004 where the Mekong River Commission is a co-sponsor.

Additionally CPWF formal presence is planned in the following international meetings:

- The FAO Netherlands Conference on Water and Food also planned for 2005.
- The International Crop Science Congress at Brisbane 24-28 September 2004.

- South Asia Water Week in Bangladesh in June 2004.

The CPWF was also represented at the Southeast Asia Water Week in Chiang Mai in November 2003 and at the Pan-Africa Water Forum in Addis Ababa in December 2003. As well as providing opportunities for scientific contact these meetings also offer opportunities for follow up of project negotiations and for contact with donors and potential donors.

At this early stage, there is already an exciting example of the catalytic effect that the CPWF can have within projects, in this case through the approval of Project 37 on livestock-water interactions, and the great contributions that key collaborators can have towards the goals of the CPWF. Partly as a consequence of this CPWF support, ILRI has established a new priority on this theme and has freed up more time of Don Peden (PL of project 37) to dedicate to this priority. In his own words: “Water and Livestock (is) a newly established priority for ILRI. At the start of the CP process about three years ago, the issue of livestock water interactions was not on the horizon of either the embryonic CP or ILRI. The CP process has changed the thinking of ILRI, and is now formally accepted by ILRI's management as one of the important research issues for the institution in the years immediately ahead. This change is largely due to the encouragement and support that has come from the CP .....”

Among other initiatives, Don Peden has made a number of key contacts to establish stronger collaboration with the Sudan whose Ministry of Science and Technology is very keen to make the CP a flagship program within its newly established Sudan Academy of Science. The nexus of water, human health, livestock and animal feed is of the highest priority to the government in Khartoum. Don considers that there is a great opportunity to strengthen the CP's presence in Sudan and writes: “What is so compelling to me is that we can package our CP work as strengthening the peace process through better livestock-water management. From the minister to nomads that I met, this seems to be perceived as the primary issue underlying internal and international conflict in the Country.” In a related move, the CP secretariat has been included in an emerging CGIAR process to support the needs of the southern Sudan.

### 3.4 Synthesis

In future reports this section will provide an extract from the Annual Synthesis Reports that are required from the Theme Leaders and Basin Coordinators as part of the monitoring and evaluation procedures at the Process Level. As mentioned earlier, the initial research agenda was developed under the leadership of the Theme Leaders with Thematic Working Groups established from the large number of researchers involved in the process. Several Thematic Workshops and group meetings have been held resulting in the publication of synthesis papers and the Research Agenda of the Challenge Program. This publication and the Research Agenda were also placed on the internet (see [www.waterforfood.org](http://www.waterforfood.org)). The publication is available as a separate document. Theme Leaders have been active in guiding the development of concept notes, and developing a method to deal with cross-cutting and integrative issues within their analytical and conceptual framework.

The major task undertaken by the Benchmark Basin Coordinators during 2003 was the compilation and analysis of the respective benchmark basin profiles. The nine benchmark basin coordinators worked closely with their respective stakeholders and carried out detailed research and analysis to

compile this document. ‘Kick-off’ workshops were held in most Benchmark Basins. These workshops had multiple objectives (1) develop and grade the basin research priorities in a participatory fashion together with major stakeholders (2) to inform stakeholders about the objectives of the Challenge Program (3) to publicize the call for concept notes and to bring together the formation of research networks for collaboration with the Benchmark Basin Coordinator as the focal point for the basin (4) to carry out a stakeholder analysis and assess which inter-sectoral and institutional linkages needed to be developed further, focusing upon major stakeholders in the water and agriculture sectors, and to a lesser extent in the environmental sector. Workshop outputs were prepared from each workshop, and made publicly available on the Challenge Program website. A detailed literature survey was carried out on each basin and some of the basins developed CPWF brochures and newsletters to stakeholders, translated into the main basin languages.

Following the successful completion of the first call for proposals, two important areas of synthesis research by Theme Leaders and Basin Coordinators has been gap analysis and the preparation of a concordance. Gap analysis determines how well the selected research projects cover the research priorities. The concordance integrates and rationalizes theme and basin priorities within a single framework. Gap analysis was first conducted with existing priorities but will be repeated once priorities have been focused and harmonized in the concordance.

Working with these two methodologies (gap analysis and concordance) the CPMT will develop recommendations to the CSC of the outputs that would add value to the currently funded portfolio – and the most efficient methodology for filling those gaps. These include competitive calls, competitive tendering, commissioned research, synthesis research by theme and basin leaders and identification of (and linking to) work being undertaken elsewhere.

In 2003, the output from the five themes included synthesis papers, reports, draft papers, state of the art reviews, workshop reports and workshops as follows.

#### **3.4.1 Synthesis Papers**

- Achieving high water productivity by taking into account livestock / agriculture interactions in water stress areas
- Capitalizing on new technologies for improving crop water productivity: remote sensing, short and long term weather forecasting
- Applying science to crop water productivity: who pays if we succeed and who pays if we don’t?
- Integrating germplasm development and natural resource management for increasing water and land productivity in drought environments.

#### **3.4.2 State of the Art Reviews**

- Governance.
- Aquaculture.
- Small Water Bodies.
- Lakes and Reservoirs.
- Rivers and Floodplains.
- Integration of Aquaculture with Farming Systems.

### 3.4.3 Reports

- Conceptual framework for research on integrated basin water management system.
- Integrated basin water management research agenda, portfolio, operational plan and the synthesis and dissemination strategies.
- What do we already know? A bibliography on basin level water management
- Agricultural water management in Sub-Saharan Africa: Issues, challenges and future options.
- Africa river basin case studies: Lessons learnt and the way forward
- Basin profile methodology for scoping integrated basin water management issues, information and research needs and priorities
- Strategies for enhancing basin level water productivity.
- Data management plan for the CPWF
- Status of basin data: results of questionnaire survey
- Framework for integrating indicators and monitoring evaluation into research programme
- Environmental Services

### 3.4.4 Draft Papers

- Technological and management interventions for enhancing basin water productivity.
- Institutional innovations for enhancing basin water productivity.
- Improving access of information for enhancing water productivity.

### 3.4.5 Workshop Reports

- Data management
- Indicators for river basin assessments

### 3.4.6 Workshops

- Research priorities and methodologies in assessing changes in water productivity: socio-economic perspectives.
- Improving water and food productivity at different scales in drought-prone and saline areas.
- Economic incentives for Water Allocation: Global, National and Micro levels.

### 3.4.7 Web Pages

- Themes 2 and 5 have developed dedicated web pages to provide additional information. This includes a more in depth discussion on the conceptual framework within which the themes operate and publications that are produced through the commissioned research component of the CPWF. Theme 1 is developing its website.
- Theme 2 has constructed an annotated bibliographic database of grey and white literature of recommended readings.
- Theme 2 also provided an overview of participatory research and learning processes and their relevance to watershed management and development.

Theme 4 has produced a brochure on 'Integrated basin water management systems'. Eight basin profiles (Yellow, Mekong, Indo-Gangetic, Nile, Limpopo, Volta, Sao Francisco and Andes) were provided by the basin coordinators. These were edited by the Theme 4 leader as a CPMT product,

including a draft basin profile synthesis report: Status, vision and required actions: basis for a research on enhancing agricultural water productivity.

### **3.5 Data Management**

A georelational database structure is being developed for the CPWF, to which many different datasets at global, basin and local level could be linked. Much of the information will be able to be viewed over the internet via a River Basin Information System which is being developed using open source software. Data base administrators (DBAs) from each of the benchmark basins participated in a training program held at the University of Jena, Germany in October 2003. The administrators were trained to use the Data Base Networking Software (DBNS). Additionally, three programmers from IWMI support staff were trained as trainers of DBAs at the same university and worked alongside trainers from Jena at courses in the Limpopo and Indo Gangetic Basins.

The aim of the data management component is to initiate and implement the foundations for data sharing for the CPWF. It does not aim at reengineering the way data is being collected, processed, and analyzed within research projects funded by the CPWF. Instead, it will assess data requirements for each funded research project and integrate them within a basin perspective. It will provide monitoring of shared data and achievements on data sharing agreements to users, basin coordinators, and CPWF management. This monitoring is intended to encourage increased contributions of data through highlighting the benefits that can be gained through data sharing. For CPWF management, it will serve as an efficient tool to ensure funded research projects are delivering on time the data they agreed to deliver. For each funded projects the deliverables are: a data dictionary and a conceptual data model. The data dictionary will describe the required data as well as its availability. The conceptual data model will present the projects' context from a database point of view. An Operational Data Store (ODS) will be set up and delivered to facilitate data integration as well as batch loading of data into the Integrated Data Information System (IDIS) prototype. The ODS will host the relational database as well as the procedures and tools to extract and import data from data source files into the IDIS prototype. The multidimensional database will support monitoring of data sharing. This project will also build capacity in the operation and maintenance of the ODS. A copy of the Work plan for Data Management is at Attachment 15, together with a paper prepared by the data management contact person in the CPMT with the project leader of the data management initiative.

### **3.6 Links to Global Change Research Communities**

The primary goal of this activity is to develop and maintain linkages between International Global Change Networks and the CPWF at the institutional level. These networks coordinate research worldwide on all aspects (causes, consequences and societal responses) of global environmental change. Attention will concentrate on those that focus on changes in the water cycle, such as HELP (Hydrology for Environment, Life, and Policy), GWSP (Global Water System Partnership), WWAP (World Water Assessment Program), ICSW (International Commission on Surface Water) GECAFS (Global Environmental Change and Food Systems), GLOWA (Global Change in the Hydrologic Cycle), FRIEND (Flow Regimes from International Experimental and Network Data), and also the IGBP's terrestrial ecosystem program, LUCC (Land Use and Cover Change).

One activity in this area builds on a two day workshop held in Nairobi in 2003 for twenty one key researchers in the global arena. The researches discussed the formulation of a common set of indicators for river basin assessment including issues related to the definition, assessment, application and interpretation of:

- indicators that can describe kind, magnitude, vulnerability and adaptive capacity of natural and human systems to water related changes affecting the hydrological cycle, water availability and water use for food production and human development, water quality and aquatic environments.
- complex indices that integrate and quantify the dynamic system status such as Integrated water resources management, environmental quality, the social and economic value of water and water allocation, or the basin's vulnerability in respect to disasters.

The participants reviewed current approaches in social and natural sciences; identified and evaluated relevant indicators and indices for assessing benchmark river basins in terms of the human and ecological well-being; evaluated the potential offered by innovative techniques, such as remote sensing, GIS, modeling and integrated data management; and proposed steps to enhance the work on development, application and use of indicators. Four major steps were identified (1) Strengthen partnerships among the institutions and individuals involved, (2) Set up a working group to guide the work on further development, (3) CPWF to finalise its strategies for selection, testing, adoption and use of indicators that meet it stakeholder needs and easily feeds with other indicators (development, environment, human) and (4) CPWF to work with GWSP to test and apply indicators at basin and sub basin scales. A copy of the work plan for 2004 is at Attachment 16.

Other links to global change research are being developed by Theme 5.

## Capacity Building 4

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### 4.1 Overview

The CPWF is in the early development of the capacity building component of the program. A strategy has been devised and is being refined for further consideration by the Consortium members. Discussions have commenced with Agropolis (Montpellier, France) regarding integration of efforts and the practicalities of locating this component of the program on the Agropolis campus. Consortium members are exploring other interested parties who may wish to enter into discussions to work with the CPWF – including the secondment of a Training Officer. A competitive funding process may be used to make the final decision depending on the level of interest detected. The overall capacity-building strategy of the CPWF is to improve the capacity of institutions, individuals and communities in the CPWF Benchmark Basins to effectively manage these basins for the purposes of meeting the CPWF's objectives. A copy of the draft strategy is at Attachment 17. The strategy comprises a series of core components that define its rationale. This under-lying logic may be divided as follows:

- *Understanding capacity weaknesses:* the Strategy calls for an assessment of capacity weaknesses in each of the Benchmark Basins.
- *The importance of networks and local ownership of the capacity-building process:* the CPWF recognizes that in order for capacity-building processes to have an enduring impact in their target basins, capacity-building must be locally owned.
- *The importance of training:* training is a key method of capacity-building. The CPWF recognizes that the ability of individuals to meet its objectives necessarily entails the creation and/or improvement of capacity within the Benchmark Basins. So as to reinforce intra-basin capacity-building, training opportunities and goods will, wherever possible, be sourced from Benchmark Basins
- *Dissemination:* The CPWF is aware that much scientific research carried out under its various programs may improve capacity within and between research institutions. It is vital, however, that its research results should also be able to contribute to capacity-building and strengthening in other sectors.
- *Endurance:* this refers to capacity-building that has a long-lasting impact. The CPWF Capacity-building Strategy seeks to ensure that capacity improvements in the Benchmark Basins endure and continues to bear fruit after the completion of the Program.
- *Co-ordination:* in order for the Strategy to have maximum benefit, it calls for the recruitment of a Capacity-building Officer to coordinate its implementation, ensure that capacity-building is directed at where it is most needed and to give the Strategy the attention it requires to sustain its momentum in the long-run.

## 4.2 Outputs

During 2003, the CPWF convened a Proposal Writing Workshop to assist project leaders from outside the CGIAR with less experience in writing. Thirty four men and women from 15 countries participated. As well as providing an opportunity for the project leaders to better understand the proposal requirements and refine their skills, they were also able to meet other researchers to exchange views.

The value of capacity building within the CPMT itself should not be under estimated. The CPMT brings together a diverse group of people – international scientists from the CGIAR and national NARES scientists with a range of experience and exposure to international agencies. The CGIAR scientists provide an international perspective on program and project development and management while the NARES scientists provide a reality check on the environments within which they operate in their individual countries.

## Public Awareness 5

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### 5.1. Communications

At the Nairobi Baseline conference, while the researchers provided poster displays of their projects – many of which were provided by proponents who had submitted proposals not included in the initial portfolio of fifty projects – explanatory materials were produced for wider dissemination. Four page brochures were produced with a layout and content suitable for a broad audience of people. The brochures explained the individual thematic areas of research, and descriptions and priorities of benchmark river basins. A further brochure explained the governance and management structure of the CPWF and an overview of how the individual research thrusts and river basin coverage meld into the objectives of the CPWF. Many documents were provided on a CD, including an array of background information, river basin profiles, and electronic versions of the brochures, posters, presentations and the initial portfolio of fifty projects.

In 2004 a strategic plan has been formulated in close collaboration with the media plans for 2004, including the improvement of inter and intra-basin communication and knowledge sharing; the launch of a CPWF newsletter, further refinement of the CPWF web page to better meet the needs of the range of users; and the provision of support during major water related events at which the CPWF is represented. The production, distribution and display of out-reach material will also continue on a needs basis, including brochures, posters, publications, CDs and promotional merchandise.

### 5.2 Media

The Baseline Conference in Nairobi provided an ideal opportunity to disseminate information to the wider general public. This was achieved through a program of media interviews, both formal and informal, including newswires, television, radio, newspapers, magazines and online coverage. As well as journalists participating in the conference, news print articles were provided directly to the international press, resulting in many articles including the Financial Times. The CPWF was also covered on the internet by CNN and the BBC.

In 2004 opportunities will be taken to promote and disseminate information on the CPWF at major international conferences and events linked with water (i.e. such as the Stockholm Water Week), capitalizing on the participation of CPWF personnel. A media data base and increased media networking will be developed for increased distribution of materials. A program of basin level launches is planned, commencing with the Mekong (held in Thailand), and later in the Sao Francisco, Andean, Volta and Limpopo basins.

## Governance and Management 6

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### 6.1 Consortium Steering Committee

The CSC met in November 2002 at the WorldFish Center, Penang, Malaysia. At the November meeting, the CSC considered budget issues, work plans, and the process for the competitive grants component. Applications were also considered from five river basins seeking to join the Program: the Mekong, Volta, Andean, Amu Darya and the Uluu. The Mekong was approved as a full Benchmark Basin. The Volta and Andean system of basins were approved at that point as Associate Basins, but have since been given full Benchmark Basin status. The CSC met again in June 2003 at IRD, Paris. Decisions were made on various procedural issues, as well as the concept notes suitable to be worked into full proposals, and the procedure that should be followed for their development and review. At their meeting in October 2003 held at ICAR in New Delhi, the main focus of discussions were approval of the initial portfolio of projects and the procedures for contracting including the project cycle and monitoring and evaluation process. As the CPWF matures and procedures become established, the Steering Committee is expected to move towards a focus on the longer term directions of the program and identify procedures to guide the program into the future. This direction was clearly evident at the March 2004 meeting in Salvador, Brazil. The terms of reference of the Steering Committee are contained in the Joint Venture Agreement. These may need to be revisited in the light of experience. For instance, it may be more efficient for the Steering Committee to meet once rather than twice a year depending on the decisions to be taken that require all members to be present.

### 6.2 Management Team

The Challenge Program Management Team (CPMT) met in Penang, Malaysia during November 2002; in Cairo, Egypt during February 2003; in Paris, France in June 2003; and in Nairobi, Kenya in November 2003. Budgets, work plans and strategies for working with the dispersed Management Team were discussed in the different meetings and a series of team-building activities was undertaken. The secretariat also experimented with separate meetings of theme leaders (Washington D.C., USA, September 2003) and basin coordinators (Naivasha, Kenya, November 2003).

The program coordinator invited CPMT members at a meeting in Nairobi in November 2003 to prepare their workplans and budgets seeking to be innovative in a situation of limited budget and particularly to adapt their proposals to the gaps identified through gap analysis that each would conduct. A conclusion was also reached in Nairobi to meet 3 rather than 4 times in 2004 so as to reduce costs, and not to continue for the moment with separate meetings of theme leaders and basin coordinators. The lower frequency of meetings places extra demands on the use of electronic media and telephone. We can say that we are learning how to operate as a large, virtual, dispersed team, and that we are making progress. Tables of “Deliverables, Accountability, and Deadlines” are generated in each team meeting, recorded in a table and monitored. These are proving an effective tool. Although some deadlines are still missed, team members have become more aware of the

linkage among key activities and (often) later recuperate delays. Volunteering for responsibilities among some team members has been very supportive.

Special responsibilities have been taken on by Theme Leaders and Basin Coordinators in developing the CPWF strategy. Simon Cook consulted Theme Leaders to develop an early paper on theme leader responsibilities; Gunhild Garsdal carried out a similar task with basin coordinators and Kim Geheb drew up ToR based on her work. Kim also prepared a paper on basin coverage for the CSC, working from initial ideas by Hector Cisneros. Additionally he designed and analyzed a questionnaire to concept note and project proponents about their experiences and wrote up the results. Simon Cook, Martha Otero and Jorge Rubiano designed a uniform format, consulted team members and prepared a synthesis of gap analysis. Kim Geheb, V. Sugunan and Martha Otero provided detailed comments on the draft M&E paper developed by consultant John Howell. John Bennett and Bing Bayot prepared a draft concordance to integrate theme and basin priorities in a single sheet as a tool for simplifying and consolidating them, based on an original idea by Francis Gichuki. Simon Cook, Mark Rosegrant and Patrick Dugan prepared a paper to compare and contrast commissioned and competitively identified research.

CPMT members also accepted assignments for longer term special team responsibilities including Francis Gichuki, to chair the Organizing Committee for the Nairobi Baseline Conference, to coordinate links with data sharing, uniform indicators and basin profiles. Kim Geheb, to coordinate capacity building and (from April 2004) interactions with our Gender, Institutional Analysis, and Participation (GIP) advisory panel. V. Sugunan acts as a focal point for environmental concerns and analysis for the CPWF. John Bennett acts as the technical link with the HarvestPlus and Generation Challenge Programs. These responsibilities are in addition to the products and activities of each theme and basin.

### **6.2.1 Theme Leaders**

Summaries of the 2003 activities of Theme Leaders are at Attachment 18 including results of the gap analysis and plans for 2004. Full reports are available as a separate document.

### **6.2.2 Benchmark Basin Coordinators**

Summaries of the 2003 activities of the Basin Coordinators are at Attachment 19 including results of the gap analysis, and plans for 2004. Full reports are available as a separate document.

## **6.3 CPWF Secretariat**

During 2003 a staffing strategy was developed for the Secretariat and premises assigned. The Secretariat is currently led by a Coordinator who is an expert on research and extension processes, including competitive grants, supported by a senior Program Manager, with complementary experience. These appointments ensure the highest international standards of transparency in the operations of the program.

The Secretariat staff have over the past year developed, implemented and managed the process for the first call for proposals. The identification of members for assessment panels for concept notes and full proposals was achieved. Two panel meeting were subsequently convened. A capacity building workshop was convened in an effort to ensure high quality proposals. Meetings of the CSC

and CPMT have been organized, including extensive background and discussion papers. Much effort has gone into working with the management team members in developing the research agenda. The Secretariat provided the logistical arrangements for the Nairobi Conference with the assistance of a conference organizer. A method of contracting has been devised that acknowledges the multiple roles of the CGIAR centers involved whose role is to manage the portfolio of research projects. Agreements have been drawn up with the Theme Leaders and Basin Coordinators following agreement on their annual work plans and budgets. A monitoring and evaluation system was designed that has since been further developed with the assistance of an M&E expert. Spreadsheets to track expenditures have been designed, and the secretariat has worked with the IWMI accounts department to provide expenditure statements that better fit the activities of the CPWF. The secretariat has also been involved in identifying and liaising with the donor community. The Secretariat work plan for 2004 is at Attachment 20.

Many others members of CPWF institutions commit considerable time and effort to the CPWF Secretariat activities, including, but not limited to, Sanjini de Silva who dedicates much of her time as Communications Coordinator, Patrick Fuller who advises on media, Pierre Marchand who is developing the shared data platform, Deborah Bossio who develops contacts with global change research institutions. The IWMI accounts department provides financial management support, and the IWMI Information Technology Group provides support for computing and web services.

## **6.4 Expert Panels**

### **6.4.1 Expert Panel on Scientific Quality**

As instructed by the CSC, an Expert Panel to oversee the scientific quality of the CPWF was appointed. The Secretariat approached the candidates identified by CSC members. As a result Professors, Peter Rogers, Albert Wright and Ted Scudder have now all agreed to participate in the program, with Professor Malin Falkenmark joining later. The initial task of the Panel was to verify and ratify the selection panel for full proposals. The Expert Panel was consulted on three separate occasions as the full proposal selection panel was identified.

### **6.4.2 Assessment Panel**

A data base of several hundred qualified evaluators has been constructed covering a diversity of disciplines and representing all regions. Evaluators are not sought on the basis of institutional affiliations, but on their individual expertise and experience. Panelists were required to declare any potential conflict of interest. Remote evaluation has not been adopted – rather panelists are brought into Sri Lanka to a location separate to IWMI. Panelists supported this approach and comments were received that (1) they would not have had time for evaluation at their home base (2) such evaluations were more likely to be careless, distracted or un-uniform because of outside pressures (3) there was more danger of inappropriate outside influence and (4) that the experience of carrying out individual evaluations, but as a group, helped to ensure quality, concentration and productivity. However, the cost and time pressure of convening panel meetings are high. At the concept note stage, a short list of 50 potential panelists was identified, 36 confirmed their availability, and 25 received confirmed invitations to participate. A reserve list was also constructed which was utilized due to the higher than expected level of concept notes received – the panel therefore numbered 28.

### **6.4.3 Gender, Institutional Analysis and Participation Panel**

In collaboration with the System-wide Program on Collective Action and Property Rights (CAPRI), and the Gender and Diversity program, an Ad Hoc Advisory Group on Gender, Institutional Analysis and Participation, was convened in early 2003, and in May 2003 was constituted as a specialist Panel. The objective of the Panel, who also take part in assessment of concept notes and proposals, is to ensure that state-of-the-art social research and gender issues are fully integrated into the CPWF, and to guide the processes of stakeholder involvement and social learning taking place in each river basin.

## Legal 7

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### 7.1 Contract Documents

During 2003 the Program Manager of the CP Secretariat worked with a legal advisor (Dodds and Associates located in Washington D.C.) and with the five Consortium CGIAR Centers to develop the legal documentation of the program. The resultant documents support the dual role of CGIAR Centers as research managers and research implementers that is contained in the Joint Venture Agreement and the partnership approach of the program. Consultation on these documents is almost complete and it is expected that signatures will be applied shortly to enable the CPWF to enter into agreements with the project leaders for project activities to commence in earnest. The starting point for the development of the documents is the Joint Venture Agreement, which identifies IWMI as the legal representative of the Consortium. Three documents are involved:

1. The first is a **Memorandum of Understanding** among the five CGIAR Centers, which sets out the ground rules for managing projects (under the Joint Venture Agreement the Managing CGIAR Center receives a fee of 4% of the total CPWF project budgets which they manage). The MOU links the CPWF, through (and including) IWMI as the legal representative, with the four consortium CGIAR Centers on an equal and common basis of service provision (although IWMI remains the legal representative, the Consortium members are 'jointly and separately' liable).
2. Annexed to the MOU is the **Project Agreement** containing the standard clauses. These clauses state the obligations of the 'Managing Center' (i.e. one of the five CG Centers), and the 'Recipient' (i.e. the institute within which the project leader is lodged), and the CPWF. Management procedures are clearly laid out including reporting requirements, payment processes, intellectual property rights (expanded from the HarvestPlus program), and the process for revision and termination of projects. The Project Agreement also explains the management procedures of the three phase project cycle.

By signing the MOU all Centers automatically agree to abide by the standard clauses under which research projects are managed on behalf of the Consortium. The MOU can exist for an indefinite length of time (until the CPWF ceases to exist), and can be altered by agreement of all parties concerned. The MOU covers all contracting for services, whether it is competitive or commissioned research. Flexibility is provided by document three:

3. The third document is a **Letter of Agreement**. This letter is issued by the CPWF to the project leader (copied to the Managing Center) at the conclusion of project negotiations (which is carried out by the Secretariat – initiated by a standard 'Letter of Intent'). Countersigning by the project leader activates the project and the standard clauses then apply. The Letter of Agreement is used to link the individual project deliverables (through the Project Proposal), maximum budget and payment schedule, and the project planning documents outlined in 2.9 below. The letter can state any additional that may apply to either party beyond the standard clauses. The letter overrides the clauses in the Project Agreement where it is desirable to do so and can state clauses that are not applicable.

Consortium CGIAR centers will be requested to implement projects where the principal theme of the project falls within their mandated discipline. Projects with equal value thematic areas will be contracted under the most appropriate CGIAR center following an analysis of activities and in consultation with the Centers involved. Consortium CGIAR centers will manage all projects, regardless of theme, where the Project Leader is located within the Consortium center for ease of technical and financial management. Copies of these documents are at Attachment 21, 22 and 23.

## 7.2 Three Phase Project Cycle

The program is adopting a three phased approach to managing projects that enables flexibility in research methodology as projects mature. This approach enables clearly defined time frames for submission of project planning documentation, external reviews, and revisions. It also puts project leaders on notice that their project does not automatically proceed from one phase to the next if there are serious doubts about the progress of the work. This procedure is outlined below:

**Phase one (Planning Phase)** is initiated by the 'Letter of Agreement' from the CP Secretariat. The rationale behind the use of a short planning phase is to enable new partnerships to be better established and a further critical examination made of the methodology, team expertise, realities of communications etc. amongst the team. Many projects have allowed for early planning meetings to take place, and have budgeted accordingly. The time frame will be based on the complexity of the project and will be established during the negotiation process (expected to be one or two months). An appropriate budget for the period is agreed during the negotiation process.

During the planning phase a two year milestones table, budget, schedule of payments, two year work plan and asset audit must be constructed for submission to the managing CGIAR center for endorsement, following which phase two will commence. The period may also allow for baseline surveys to be completed depending on the project. This is a description of the initial situation of the target group and is limited to describing aspects that the project intends to change. Refinement of plans for internal monitoring and evaluation procedures can also be undertaken.

On completion of the planning phase, any one of three key points can nullify the agreement (1) strong evidence that the proposed team is not functional (2) a feasible work plan and milestone table is not provided, and/or (3) a realistic budget is not agreed. If any of these points are clearly the case, the Consortium CGIAR center involved, recommends to the CP Secretariat that the project agreement is terminated. An offer can then be made to the next ranked proposal that is waiting for funds to become available.

**Phase two (implementation phase)** Successful projects then enter the implementation phase activating the milestones table for monitoring and evaluation. This process is covered in the separate Monitoring and Evaluation paper. The implementation phase lasts for up to three years, inclusive of the planning stage. Towards the end of the two year work plan and milestone table, a further one year plan and table must be submitted to the managing CGIAR center for ratification which guides the research through to the end of the implementation phase.

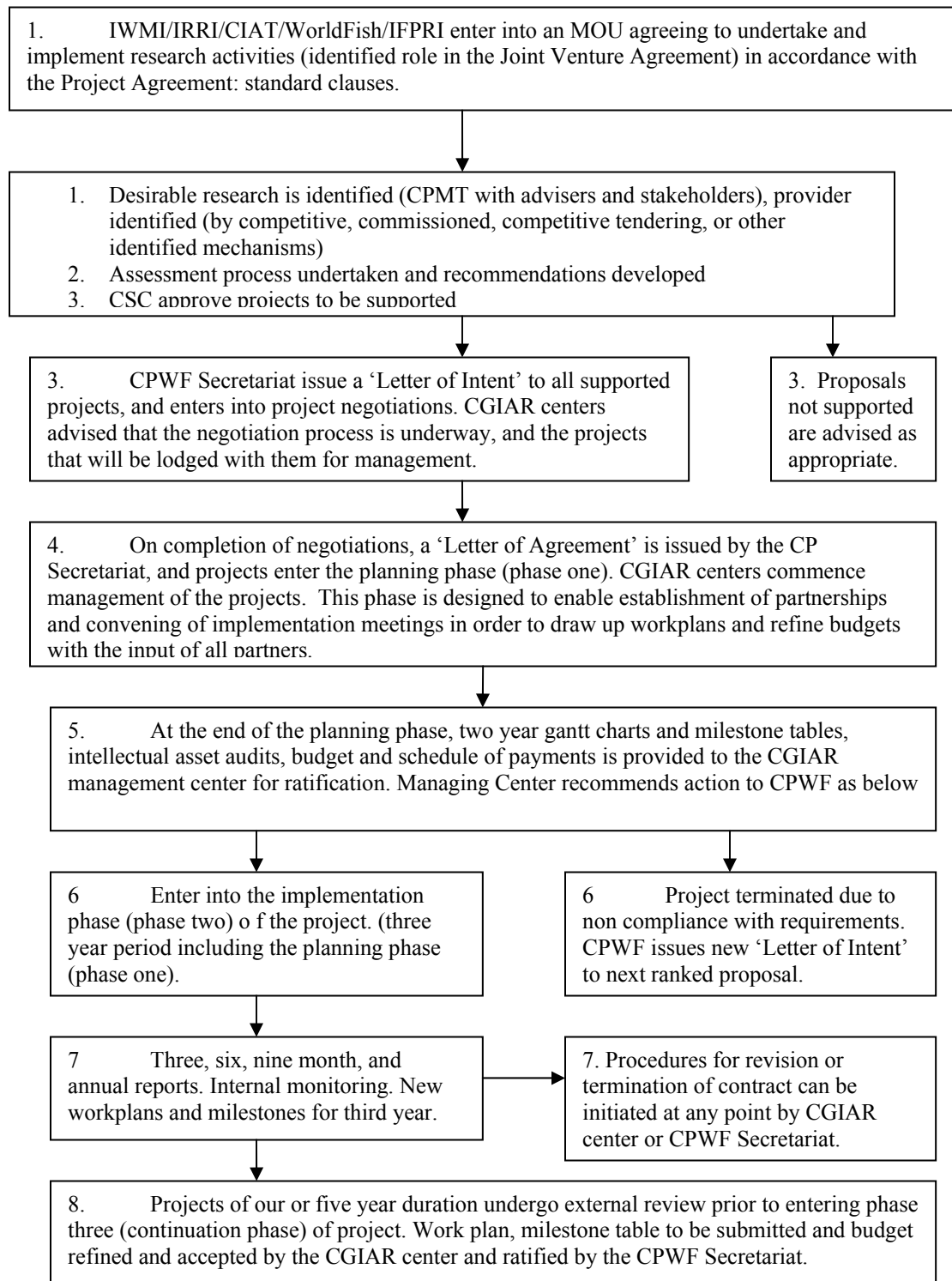
**Phase three (continuation phase)** Projects with a four or five year time frame are required to undergo an external review prior to entering the continuation phase of the project. The Project Leader must also submit a new work plan and milestone table, and refine the budget accordingly. The Consortium CGIAR center endorses the project for continuation, and submits to the CP for continuation of the agreement.

### **7.3 Intellectual Property and Assets Management**

The Secretariat has worked with an international lawyer and in consultation with the five CPWF CGIAR Centers, to ensure that the standard clauses of the Project Agreement reflect the international public goods nature of the CGIAR. The approach used by the HarvestPlus Program has been adopted on joint ownership and open access, as well as a requirement for disclosure by the project leaders. The decision on protection of results from CPWF research resides with the CSC with the aim to keep results in the public arena. A procedure will be formulated in the coming months on the decision process. Should protection be required, the IWMI, as the legal representative of the CPWF, will hold any tangible or intangible intellectual property for access free of charge through an 'Assignment Agreement'. Commercially valuable IPR is addressed through the MOU between the five CP Centers. (see Attachment 21, clause 7 for the MOU and Attachment 22, Clause 5 for IPR in the Project Agreement).

A completed Asset Audit Form is required from each project leader prior to entering into phase two of the three phase project cycle. A recently formulated 'Third Party Intellectual Property' audit form was kindly shared by the IRRI IPR Specialist. Following adjustment to fit with the CPWF requirements, this form has been provided to each project leader. The rationale for this exercise is to ensure that researchers are not accessing property with caveats attached that may preclude wide dissemination of results. See attachment 24 for a copy of the audit form.

The CPWF will also be participating in an IPR workshop currently under development with the CAS and other Challenge Programs. This will take place in late June at IPGRI in Rome. The aim of the workshop is to ensure the establishment of a common approach by the Challenge Programs to intellectual property management, as well as an increased understanding of the issues involved. The third party intellectual audit form will be shared, and IPR clauses contained in contract documentation discussed. For the CPWF issues of data sharing is a critical area as the program continues to develop the meta data base.



**Figure 3. Contract and Project Cycle Flow Chart**

### 8.1 Program Transaction Costs

Table 11 below illustrates the transaction costs of the CPWF in its initial stages of implementation. The table is a summary of CPWF expenditure in 2003 and compares it with the proposed budget for 2004. It can be seen that the transaction costs of the implementation year were relatively high due to the costs of establishing the first call for proposals (reflected as ‘total secretariat’). This is seen as an investment in the development of the portfolio.

**Table 11. Estimated expenditures and transaction costs of CPWF**

Expenditure Item	Inception Phase Nov 2002 to Dec 2003 (US\$,000)	Implementation Phase Jan - Dec 2004 (US\$,000)
1. Secretariat, Steering Committee, Evaluation Panels = ‘transaction costs’	1216	819
2. Theme Leaders and Basin Coordinators = commissioned research and concertation	2778	1965
3. Capacity Building	86	70
4. Public Awareness (including Baseline Conference and links with Global Change Research research community	413	168
5. Data Platform Design and Implementation (including training)	365	62
6. Research projects resulting from first competitive call (CPWF investment in first 23 projects likely to be funded – conservative estimate)		5486
Total expenditure	4858	8570
Transaction costs	25%	9.5%

### 8.2 Partnership Investments

Summaries of budgets for themes and basins in 2003 and 2004 are provided as Tables 12 and 13 over the page. Copies of the individual Theme and Basin Agreements are available separately. A copy of the format is provided for information at Attachment 25 (2004 Agreement with IRRI). The matching funds component of contracted research can also be considered as investments from our partners in research. The level of funding is identified in the spreadsheet at Attachment 26, which also provides financial information on the maximum budgets of contracted research.

**Table 12. Theme Leader Budget 2003 – 2004**

Thematic Area	2003 (US\$)	2004 (US\$)
1 Crop Water Productivity (IRRI)	283,887	135,000
2 Water and People in Catchments (CIAT)	298,676	121,788
3 Aquatic Ecosystems and Fisheries (WorldFish)	279,549	174,040
4 Integrated Basin Water Management Systems (IWMI)	236,384	177,000
5 Global and National Food and Water System (IFPRI)	299,999	125,000
Total	1,398,495	732,828

**Table 13 Basin Coordinator Budget 2003-2004**

River Basin	2003 (US\$)	2004 (US\$)
Andean system of basins	74,378	116,500
Indo-Gangetic	130,900	89,600
Karkheh	77,719	79,414
Limpopo	162,358	98,780
Mekong	171,000	126,540
Nile (2004 budget under negotiation)	303,238	135,000
Sao Francisco	110,390	97,797
Volta	90,000	90,000
Yellow River	259,100	107,100
Total	1,379,083	940,731

### 8.3 Commissioned and Contract Research

The major expenditure in the Table 11 line item for Theme Leaders and Basin Coordinators in 2003 was associated with stakeholder workshops and basin profiles in each of the nine basins. The nature of the expenditures in the category are seen as ‘commissioned research’ and network concertation – through the annual work plans of the Theme Leaders and Basin Coordinators. This component is intended to achieve synthesis across the portfolio of competitive projects, both to draw out generic conclusions, or global public goods, and to achieve impacts in basins (see Section on Synthesis 3.4 for more discussion).

### 8.4 Competitive Grants Research

At this moment, the Secretariat is actively negotiating contracts with 18 approved projects from the first competitive call – the 16 of top rank plus two suitable for restricted funding by Denmark and Germany. Three other projects are in reserve for possible funding through Echel-Eau (French funding). All three are suitable within the program rules, but it is not certain that all will be funded. Up to four projects may be funded by IFAD.

At the CSC meeting in New Delhi, October 2003, the Secretariat undertook to reduce budgets of approved projects by an average of 25% during negotiations. This reduction is based on the Secretariat estimates for each of the 50 approved projects, which were in turn based on panel evaluations of proposed budgets. For the 16 approved projects first invited to negotiate, the target budget was USD 18.3 million instead of the \$23.0 million originally requested by their proponents, corresponding to a reduction of 20%. The present estimate by the Secretariat is a reduction of 13% to a total budget of \$19.98 million. For future calls, difficult budget negotiations will be necessary with some projects that make apparently excessive demands in the view of the Panel. The Secretariat has suggested that the need for “across the board” budget reductions could be reduced by lowering budget maxima in future calls for proposals.

## **8.5 Donor Commitments and Expectations**

Fundraising before and during the inception phase was largely in the hands of CPWF Chair Frank Rijsberman. In order to spread the load and amplify the effort now that projects have been approved, Frank and Gerry O’Donoghue of IWMI have guided the CP Secretariat in establishing contacts. The task is now to expand the effort beyond the Steering Committee Chair and the Secretariat to CPMT, CSC and project leaders. Tables 14 and 15 provide two potential future scenarios. Table 14 presents a conservative budget. Under this scenario it is estimated that 25-27 projects from the first call could be funded. This scenario – based only on the continuity of present commitments and a CPWF estimate of contributions from three donors that have indicated interest in the program – shows the availability of US\$6m for future investments in research. Given that the CPWF has attracted 8 confirmed donors in 17 months of existence, and with projects only just starting, it seems unlikely that only three additional donors will be attracted in the remaining 5 years of the first phase. This is indeed a very conservative scenario.

Table 15 presents a more realistic, and ‘target scenario’ – a worthwhile and reachable budget target without exercising excessive optimism – to raise from existing or new donors a total of USD 20.1 million by 2008 beyond the conservative projection, for a total CPWF budget of USD75 million over six years. Note that this is still below the bottom end of CPWF full proposal projections of USD 80 – 120 million that ExCom approved in November 2002. Under this scenario, 33-35 approved projects from the first call would be funded, with USD 2.8 million assigned immediately to capacity building and additional commissioned research by these and basins and USD 16.2 million available to be assigned among second and third calls, additional commissioned research and concertation and broader plans in capacity building.

**Table 14 Forward Estimate: conservative scenario**

	2002	2003	2004	2005	2006	2007	2008	Total
	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000
<b>Funding</b>								
World Bank	200	3,000	3,000	3,000	3,000	3,000	3,000	18,200
Netherlands		1,100	1,650	1,800	1,500	400	400	6,850
France			200	1,010	1,800	1,630	1,360	6,000
Norway		347	360	360	360	360	360	2,147
Switzerland		385	632	632	632	632	632	3,545
Sweden		107	107	107	107	107	107	642
Denmark		496	496	496	496	496	496	2,976
Germany		625	625	600	600	600	600	3,650
IFAD			600	800	1,000	1,000	1,000	4,400
DfID			500	750	750	750	750	3,500
EC				500	500	500	500	2,000
Allocation to specific activities			400	200	200	200		1,000
	<b>200</b>	<b>6,060</b>	<b>8,570</b>	<b>10,255</b>	<b>10,945</b>	<b>9,675</b>	<b>9,205</b>	<b>54,910</b>
<b>Expenditures</b>								
CP development	300							300
Secretariat	100	652	447	500	500	500	500	3,199
Program activities	232	1,429	672	900	1,050	700	700	5,683
Theme leaders		1,398	1,104	750	750	750	750	5,502
Benchmark basins		1,379	861	900	900	900	900	5,840
	<b>632</b>	<b>4,858</b>	<b>3,084</b>	<b>3,050</b>	<b>3,200</b>	<b>2,850</b>	<b>2,850</b>	<b>20,524</b>
First call (core)			3,775	5,344	5,199	4,142	1,522	19,982
First call (Germany)			441	395	414			1,250
First call (Denmark)			300	177				477
First call (France)			200	360	440	270		1,270
First (IFAD)			600	800	600	600	600	3,200
First call (DfID)				500	500	500		1,500
First call research administration			170	221	214	154	61	820
Balance Available				-	556	1,159	4,172	5,887
<b>Total expenditures</b>	<b>632</b>	<b>4,858</b>	<b>8,570</b>	<b>10,847</b>	<b>11,123</b>	<b>9,675</b>	<b>9,205</b>	<b>54,910</b>
Surplus/(Deficit)	(432)	1,202	-	(592)	(178)	-	-	-
Balance brought forward	-	(432)	770	770	178	-	-	-
Balance carried forward	(432)	770	770	178	-	-	-	-

**Note: Funding estimates are projections by the CPWF Secretariat. They do not in most cases represent existing commitments**

**Table 15 Forward Estimate: target scenario**

	2002	2003	2004	2005	2006	2007	2008	Total
	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000	US\$'000
<b>Funding</b>								
World Bank	200	3,000	3,000	3,000	3,000	3,000	3,000	18,200
Netherlands		1,100	1,650	1,800	1,500	400	400	6,850
France			200	1,010	1,800	1,630	1,360	6,000
Norway		347	360	360	360	360	360	2,147
Switzerland		385	632	632	632	632	632	3,545
Sweden		107	107	107	107	107	107	642
Denmark		496	496	496	496	496	496	2,976
Germany		625	625	600	600	600	600	3,650
IFAD			600	800	1,000	1,000	1,000	4,400
DfID			500	750	750	750	750	3,500
EC				500	500	500	500	2,000
Allocation to specific activities			400	600	600	600	600	2,800
Other donors				3,000	5,100	5,100	5,100	18,300
	<b>200</b>	<b>6,060</b>	<b>8,570</b>	<b>13,655</b>	<b>16,445</b>	<b>15,175</b>	<b>14,905</b>	<b>75,010</b>
<b>Expenditures</b>								
CP development	300							300
Secretariat	100	652	447	500	500	500	500	3,199
Program activities	232	1,429	672	1,100	1,250	900	1,100	6,683
Theme leaders		1,398	1,104	950	950	950	950	6,302
Benchmark basins		1,379	861	900	900	900	900	5,840
	<b>632</b>	<b>4,858</b>	<b>3,084</b>	<b>3,450</b>	<b>3,600</b>	<b>3,250</b>	<b>3,450</b>	<b>22,324</b>
First call (core)			3,775	5,344	5,199	4,142	1,522	19,982
First call (Germany)			441	395	414			1,250
First call (Denmark)			300	177				477
First call (France)			200	360	440	270		1,270
First call (IFAD)			600	800	600	600	600	3,200
First call (DfID)				500	500	500		1,500
First call (Other)				1,800	2,400	2,400	1,400	8,000
First call Research Administration			170	221	208	166	61	826
Balance Available			-	1,421	3,041	3,847	7,872	16,181
<b>Total expenditures</b>	<b>632</b>	<b>4,858</b>	<b>8,570</b>	<b>14,468</b>	<b>16,402</b>	<b>15,175</b>	<b>14,905</b>	<b>75,010</b>
Surplus/(Deficit)	(432)	1,202	-	(813)	43	-	-	-
Balance brought forward	-	(432)	770	770	(43)	-	-	-
Balance carried forward	(432)	770	770	(43)	-	-	-	-

**Note: Funding estimates are projections by the CPWF Secretariat. They do not in most cases represent existing commitments**

## Monitoring and Evaluation 9

### 9.1 Milestones Achieved 2003

The CPWF Secretariat and Management Team completed the milestones set by the CPWF Steering Committee for the inception phase of November 2002 to December 2003, with the exception of the points italicized that are in progress. These were:

1. Establishment of governance and management procedures, and the convening of at least two CSC meetings, and four CPMT meetings.
2. Establishment of the Challenge Program Secretariat, with staff appointed including experts on the procedures of competitive funding programs.
3. Development of the Research Agenda by the Thematic Team Leaders.
4. Development of Benchmark Profiles on which to base Program impact.
5. *Revision of the Research Agenda, and prioritization at the basin level.*
6. Undertake a series of Benchmark Basin 'kick-off' Workshops.
7. *Development of a meta data base.*
8. Development of competitive grant procedures.
9. Initial call for concept notes, their evaluation, and full proposal submission.
10. Evaluation of full proposals, *and contracts signed.*
11. Undertake a Baseline Conference in Nairobi following the AGM.
12. Establish a sound funding base that reflects the level of support in establishing the Challenge Program.

This report supports the opinion of the Secretariat that all the milestones were achieved to a high level of success. Contracts are close to being signed due to the longer than expected process of negotiation of the contract documents due to the all inclusive approach by the CPWF Secretariat. The Secretariat also appreciates that the activities and procedures developed to address most indicators continue to evolve and their completion does not mean they can be put aside. For this reason the milestones for 2004 are mainly aimed at further development of the 2003 milestones. These are:

### 9.2 Milestones Planned for 2004:

- Development and consolidation of the working methods of the multi-institutional, multi-location management team and its relationship to the Consortium Steering Committee.
- Commencement of the initial research portfolio following contract negotiation.
- Revision of the competitive grants procedures in the light of the first round.
- Adjustment and focus of theme and basin priorities and identification of critical research gaps.
- Second call for concept notes using the revised procedure and taking into account the research gaps.
- Design of a process for directly-contracted research to complement competitive funding and fill research gaps.
- Revise the project monitoring and evaluation system following testing.

- Project Leader workshops to develop links among projects, themes and basins, and to strengthen the communities of practice among researchers.
- Implement the meta database structure in further basins, depending on results in the pilot basins.
- Commence implementation of capacity building strategy.
- Develop more specific contacts with funding agencies.
- Prepare additional milestones for 2005/2006 based on an evaluation of experience in 2003 and additional needs identified.

## **9.3 Significant Outputs for 2003**

### **9.3.1 Research**

The major resource investment during 2003 within the Secretariat was the design, implementation and selection of the first call for proposals. This has resulted in an initial portfolio twice evaluated portfolio of 50 high quality investment opportunities in a coherent structured program, ready for implementation. Theme leaders and basin coordinators have established constituencies of support, for instance through their kick off workshops, advisory panels, and commissioned research activities – leading to the first set of priorities. Collectively referred to as the ‘community of practice’ the Baseline Conference held in Nairobi at the end of the 2003 AGM further cemented these diverse constituencies by providing a forum for discussion. The construction of basin profiles by the Basin Coordinators involved the collection of dispersed and grey data that would otherwise be difficult to obtain.

### **9.3.2 Institutional**

Achieving the outputs of the CSC and CPMT and their interactions at meetings is leading to more cohesive governance and management decision making. The governance mechanism is producing an innovative form of inclusive decision making where partners govern (the CSC) or manage (the CPMT) the program through majority voting. The CPWF Secretariat is now firmly established with staff in place. A consolidated approach to donor contacts is well developed, leading to increased donor interest. Analysis of the questionnaire following the first call has provided very useful feedback for the design of subsequent calls and to gauge reactions to the CPWF. From the negotiation process, it can be deduced that many project leaders are entering new territory as far as planning their projects and dealing with the diversity of partners and the logistical implications of both technical and financial management. The CGIAR has therefore started to open up to a considerably wider set of partners than used to participate in our research, not only as junior partners, but also as project leaders – this has considerably leveled the playing field for NARES partners, and has linked in many ARI partners.

## **9.4 Results of Commissioned External Reviews**

To be advised in future reports as reviews are undertaken.

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## 10.1 Strengths and Weaknesses

### 10.1.1 Monitoring and Evaluation

The recent draft (see Attachment 2) offers important opportunities to the CSC and the CPMT to understand more clearly our reason for being in business (outputs, purposes and goals, how they are linked, and the part that we can influence) and for designing effective team processes to measure progress (including detecting institutional change and technical synthesis). This system should ideally provide the primary data for monitoring by the Science Council in their assessment of the usefulness of Challenge Programs to the CGIAR reform process.

### 10.1.2 Financial Issues

The use of a competitive mechanism of contracting, coupled with inclusive partnerships, requires a commitment by donors to ensure a dependable level of funding to keep the interest of the research community. Expectations in the first call, when a key donor was on board, were high. In mid 2003 the Netherlands Government withdrew, for national political reasons, part of their funding commitment. This had important consequences for the successful implementation of the first competitive call which was half complete at that point. The program has adjusted well to this challenge although obviously a higher proportion of the 50 approved research projects could have been financed immediately had the withdrawn funds been available. Among some CPMT members and project proponents, the partial withdrawal of funding by this one donor had a disproportionate affect on morale while others were relatively unaffected. The Secretariat has worked hard to restore morale which is returning.

Interestingly, among concept note proponents who responded to a recent questionnaire, the NARES partners are more interested than the CGIAR ones in future calls. In order to establish the program with a solid reputation it is both feasible and desirable to hold a second call for proposals in 2004 with a final closing date in 2005.

### 10.1.3 Research Priorities

The further refinement of priorities is required, starting with the concordance and the gaps identified in the gap analysis as a key input to focusing the plans for future support and synthesis by theme and basin leaders. The preparation of the concordance will therefore continue as a major activity in 2004. It will be necessary to identify the best mechanism (competitive fund, competitive tendering, may be direct commissioning) to use for obtaining suitable proposals for each type of priority will need to be identified. Insufficient time was allowed for an in depth priority setting process that assured demand driven priorities, articulated as outputs, were equitably identified within each country where the basins are located.

### 10.1.4 Effective Maintenance and Widening of Communities of Practice

Positive comments received from CPWF participants about the inclusiveness of the Baseline Conference and the utility of the first Monthly Newsletter are examples to which the CPWF must add so as to be broadly inclusive. Because of funding constraints, workshops, specialist consultancies

and attendance at conferences in 2004 are relatively few and need to be used carefully to develop CPWF contacts. The products of these must therefore be carefully prepared and widely diffused.

### **10.1.5 Management Team**

An interesting and worthwhile challenge for the evolving CPMT is how to combine efficiency and inclusiveness in decision making with shared team responsibilities. It is possible that a move towards a two-tier process with different sub-groups meeting in person or virtually on specific topics or issues, backed up by less-frequent general meetings of the whole team will be a more efficient use of the scarce resources we work with.

### **10.1.6 Broad Participation in Donor Contacts**

The CPWF will need to continue the shared responsibility of CPMT (especially the Secretariat), CSC and project leaders for fund-raising, inspired by targets that we wish to reach for a highly effective program. Donor contacts go beyond “fund-raising” to ensuring that we capture their needs as stakeholders and offer frequent feedback on the outputs that their contributions have made possible.

### **10.1.7 Basin Coverage**

During 2003 the CSC requested the CPMT to analyse the adequacy of the current set of basins in their ability to reach the CPWF goals. A copy of the paper that was subsequently produced is at Attachment 26. The intention of the current basin representation was to provide a geographical spread of CPWF activities across a range of ecosystems and socio-economic conditions. The analysis showed that the criteria can be satisfied relatively easily in many possible sets of basins. Research and development politics – meaning a consideration of countries that have important institutions on the world stage – appear to have significantly affected the choice of the present set of basins. Political considerations are a legitimate factor for basin inclusion – including the presence of fully committed institutional players in the NARES.

## **10.2 Lessons Learned**

### **10.2.1 Project Portfolio Gap Analysis**

An analysis has been undertaken of the response to the first call for proposals under the competitive mechanism of contracting. This section is an extract from the full report which is at Attachment 27. Major uses of the gap analysis are to feed into the planning for the second call (which in turn involves decisions on the most appropriate mechanism for contracting), and to identify any lessons that can be learned regarding the process of priority setting and where gaps are developing. The analysis also considers the performance of the selection process – whether it had any causal effects. The significant thematic, geographic and institutional gaps that were identified as a result of the analysis do not necessarily indicate a fatal problem of design. More probably they indicate much about the earlier ambitions for the CPWF. We should therefore consider the following questions

- What is the sustainable breadth of the CPWF? What are its key attractions?
- What are the priority areas in which the CPWF has a comparative advantage?
- What are the critical areas that need to be covered by commissioned research to retain impact, cohesion and credibility?

- Does this analysis identify problems of process that should be corrected in future competitive bids?

While there is clearly a problem in the overall balance between demand for research and the level of funding in the short term, the many gaps within individual basins and themes indicate problems of selection of balance. One of the most likely causes for this is that priorities have not been articulated in a form that ensures proposal developers and reviewers can unambiguously match the proposals with program demands. Accordingly, the CPWF has decided the following:

- That priorities are expressed firstly as required outcomes rather than activities
- That these outcomes are achieved by a balance between global and local activities; local and generic; and strategic and applied.
- That the priorities are reviewed regularly to ensure they enable the CP to progress and develop rapidly as the portfolio of projects expands.

A major benefit of the competitive grants process is that it introduces a wide range of participants, especially national organizations, who bring new capacity and ideas to the research problem. In the short-term, this non-deterministic approach can also create difficulties of coordination with respect to overall goals. Short-term gaps must be expected. These problems can be reduced through the following:

- Ensure that proposal developers and reviews are very clear about research priorities. Mismatch between review and priority-setting criteria will confuse proposal developers.
- Ensure that funding targets are stable so that proposal developers adopt realistic expectations of chances of funding.
- Ensure that maximum capacity is acquired through full participation of ARIs and NGOs.

### **10.2.2 'User Satisfaction' in the First Call for Proposals**

A questionnaire was sent out to all proponents who submitted Concept Notes and Full Proposals (if relevant), to evaluate their experience of the CP procedures. 227 questionnaires were sent out, and the 74 responses received. The analysis provided valuable feedback for future calls. 51% of the respondents were members of CGIAR institutions, 28% from NARES, 15% from ARIs and 6% from other institutions.

The responses highlighted positive features as well as areas for improvement. Among the positive attributes was the help provided in the design of the Concept Notes. 45% of respondents attended a kick-off basin workshop, 84% found it to be helpful or moderately helpful. 86% of respondents who sought help from the CPWF Secretariat rated it as helpful or moderately helpful. A majority of the respondents also found it useful to have the call based on the internet.

Suggestions for improvement of the information provided on the website included clearer information on basin priorities and cross basin projects, and a clearer definition of the evaluation process. 77% of respondents found the CN submission procedures straightforward or moderately difficult. Issues raised concerned difficulties due to poor web connection, breakdown of the web link and other problems related to electronic submission. Concerns were also expressed that the

format of the budget was too complicated. Respondents who had submitted Full Proposals also highlighted the issue of the budget being extremely complex, and mentioned problems arising as a result of the format and rules being changed mid-way through the process.

A lower proportion of CGIAR respondents found the CN evaluation to be fair, than respondents of NARES or ARIs. NARES rated it as fair regardless of whether their proposal was approved or not. A proportion of CGIAR respondents whose proposals were approved also rated the evaluation unfair. Problematic issues that were highlighted by proponents who submitted Concept Notes as well as Full Proposals include the review process and the knowledge and qualifications of the panel members to review proposals belonging to certain subject areas, and the consistency and validity of some comments made by the panel. Proponents seemed to lack clear understanding of the evaluation criteria, and also of the comments made by the panel.

Of the respondents, 80% of NARES, 64% ARIs, and 29% CGIAR rated their experience with the CPWF as very good or moderately good. Notably, NARES respondents gave a higher rating regardless of whether their proposal was approved or not, whereas some CGIAR respondents gave a lower rating even if their proposal was approved. A copy of the full analysis is at Attachment 27.

Additionally, the Secretariat analysed in more detail the characteristics of concept notes and full proposals that were approved and not approved which dispersed some of the criticism that mainly simple projects with local impact and high social science participation were approved. In fact projects with more themes covered were neither more nor less likely to be approved, those with more than one basin included were more likely to be approved (although that does not necessarily mean that they included a strategic link of research among the basins). Those with the participation of an economist among the principal researchers (some 73%) were more likely to be approved but the inclusion of a social scientist (some 20%) made no difference. The full data is Attachment 29.

The CPMT and CSC have discussed the possible reasons for level of disillusionment among the CGIAR respondents. We have hypothesized that some or all of the following may be in play:

- The feeling that CPWF competitive funds ‘belong’ to the CGIAR centers (whereas for NARES any project approved with the CGIAR funds may be perceived as pure gain relative to the previous situation)
- The perception (false in our opinion) that without the CPWF, funds would somehow have been available from traditional sources of funding to each center – evidence suggests that donors might not have continued to contribute even those funds that were moved to the CPWF. It is also worth noting that part of the CPWF funds – particularly those from France and Netherlands are clearly new to the CGIAR.
- The perception from CGIAR staff that it was somehow easier in the past to present proposals adapted to the requirements of different donors. The CPWF offers one mechanism in the place of many previous ones of individual donors so this perception

makes little sense. Incidentally, in CGIAR centers dedicated staff were active at the interface between the scientists and donors. In dealing with the CPWF, scientists are more responsible both for submitting proposals, and more in touch with evaluating proposals. As a result, it may be that they see the CPWF as more accessible and known and feel free to criticize in ways that they would never have contemplated with donor representatives.

### **10.2.3 Competitive Funding Programs**

Despite funding circumstances and the strong supply of projects approved for the first call, the need to maintain and build participation in the CPWF networks apply as much as ever. For this reason it is important to hold a second call for proposals before the end of 2004. . As with other competitive programs, the second call needs to be more focused on geographic and thematic gaps in high priority areas – hence the gap analysis and concordance. An extended time period in order to better develop partnership identification and establishment is also desirable between the advertisement and submission date. Submission guidelines need to be redesigned, particularly the budget format, and the link between concept notes and full proposals better developed. A more modest budget maximum would allow sufficient projects to be approved without budget cuts.

### **10.2.4 Assessment Panels**

At the concept note stage, although confirmation was received from panelists and gaps in age and geographical focus were filled, cancellations in attendance (including because of the SARS virus) immediately prior to the panel meeting were extremely difficult to fill and required a large investment in time in order to ensure sufficient numbers and diversity in members. Similarly, at the full proposal stage, difficulty was experienced in meeting the requirements of a panel rotation in the range of 25-50% from concept note to full proposal stage. The expectation is that diversity is achieved in discipline, age, gender, geographic spread, north / south background and experience.

### **10.2.5 Governance and Management**

The CPWF works with a diverse and dispersed membership within the Steering Committee and the Management Team. Normal email contact with the Steering Committee membership has been found to be effective as a communication tool, but the need for early access to meeting papers required a different tool. Restricted electronic access via the CPWF web page has therefore been adopted.

The high transaction costs of some meeting venues as well as the cost of individual's time spent at meetings has led to the preliminary decision to meet once a year in person in the future. The effectiveness of the CSC discussing and agreeing on issues in 'virtual meetings' using the internet or email will be explored. This is considered feasible now that the program is maturing, the first portfolio has been identified, and critical long term decisions have been made. The CPMT have taken a similar decision, meeting three rather than four times a year.

### **10.2.6 Leverage and Influence Ability**

The potential for linking the priorities of the CPWF with those within the national systems (the two should anyway be complementary) is built into the CPMT through the Basin Coordinators. Every effort will be made in the future to establish the two way flow of resources that a true demand-

driven partnership entails. As mentioned earlier in this report, the CPWF has also influenced the research agenda of a CGIAR center – in this first instance that of ILRI where livestock water interactions now enjoy a high priority as a direct result of CPWF involvement. This could be further deliberately influenced by the manner in which contract mechanisms are designed.

### **10.2.7 Financial Issues**

During the process of negotiation care has been taken not to damage the overall objectives of any project. In all cases where the proponents questioned the requested reduction (that is all but 2 cases where it was 5%) the written opinion of 2 CPMT members was sought before entering email negotiations with the project leader about whether the reduction was reasonable (and if not, to revise the estimate) or would severely place at risk the objectives. They were also asked to suggest where cuts might be made, while referring to the panel's original comments. The process has been long with several iterations. In many cases, the Secretariat, advised by the CPMT reviewers, found that the explanations provided by the proponents, and their clear efforts to make budgets efficient, justified a less severe reduction.

In contrast, the parallel technical negotiations have presented few problems; proponents have usually been content, or at least compliant, in adopting the technical requirements.

## ATTACHMENTS

- 1 Joint Venture Agreement
- 2 Monitoring and Evaluation Paper
- 3 Work plan on Communications
- 4 Work plan on Public Awareness
- 5 Initial Research Theme Priorities: 2003
- 6 Initial Benchmark Basin Priorities: 2003
- 7 Guidelines for Submission – Concept Notes
- 8 Guidelines for Submission – Full Proposals
- 9 Guidelines for Assessment – Concept Notes
- 10 Guidelines for Assessment – Full Proposals
- 11 Report on Selection Process – concept notes
- 12 Report on Selection Process – full proposals
- 13 Negotiation Status at March 2004
- 14 Brief Project Summary Reports
- 15 Work plan on Data Management and paper on data and information management
- 16 Work plan on Global Linkages
- 17 Capacity Building Strategy
- 18 Theme Leader 2003 Summary Reports, gap analysis and 2004 outputs
- 19 Basin Coordinator 2003 Summary Reports, gap analysis and 2004 outputs
- 20 CPWF Secretariat Work plan for 2004
- 21 Memorandum of Understanding
- 22 Project Agreement: standard clauses
- 23 Letter of Agreement
- 24 Intellectual Asset Audit Form
- 25 Theme Leader and Basin Coordinator Agreement
- 26 Analysis of Benchmark Basin Coverage
- 27 Gap Analysis following First Call for Proposals
- 28 Analysis of Questionnaire following 1<sup>st</sup> competitive call for proposals
- 29 Results of analysis of concept note and full proposal selection process