

## SCIENCE COUNCIL OF THE CGIAR

### Commentary on the Challenge Program on Water and Food (CPWF) Research Agenda and Implementation Plan for Phase 2

SC Secretariat, 20 April 2008

The CPWF document “*Research Agenda & Implementation Plan for Phase 2*” submitted to the SC in mid March 2008 was discussed by the Council at its 9<sup>th</sup> Meeting. Jonathan Woolley, CPWF program coordinator presented a brief summary of the document. He emphasized this was a plan not a proposal, and that the Phase 2 plan responds to the concerns raised in the External Review (2007) and the SC Commentary on it. Phase 2 will focus its efforts in six basins (vs. nine previously), where two development challenges have been identified in each basin as well as four cross-cutting topics. Woolley emphasized that the CPWF is a ‘platform’, both from a logistics and a scientific point of view. The plan also puts forward an implementation, monitoring & evaluation and exit strategy, and proposes a new governance and management structure.

The SC would first like to emphasize that the decision of ExCo 13 – approved at AGM ‘07 – was for the CPWF to proceed to Phase 2, but to also present a more focused strategy and research plan to the SC. Therefore, this commentary of the SC is only meant to help improve the CP as it moves into Phase 2. The SC expects to see such improvements subsequently reflected in the new three-year rolling MTP for 2009-2011 yet to be developed by the CPWF.

The SC is pleased to see that the CPWF research plan attempts to address a number of the key External Review recommendations related to strategy and greater focus. The CPWF has reacted positively to the recommendations to develop a new vision, strategy and objectives, and to develop a more cogent and focused research agenda by drawing on results from Phase 1 and the Comprehensive Assessment on Water and Food completed last year. In particular, the SC commends the CP for focusing on a reduced set of research questions (from 90 in Phase 1 to 13 in Phase 2) and reducing the number of research topics by 20%.

Due to the unexpected complexity of water and food problems, CPWF calls for a ‘new way of doing science’, through integrated research to solve water and food problems. The CPWF thus logically visualizes that it provides “*an institutional innovation that helps deal in an integrated fashion with multi-scale water problems and how they affect agricultural systems. It helps break down boundaries set up by institutional structures and mobilizes the efforts of a diverse group of stakeholders. It helps build a water dimension into on-going research on food, poverty, the environment and livelihoods*”. No change was made in the mission statement which reads: “*To increase the productivity of water for food and livelihoods, in a manner that is environmentally sustainable and socially acceptable*”. The SC endorses that decision.

The Phase 2 plan has three modified objectives:

1. *Contribute more effectively to the delivery of development outcomes (through partnerships with development institutions such as policymakers and NGOs)*
2. *Produce more relevant and targeted scientific outputs for development*
3. *Foster a more effective and integrated process of collaboration in research (among CG Centers and between Centers and other research partners)*

The SC notes that while this is a step in the right direction, the modified objectives are still very general and may not help focus the program. The objectives as written leave open what is specifically being targeted from research in this CP. It is difficult to interpret the true nature of the water and food challenge in these objectives – water is not even mentioned. The SC Commentary on the CPWF External Review highlighted the need to articulate a set of achievable objectives in Phase 2. It is not yet clear that has been accomplished, nor is it clear how success would be measured against the generic objectives as currently stated.

The ‘strategy’—as presented in Chapter 2 as the Research Agenda—could still be improved and elaborated upon, as it leaves open some questions regarding the main focus of the CP, and would benefit from more clarity about the objectives and the targeting of measurable, significant outcomes. The SC struggled to see in the new plan “a clear focus on those parts of the complex issues of the challenge that it intends to address in Phase 2 and elaborate how it will do so” (SC Commentary on CPWF-ER). The Plan does reflect some initial steps to narrow the focus geographically (by reducing the number of basins and focusing on specific geographical parts of each basin) and by topic (by focusing on 2-3 development challenges related to each basin), but it can and should go further. The SC would hope that a revised Phase 2 plan could address these issues with more specificity—as described below—and within the context of sharply defined research objectives. In defining a set of clear and measurable outputs and outcomes, and to effectively track them, the SC recommends that the CPWF management and governance take note of two recent documents: (i) the recent EPMR of CIAT which provided guidance on planning and monitoring of “outcome lines”; and (ii) the External Review of the Generation CP, both of which gave clear recommendations on focusing on do-able “output products” in the second phase of the CP in order to demonstrate proof of concept. There is a similar need here to focus on achievable outputs and outcomes and to monitor progress toward achievement in this phase of the CPWF.<sup>1</sup>

The thematic research areas for Phase 2 were selected through an elaborate stakeholder consultation process using three criteria: (i) *it must fit within the current research agenda for topics or basins*; (ii) *it must be interdisciplinary, include cross-scale analysis, and take into account resilience (social and ecological)*; and (iii) *it must contribute to an improved understanding of the interrelationships among water, poverty, productivity and ecosystems in the context of global change*. Four thematic areas (topics/priority areas) were identified: improving rainwater management, multiple uses of water, benefit sharing and drivers and processes of change. Each of these topics cut across each of the basins. Policy and to a lesser extent institutions, however, seem to be at the heart of almost all research questions described.

These criteria are clearly relevant but are not sufficient as a basis for selecting research topics of the highest relevance at the basin level particularly after 4 years of work in Phase 1. The question remains how the criteria were applied, how the CPWF’s comparative advantage in addressing the key topics was established and how priority areas were selected based on the most likely to succeed within the time frame of the CP. The plan could be more explicit about who the most relevant partners are and how CPWF is positioning itself to deliver the selected outcome lines within the CPWF timeframe.

---

<sup>1</sup> Although the original proposal for the CPWF states that “*The CP is envisaged as a major program of research, extension and capacity building over a period of ten to fifteen years*”, it was the research agenda and the business plan described in the proposal for the first 5-year phase that was approved by the Group at AGM 2002. The SC is recommending that, similar to the timeframes for the other CPs, this CP be considered in the context of a ten-year time horizon, consistent with the document on Lessons Learnt on CPs (Sept 2007).

With respect to the four key topics identified, the Plan should go further in describing what critical aspects of these complex topics will be specifically investigated that are additional to ongoing work in the agriculture or water sectors. The tangible research outputs from each during the Phase 2 period should also be identified. Further elaboration would be required to judge whether the major constraints in water and food related productivity/sustainability are likely to be successfully addressed. For example, under the broad topic “improving rainwater management”, vast amounts of earlier research both within and outside the CGIAR have already been done, for example, on water catchment and strategic use for cropping and fisheries (e.g., by ICARDA, ICRISAT and World Fish Center). This should be reflected when describing the added value and distinguishing features of this CPWF effort in rainfed systems. What are the new and novel components? To what extent will upstream/ downstream effects on a landscape/catchment scale be a focus of attention? If the outcome lines and output products for the rainfed system topic could be described, it would strengthen the case for selecting that topic.

The SC notes in the Plan that the “research questions are expected to evolve as research proceeds over the years” (p. 12). To an extent, this is natural, but it is also surprising that after four years into the CP, the research questions are still ‘evolving’. The SC would urge the Basin Focal Projects and CPWF management to ‘hone in’ on some clearly defined problems and target measurable outputs for Phase 2. Leaving the refinement of the “presently formulated research questions into basin development challenges” to the discussions planned for the 2<sup>nd</sup> CPWF International Forum in November 2008 is too late. The SC believes that the 2<sup>nd</sup> phase of the CPWF must begin with a very clear and tightly focused set of objectives and nested set of outcomes and outputs in order to have the desired impact and to show proof of concept by 2013.

The relevant questions and potentially important research outputs that have been alluded to in the discussions under the research questions for each basin should be embedded into an overarching conceptual framework and a set of objectives and research hypotheses. This would strengthen the document. In addition, the Plan should identify and clearly described development outcomes, details on the pathway for these outcomes and means by which they could be tracked.

There is an acknowledgement that the “CPWF is only one player amongst many, and cannot on its own ensure the delivery of development outcomes.” The SC agrees with the statement in the Plan that it “can, however engage more closely with those people and institutions – policymakers, NGOs, and others – with prime responsibility for fostering development [and] ... encourage and participate in social processes of innovation and it can help with capacity-building”. To ensure this will in fact happen, the document could describe how the CPWF plans to bring the non-agricultural research communities – who have a deciding role to play in delivering some of the CPWF outcomes – within the CP realm. Programs such as the UNESCO sponsored IHP and HELP and the ICSU-ESSP sponsored Global Water System Program could and should play a key role here.

There are numerous references in the document to the climate change agenda as a focus of research in several basins, yet without a clear indication that the research agendas of the CPWF and CP on climate change (CCCP) have been reconciled. The SC does not deny the importance of such work; but it believes the CPWF might better focus on understanding the underlying water – productivity mechanisms, leaving the overlay of how climate change modulates such mechanisms to those with expertise in this area. It is understood from SC 9 discussions that for

the global Drivers and Processes of Change topic the CP will be seeking input from experts in climate change, biofuels, trade research, etc., on the implications of those changes on water productivity research in the basins. It should be clarified in the present plan how the CPWF will interact with the proposed new CCCP.

Although the research within the CPWF is expected to generate regional public goods from the platform-based research projects, the document is silent on how it proposes to generate IPGs through cross basin analysis and synthesis. The global setting is framed by two questions: (i) *Which key drivers of change, including climate change, biofuels and trade policies, are of most importance, and what complementary sets of policies and investments would be most effective to mitigate adverse and enhance positive impacts?* and (ii) *How does research achieve developmental outcomes and impacts (for different types of research output in different contexts) and what partners are necessary at different levels to achieve impact?* The CPWF basins may be well set up to contribute to answering some aspects of the first question but it is not clear which datasets and what type of analyses the CPWF will itself be generating and engaged in? Some of these issues may need to be addressed on a CGIAR level and not on a CP level that deals with water only. It would be useful to describe roles played or expected to be played by others, e.g., the CCCP partners. The brief narrative explanation for the second question says very little. Indeed, the question itself suggests considerable uncertainty with respect to the potential value of further research in solving development problems and raises questions about whether impact pathways are yet sufficiently defined.

The Monitoring and Evaluation processes described in Section 4 are very thorough and are grappling with three elements outlined in the beginning, i.e., knowledge, development outcomes and effective partners. The SC recognizes that the issues are complex. The previously noted CIAT EPMP also dealt with this dilemma -- how to maintain focus on achievable outcomes in complex systems. The SC urges the CPWF, in addition to the pathway analysis as described, to define more clearly the critical outputs and key entry points along the impact pathway and where the major constraints to impact are likely to be. Simple clear metrics are required to be monitored by the CPWF on an annual basis.

The exit strategy defined on p.26 needs more attention. It offers a somewhat confusing statement up front, i.e., "the exit strategy of the CPWF depends on the strong focus on basin research needs and questions". The SC suggests that a more proactive exit strategy could be outlined consistent with a set of more clearly defined research themes with well defined and measurable outputs and outcomes. The SC is aware that the CPWF Management considers Phase 2 only a mid-term phase. There may be value in extending this CP beyond two phases, but that should not be anticipated at this stage. The SC believes that over the next 5 ½ years, the CP should be able and have sufficient incentive to develop a much tighter research agenda and target clearly achievable outputs and outcomes by the end of Phase 2.

*The SC suggests that in developing the 2009-2011 MTP, these comments on the Phase 2 Plan are taken into account by the CPWF management and new Governing Board. The SC would be pleased to review and comment on a revised Phase 2 Plan should that be useful to the CP.*