

# **Synthesis of Lessons Learned from Initial Implementation of the CGIAR Pilot Challenge Programs**

A Joint Report by the Science Council and the CGIAR Secretariat

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## List of Lessons Learned and Recommendations

### *Lessons Learned:*

- *The partnership should be determined by the nature, scope and scale of the problem and the research needs. That role of partnerships needs to be made clear in the planning stage. Although the CPs are explicitly expected to open the CGIAR up to partners beyond the traditional CGIAR ones, including leadership outside the CGIAR, the effectiveness of the CP must be judged on the added value of the partnership to engage in high quality science and deliver relevant scientific, time-bound outputs, not on the intrinsic value of the partnership per se.*
- *The CPs must have clearly defined boundaries built on existing programs, and they must focus on the added value of the research. It is important to seek for synergies between CPs, systemwide programs and Center programs, and avoid duplication of work done. The CPs need to remain focused on the added value elements of this organizational instrument and use existing networks to maximum advantage.*
- *The CPs must have in place a clear set of priorities around which partners and projects are developed with a clear focus on the strategic research goals and on the comparative advantage of the CGIAR. The priorities must be set with a focus on research and research methodology that provides IPG allowing extrapolation of new knowledge and research results across targets (such as environment, traits, crops).*
- *Reconciling the relevance and rigor requirements of the CPs necessitates on the one hand focus on the outputs of IPG nature and on the other leveraging pre-existing networks provided through SROs, ROs, NARS and some NGOs in order to also achieve the impact at the local level.*
- *The investor should seek maximum effectiveness and efficiency by investing in a research program that addresses the agreed CGIAR priorities and uses the most cost-effective instrument to address the challenges implied in those priorities.*
- *There is a need for close oversight of the CP by the governance bodies of the CP (to ensure that the CP remains focused on IPG outcomes and uses existing structures) and close monitoring by the SC to guarantee that the CP remains focused on the relevant research goals. The SC should keep close contact to provide more intense monitoring of the CP program elements during the start up phase.*
- *The CPs must develop MTPs that show realistic outputs and milestones. In the more complex CP such as the Water and Food CP, a set of MTPs may be needed for both theme and basin, with an overall log frame that monitors progress at the CP level.*
- *The future System Priorities should be used to identify areas of research where a call for CP could be made. Selection criteria need to be modified considering how much detail in science and partnerships can be realistically expected before implementation*

*begins. Investor, and anticipated investor interest, should not be criteria for the development of CP activities outside the well-defined priorities.*

- *It is appropriate to maintain flexibility so that each CP creates and adopts governance structures that best suit their needs. This is consistent with the broad principles set for developing CPs. Prescribing a single model for CPs would be counterproductive. However, it is recommended that a set of governance parameters for the CPs be developed spelling out the key questions on governance systems, including management and related legal and administrative matters. The guidelines could build on the principles prescribed by the CP Task Force in 2001 and on benchmarking with similar types of research and consortium instruments.*
- *The pilot CPs are generating new funding, both from traditional sources (CGIAR members) and from completely new sources. Such new resources most likely would not have been raised without the CPs. Available data show that funding to any Center in 2003 and 2004 has not declined.*
- *Competitive grants seems to be effective in opening the System to new research suppliers. A future review should enable the CGIAR to assess more fully the level of engagement of non-CGIAR centers as research suppliers in the CPs. Competitive grants need to be complemented with commissioned grants to ensure a balanced research portfolio on the key roadblocks of the challenge.*
- *Incurring transaction costs is unavoidable in developing and implementing CPs. Good oversight is key to managing transaction costs. This includes monitoring of the establishment and maturing of partnerships, implementation of the competitive grants schemes, and associated changes in the transaction costs.*

#### *Recommendations:*

- *The current CPs should continue and they should be evaluated by an external panel after five years from start to assess the value added provided by the CP structure in terms of the effectiveness of partnerships and generation of outputs, evidence of adoption and impact, cost effectiveness of operations and sustained donor interest.*
- *CPs need to be developed in the context of agreed System Priorities through a directed call and only when alternative organizational instruments, i.e. systemwide programs, Center programs, task forces and/or coalitions are not appropriate.*
- *The time-bound nature of the CPs should be emphasized, and the implications of it to the planned program scope and focus defined. There is a clear concern that, once established, it is difficult to end these programs.*
- *Irrespective of the orientation of the programs, the IPG nature of the planned outputs must be clear at outset.*

- *Prescribing a single model of governance is deemed inappropriate. However, it is recommended that a set of governance parameters for the CPs be developed spelling out the key questions on governance systems, including management and related legal and administrative matters. The guidelines could build on the principles prescribed by the CP Task Force in 2001 and on benchmarking with similar types of research and consortium instruments.*
- *Linkage mechanisms between the governance bodies (committees) of the CPs and the Centers should be clarified to avoid potential problems in financial, legal or other form of process oversight of CPs. Lines of accountability to investors should be more clearly defined and stated.*
- *Good oversight is required to properly monitor transaction costs associated with the conduct of CP research.*

# Synthesis of Lessons Learned from Initial Implementation of the CGIAR Pilot Challenge Programs

## 1. Introduction

At its meeting in 2001 in Durban, South Africa, the Consultative Group on International Agricultural Research (CGIAR) decided to incorporate a programmatic approach to research planning and funding to complement existing approaches, and initiate the formulation and implementation of Challenge Programs (CPs). The CP became one of four pillars of the CGIAR reform program.

A CP is defined as: “A time-bound, independently-governed program of high impact research, that targets the CGIAR goals in relation to complex issues of overwhelming global and/or regional significance, and requires partnerships between a wide range of institutions in order to deliver its products.<sup>1</sup>”

At its first Annual General Meeting (AGM01) in 2001 in Washington, D.C., the CGIAR decided to accelerate the process with the launch of three CPs on a pilot basis. The objective of the pilot process was to learn lessons on various aspects of program development and implementation to benefit those that will be developed under the regular process. The immediate initiation of the regular process was also agreed upon at AGM01. The following pilot CPs were approved for implementation beginning in 2003: 1) Water and Food, 2) HarvestPlus (formerly called Biofortification), and 3) Generation (formerly called Genetic Diversity). In the regular process, the Sub-Saharan Africa CP is being considered.

At its 6<sup>th</sup> meeting the CGIAR Executive Council (ExCo) requested the Science Council (SC) and the CGIAR Secretariat to synthesize lessons learned from the pilot CPs. The SC reviewed all aspects relevant to scientific relevance and quality from the Medium Term Plans (MTP) and annual reports and other documentation on the CP. The CGIAR Secretariat engaged an external professional<sup>2</sup> to help examine mostly the governance aspects of the CP through a process of consultation with CGIAR stakeholders and through a review of the relevant documents. The two component assessments were consolidated into this synthesis report.

The following lessons should be considered in light of the short period of time in which the CPs have been operational. Thus the recommendations presented at the end of this note take into account the above recognition of limited time and experience.

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<sup>1</sup> *Designing and Implementing Challenge Programmes*. Report to the CGIAR Interim Executive Council by the Challenge Programs Task Force, Aug. 30, 2001.

<sup>2</sup> Guy Poulter, Director, Natural Resources Institute, University of Greenwich, UK

## **2. Programmatic Aspects**

### **2.1. Criteria for Assessing the Effectiveness of the CP as a New Instrument for Research**

The definition of a CP<sup>3</sup> can be translated to the following criteria to evaluate them as a new instrument for research:

- Partnerships that provide new capacity to undertake relevant research and improve the delivery system
- Research that addresses the constraints to achieve outcomes of major global and/or regional significance to the CGIAR
- Research outputs for international application, i.e. international public goods (IPG)
- Research processes and activities that are focused and time-bound

### **2.2. Assessment and Lessons Learned**

#### *2.2.1. Preamble*

The three pilot CPs differ in the manifestation of the criteria for a CP partly because of the inherent differences in the nature of the challenge. These differences are explored in more detail in the following sections. Overall many of the essential criteria of a CP are, however, operative in all three. They are all about a time-bound, science-based intervention that will provide international public goods (IPG) to impact on a challenge of global significance to remove people from poverty.

#### *2.2.2. Effective Partnerships*

In the context of the CP, the criteria for an effective partnership include providing more than one of the following services:

- improve the relevance of the research
- lever added value to the component parts
- provide new research of high quality
- improve the delivery of the research for outcomes.

Thus the partnerships *per se* do not have intrinsic value unto themselves for the CP; they have importance based on instrumental service. The CPs need to develop partnerships only in so far as they can deploy them to be more effective in generating outputs towards the CGIAR goals.

The three CPs differ in the services of their partnerships. In the case of the HarvestPlus and Generation CPs, the partnerships bring new high quality research and access to facilities to the programs and clearly lever added value for developing time-bound research outputs. In

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<sup>3</sup> Beyond the general definition of the CP, expectations were set for a CP and these have been added to the list for evaluation (also see section 3.1).

the case of the Water and Food CP the partnerships to date provide a service of improving the relevance of the research to define the priorities. They are yet to contribute to the capacity to provide research-based outputs and outcomes. Thus, although the partnership is playing an important role (aimed at improving the relevance of the research), this service alone is not adequate; the partnership needs to capture some or all of the other services.

In the proposed Sub-Saharan Africa CP, a major bottleneck to the challenge is indeed the development of effective partnership to define the research agenda to overcome the constraints to development. In this case, the CP itself must provide a time-bound outcome of developing an effective institutional partnership as a prerequisite for subsequent activities with agricultural research objectives. In the process, the CP needs, through research on institutional learning, to provide an International Public Good on effective partnership development.

***Lessons: The partnership should be determined by the nature, scope and scale of the problem and the research needs. That role of partnerships needs to be made clear in the planning stage. Although the CPs are explicitly expected to open the CGIAR up to partners beyond the traditional CGIAR ones, including leadership outside the CGIAR, the effectiveness of the CP must be judged on the added value of the partnership to engage in high quality science and deliver relevant scientific, time-bound outputs, not on the intrinsic value of the partnership per se.***

### *2.2.3. Defining Boundaries*

The CPs are built on the Centers' programs. This organizational instrument is designed, through new partnerships, to "add value" so that the whole is greater than the component parts (i.e. individual partners' research activities). There is a need to clearly define the boundaries of the CP *vis a vis* Center programs and other existing research and delivery instruments ensuring that the CP builds on existing programs and networks and focuses on what the partnership can achieve more effectively, i.e. the added value to on-going research for reaching the target. There is some lack of clarity with all three CPs whether they are expanding activities beyond the added value elements of this organizational instrument. Furthermore it is too early to assess how much value the CP approach is bringing to these CPs. Close monitoring is needed as they mature.

This may be of particular concern where there is independent governance. The involvement of CGIAR Centers as participants in the programmatic aspects as well as in governance ought to ensure that the above principle is upheld.

***Lessons: The CPs must have clearly defined boundaries built on existing programs, and they must focus on the added value of the research. It is important to seek for synergies between CPs, systemwide programs and Center programs, and avoid duplication of work done. The CPs need to remain focused on the added value elements of this organizational instrument and use existing networks to maximum advantage.***



#### *2.2.4. Priority Setting for Time-bound Outputs of IPG Nature*

The CPs must be focused on the IPGs of greatest impact for the CGIAR System. They need to identify clearly the “roadblock”, i.e. major constraint or a set of constraints to achieving relevant goals. They need to set priorities for research to achieve time-bound outputs that remove the constraint.

The three CPs differ in their focus on time-bound scientific outputs. In the HarvestPlus CP the challenge is improving the nutritional value of the most commonly eaten food crops and outputs are defined in terms of crops and nutritional compounds. The CP Generation addresses previously intractable constraints such as drought by establishing a molecular-based breeding platform for the CGIAR crops. The outputs are defined in terms of genetic platforms, traits, and crops. However, in the Water and Food the emphasis to date is on the building of new partnerships as the base to define the research question, while the research objectives and priorities remain vague. The lack of clarity on the priorities to be addressed through research leads to open-ended targets. Partly because of this, it is difficult to distinguish the CP nature of this program from the normal programs of various centers dealing with water issues.

Also the three pilots CPs differ in their balance to achieve both research outputs of IPG and impact at the local level. For example, in the Water and Food CP the disjoint nature of the basin-level projects makes it more difficult to develop IPGs than in the Generation CP focusing on a common genetic platform. Thus the research of the Water and Food CP at the basin level ought to include transects across basins in order to identify IPG from the combined analysis of local knowledge.

An inherent danger in involving a large number of new partners in a CP is the loss of focus on the CP targets and on the comparative advantage of the CGIAR System in producing IPGs through high quality research. This seems more so where the system of competitive grants has been used to both identify new partners and to set the research agenda as is the case with the Water and Food CP and in the Generation CP.

The CP priorities need to remain sharply focused on the comparative advantage of the CGIAR System. The CGIAR has potential to seek major efficiency in the application of basic science to solve similar problems in multiple domains. This can be called the “comparative paradigm”, which is precisely what the CPs are about. In genetics, synteny among crops, i.e. similar inheritance of genes, provides the comparative paradigm across crops and production environments across the system. Not only the genetic material, but also research methodologies may be efficiently used across the system. The Generation CP and the HarvestPlus CP are seeking proof of concept of this “comparative paradigm” which holds promise for widespread impact.

In a very similar sense, the application of the science of production ecology (agro-ecology) across environments and production systems permits extrapolation across gradients of change. This brings many of the key “drivers” of productivity and resource use efficiency into the arena of IPG. Without the comparative paradigm much of the work

becomes location-specific. This is precisely why the SC is looking hard at the CPWF for evidence of cross-site “thematic” research components. Those components may be biological, social, economic, or focused on gradients of change in market structure.

The time-bound nature of a CP refers to clearly defined targets and narrow enough focus of the expected outputs and outcomes. There needs to be an intended distinction between ongoing programs of Centers, that for the most part are not explicitly time-bound, and the CPs. This does not mean that all CPs have the same life-span, but within a reasonable period it must be possible to assess whether they have achieved what they were set to achieve. Therefore, clear priorities and targets are essential for maintaining the time-bound nature of the CPs. The pilot CPs currently extend for about 10 years. The time-bound target of the Sub-Saharan Africa CP, as being considered, is setting up of the institutional arrangements and subsequently detailed workplan within 18 months. The interpretation of time-bound has been made case by case, and should not set a precedent for any future CP to be considered.

***Lessons: The CPs must have in place a clear set of priorities around which partners and projects are developed with a clear focus on the strategic research goals and on the comparative advantage of the CGIAR. The priorities must be set with a focus on research and research methodology that provides IPG allowing extrapolation of new knowledge and research results across targets (such as environment, traits, crops).***

#### *2.2.5. Ensuring Impact*

The research-for-development nature of CPs implies a need to demonstrate a credible mechanism for delivering research findings to intermediary beneficiaries and then to farmers and other relevant practitioners. The pathway to impact is clear for the CPs that apply modern basic science for the genetic improvement of the basic foods, not only through the genetic material, but also through research methodologies. The IPG nature of this work is clear; and the impact pathways can be quite credibly defined.

The pathway to impact is not so clear for the NRM research as seen in the Water and Food CP. Yet, as discussed above (Section 2.2.4) establishment of a “comparative paradigm” to extrapolate findings of agro-ecological science across gradients of change allows achieving broad impact across systems beyond location-specific applications.

In all CPs there is a need to maintain the focus on the research outputs while developing the linkages with ongoing delivery based networks. The CP must identify these networks explicitly and seek for an expression of interest from the relevant network managers to participate actively in the CP. Such interest should encompass both dissemination of research results and the provision to the research scientists of feedback from the field.

Because extension is a local, or at best regional, public good, significant investment in delivery mechanisms will typically be inappropriate for CPs, although there may exist exceptional cases where innovations in delivery mechanisms are themselves international

public goods worthy of CP investment. The CPs must guard against creating new networks for ensuring impact.

It is important to monitor how the CPs are building an impact “culture”. This involves explicitly building the baseline data for assessing impact for the future and considering *ex ante* impact assessment in CP planning, for instance in defining the use of competitive grants scheme vs. commissioned research.

***Lessons: Reconciling the relevance and rigor requirements of the CPs necessitates on the one hand focus on the outputs of IPG nature and on the other leveraging pre-existing networks provided through SROs, ROs, NARS and some NGOs in order to also achieve the impact at the local level.***

#### *2.2.6. Identifying and Linking the Challenges to the Appropriate Research Instrument.*

The three pilot CPs were identified through a process of inviting proposals from Centers. They were launched at a time when a set of new priorities were being developed for the CGIAR. While all three pilot CPs address major priorities of the system, it is important that any future CPs are identified on the basis of a) the priorities of the CGIAR System (the priority challenges that the CGIAR is best placed to address) and b) an assessment of the appropriate research instruments for addressing the challenges. The undirected open call of CP research proposals - from Centers to launch the pilot CPs and from the large community of CGIAR stakeholders in the first round of the regular CP process - is likely to create difficulties in defining what the CP boundaries are in relation to on-going work at Centers and systemwide programs and how the overall CGIAR research agenda may develop. Agreement on System Priorities allows a focused call for proposals on an identified area of research where the CP criteria can be fulfilled.

The organizational instruments that the System can use to address the priorities include CPs, Systemwide programs, Ecoregional programs, Center programs, “Center coalitions” and Task forces. All of these involve the development of partnerships as appropriate to addressing the particular problems or challenges being addressed. The appropriateness of any organizational instrument to address the identified research challenge needs to be examined against counterfactuals, i.e. the alternative instruments. The final choice of instrument should not be influenced by perceived donor interest in a particular instrument; rather it should be the instrument, which is the most cost effective to address the challenge that has been identified as being a system priority.

***Lessons: The investor should seek maximum effectiveness and efficiency by investing in a research program that addresses the agreed CGIAR priorities and uses the most cost-effective instrument to address the challenges implied in those priorities.***

### 2.2.7. Effective Monitoring of the CP Priorities and Focus During the Start-Up Phase

While the nature of the CGIAR priorities should determine the broad focus of future CPs, some change in the CP scope from inception to implementation seems inherent in the CP process as it engages new research suppliers and new investors.

The selection criteria endorsed for the CPs by the Group are based on an assumption that it is possible to define the researchable topics, research hypotheses and expected outputs with time lines at a proposal stage. Likewise it assumes that partnerships will be established and a significant proportion of the funds will be secured before initiation of activities. In the light of the experience this does not seem feasible.

All three CPs required a design phase to set up partnerships and set up governance structures. They also required considerable preparatory phase after initiation to come up with a detailed workplan and a MTP defining research targets and annual milestones. The requirement for up-front funding was also not a reliable indicator of program significance for investors. The Water and Food CP suffered from withdrawal of considerable donation that made it seem very attractive in the planning stage. The HarvestPlus CP attracted the type of new funding expected from the CPs only after initiation and careful planning (for discussion on new funding, see Financial and Budgetary Issues).

***Lessons: There is a need for close oversight of the CP by the governance bodies of the CP (to ensure that the CP remains focused on IPG outcomes and uses existing structures) and close monitoring by the SC to guarantee that the CP remains focused on the relevant research goals. The SC should keep close contact to provide more intense monitoring of the CP program elements during the start up phase.***

***The CPs must develop MTPs that show realistic outputs and milestones. In the more complex CP such as the Water and Food CP, a set of MTPs may be needed for both theme and basin, with an overall log frame that monitors progress at the CP level.***

***The future System Priorities should be used to identify areas of research where a call for CP could be made. Selection criteria need to be modified considering how much detail in science and partnerships can be realistically expected before implementation begins. Investor, and anticipated investor interest, should not be criteria for the development of CP activities outside the well-defined priorities.***

## 2.3. Programmatic Drivers for a Successful Challenge Program

The nature of the intervention to tackle a global challenge does not of itself determine the effectiveness of the CP. There seem to be three drivers that are beyond those generally applicable to all CGIAR research irrespective of organizational mode:

- Clear definition of the main objectives for addressing the challenge and focus on a narrow enough set of outputs and targets where criteria can be established to determine when they have been achieved, i.e. the program is time-bound;

- Clear justifications for and implementation of partnerships, recognizing that that ultimate justification for a partnership has to be explicit recognition that will improve the effectiveness with which the target is reached; and consequently
- Clear specification of and focus on the added value deriving from the CP approach.

In addition, experiences from the on-going CPs suggest that there are other drivers for a successful CP, which also apply to CGIAR research in general. These include the following:

- Clear “comparative paradigm” to add value to the partnerships and help achieve broad impact through creation of IPGs
- Clear priorities and focus on them in managing competitive grants schemes
- Partnerships to access expertise to tackle the research challenge and to deliver outputs
- Effective delivery mechanisms to secure outcomes and impact
- Fast moving science that benefits from centralized or outsourced facilities and services not necessarily available within the CGIAR
- Particular opportunities for in-kind contributions and leveraging science beyond the CGIAR

### **3. Governance and Finance**

#### **3.1. Criteria for Assessing the Effectiveness of the CP as an Approach for Managing Research**

CP was conceptualized as a key element of a “programmatic approach in defining, financing, and managing research activities”<sup>4</sup>. This suggests certain criteria for evaluating the CP as an instrument for financing and managing research. They are as follows:

- Effective governance
- New investments in research for development
- Use of competitive grants to identify the most efficient suppliers of research
- Cost effectiveness of new partnerships

#### **3.2. Assessment and Lessons Learned**

##### *3.2.1. Overall*

The pilot CPs have operated essentially in accordance with most of the basic principles originally defined for their development and implementation. Independence of governance is observed in all CPs although in various degrees, i.e. from one mechanism or model that involve significant influence on decision-making by the CGIAR Centers involved to one where the influence of a Center is no greater than any of the other members institutions. The governance model or mechanism chosen generally works well in each CP. However,

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<sup>4</sup> Report of CGIAR Change Design and Management Team, May 2001.

future CPs could benefit from a set of common guidelines on governance to avoid potential pitfalls.

The pilot CPs have been successful in raising new funds for research, both from traditional and non-traditional CGIAR donors. These new funds have, on the average, accounted for about half of the growth in the total CGIAR investment in the past two years.

The competitive grants component of the CPs have resulted in bringing in new research suppliers and, therefore new partnerships.

Transaction cost resulting from setting up the governance structure and from developing new partnerships is a major component of total cost at the inception phase of each CP. This has decreased in the second year but would further require close oversight.

### *3.2.2. Effective Governance*

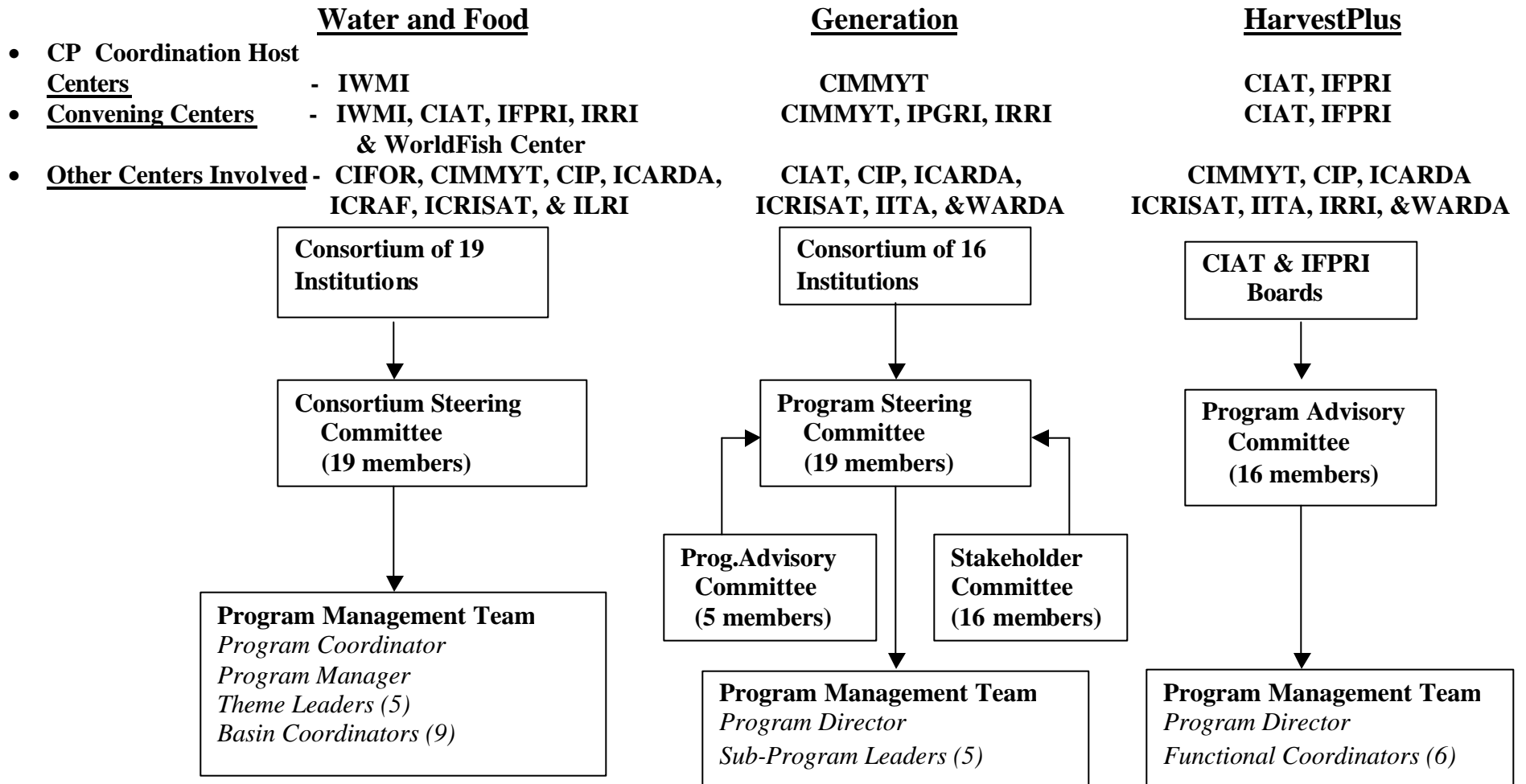
The CP Task Force that elaborated on the concept and the process for the development and implementation of CPs formulated some guiding principles on CP governance. The pilot CPs have observed these principles except on the size and composition of the steering group. All three CPs created governance bodies bigger than the one suggested by the task force.

The three pilot CPs adopted distinctly different governance models ( Figure 1). The Water and Food CP has created a legal non-incorporated consortium of its 19 member institutions with each member represented in a steering committee. The Program Coordinator, Program Manager, and the Secretariat of the Water and Food CP are hosted by IWMI at its headquarters in Sri Lanka.

The Generation CP has a formally binding consortium agreement entered into by its 16 member institutions, a program steering committee with 19 members, a program advisory committee with 5 members, and a stakeholders committee with 16 members. The Program Director and his staff are hosted by CIMMYT at its headquarters in Mexico.

The HarvestPlus CP has a formal cooperation agreement between the two lead CGIAR centers and a 16-member program advisory committee with delegated authority from the two center boards. The Program Director and his staff are hosted by IFPRI at its headquarters in Washington, D.C., and three functional coordinators are hosted by CIAT at its headquarters in Colombia.

Giving the CPs the freedom to create and adopt governance structures that best suit their needs is consistent with the broad guidelines set for developing challenge programs. Prescribing a single model is deemed inappropriate. However, it would be useful to set down the governance parameters that CPs are expected to meet. The CPs have adopted governance mechanisms that enabled partners to participate in decision-making, a feature that serves the CPs' purpose as an instrument to have a more open CGIAR System.



**Fig. 1. Governance structure of the pilot Challenge Programs**

However, there is some concern that Center boards have diminished role in accountability and in terms of legal, accounting and other responsibilities related to their Center receiving the funds for the CP, and in governance on the “boundaries” between Center programs and the independent program management of the CPs.

On day-to-day management, the possibility of a conflict between the legal, accounting and other responsibilities of a center receiving the funding on one hand and the independent program management responsibility of the CPs on the other, has been raised. So far there have been no problems but the potential for them to develop is there with the current level of financial, legal or other form of process oversight of CPs.

***Lessons: It is appropriate to maintain flexibility so that each CP creates and adopts governance structures that best suit their needs. This is consistent with the broad principles set for developing CPs. Prescribing a single model for CPs would be counterproductive. However, it is recommended that a set of governance parameters for the CPs be developed spelling out the key questions on governance systems, including management and related legal and administrative matters. The guidelines could build on the principles prescribed by the CP Task Force in 2001 and on benchmarking with similar types of research and consortium instruments.***

### 3.2.3. New Investments in Research for Development

A key question raised during the early stages of implementation of the pilot CPs’ was: *Were the pilot CPs able to attract new funding, or were they simply drawing resources away from Center programs?*

Table 1 and Figure 2 show the trends in the level of investments in the CPs relative to the total CGIAR research agenda. Overall projected growth in CP investments – 191% in 2004 and 63% in 2005 – is driving the overall growth of investments in CGIAR as a whole. The increase in investment in the CPs in 2004 over 2003 (\$16.8 million) accounts for about 44% of the total increase in financial support for the CGIAR agenda (\$38 million). The projected increase in contribution to CP in 2005 (\$16.1million) is about 62% of the expected increase in the total CGIAR investment (\$26 million). If not for the CPs, the Center programs would have expanded by only 8% (instead of 16%) between 2003 and 2005. It is clear that the pilot CPs are accounting for a very significant portion of the increase in the level of financial investments in the CGIAR.

In 2004, the CPs are expected to contribute 28% (\$8 million) of the total growth (\$29 million) of Center programs. The proportion rises to 60% (\$13 million) of the total projected growth (\$22 million) in 2005.

It may be argued that while the overall core programs have increased, some Centers might have experienced a reduction in investment as a result of the launching of the CPs. However, a closer look at the investments by Center showed that none is projected to experience a decrease in investment in 2004. All Centers, including those which are not

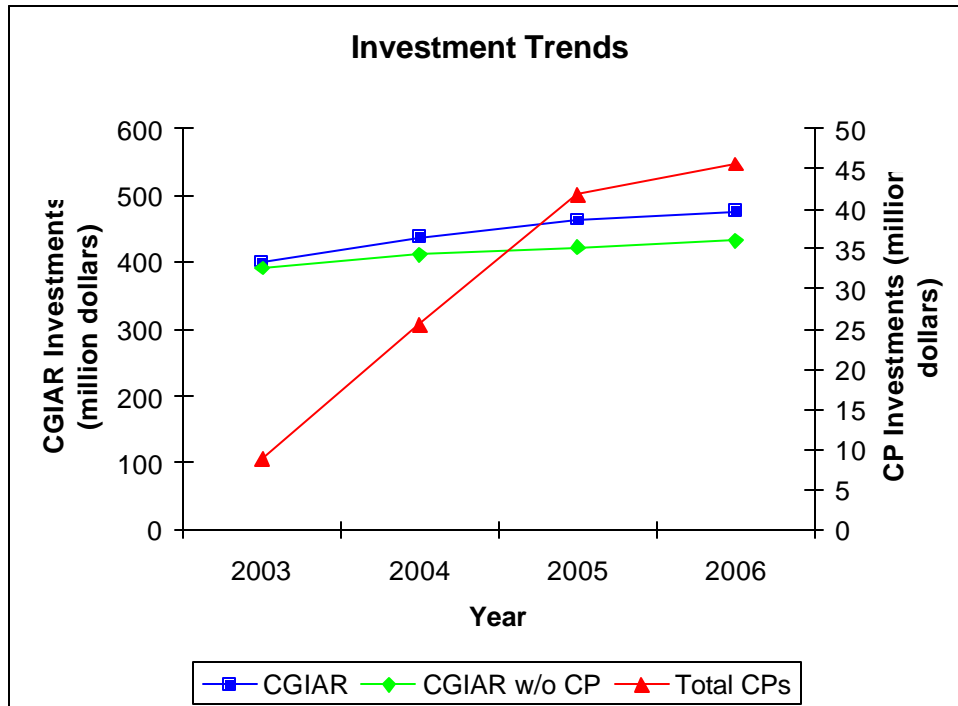


currently involved in any of the pilot CPs, are expected to realize an increase in financial support.

The experience so far indicates that the three pilot CPs have been successful in raising funds during their initial year of implementation. Some completely new sources of funds were obtained, the most well-known of which was the Bill and Melinda Gates Foundation for the HarvestPlus CP. The CPs are also tapping into new money from traditional donors (e.g. USAID, Netherlands, France, UK). Traditional investors note that without the CPs the “new” funds would not have been accessible. Examples include funding earmarked for health from USAID (HarvestPlus CP) and for water from the Netherlands and France (Water and Food CP).

<b>Table 1. Investments (million \$) in CPs relative to total CGIAR agenda.</b>			
	<b>Year</b>		
	<b>2003 (actual)</b>	<b>2004 (est.)</b>	<b>2005 (proj.)</b>
<b>Total CGIAR</b>	400*	438	464
<b>% Growth (relative to previous year)</b>	4%	10%	6%
<b>Water &amp; Food CP</b>	5.0	7.3	12.0
<b>HarvestPlus CP</b>	3.0	9.9	16.4
<b>Generation CP</b>	0.8	8.4	13.3
<b>Total CP</b>	8.8	25.6	41.7
<b>% Growth (relative to previous year)</b>	-	191%	63%
<b>% of Total CGIAR</b>	2%	6%	9%

\* For consistency, this includes inter-center activities of \$5.2 million.



**Figure 2. Trends of investments in the pilot Challenge Programs(CPs) relative to those in the total research CGIAR agenda.**

*Lessons: The pilot CPs are generating new funding, both from traditional sources (CGIAR members) and from completely new sources. Such new resources most likely would not have been raised without the CPs.*

*Available data show that funding to any Center in 2003 and 2004 has not declined.*

#### *3.2.4. Use of Competitive Grants and Direct Commissioning of Research*

Competitive research funding is consistent with the overall objective of achieving openness and wider partnerships. All CPs are using competitive grants to open up to a broader range of research suppliers and identify the most efficient ones.

Table 2 shows the extent to which diversity, in terms of new research suppliers, is brought into the CPs. In 2003, about 68% of the total CP funding went to CGIAR Centers. In 2004, 55% of the funding is expected to go to the CGIAR Centers and 45% to their partners (ARIs/Universities, NARES). The projections in 2005 indicate a continuation of funding going mostly to the CGIAR Centers, with a share of about 60% of the total funding. Compared to the two other CPs, the Water and Food CP has allocated a relatively larger proportion of funding to non-CGIAR institutions in 2004 and the trend is expected to continue in the succeeding two years. To some extent, this is due to the fact that the number of CGIAR Centers involved in this CP is fewer compared to the other two.

The distribution of CP funding described above is not solely attributed to competitive funding. A significant part is accounted for by direct commissioning of research, particularly in the initial year of CP implementation. There is a consensus that while competition is important, it is necessary to have a balanced research portfolio, i.e. being able to complement competitive research allocation with direct commissioning of research as and when appropriate.

*Lessons: Competitive grants seems to be effective in opening the System to new research suppliers. A future review should enable the CGIAR to assess more fully the level of engagement of non-CGIAR centers as research suppliers in the CPs.*

*Competitive grants need to be complemented with commissioned grants to ensure a balanced research portfolio on the key roadblocks of the challenge.*

<b>Table 2. CP fund allocation (million \$) to research suppliers.</b>			
<b>Challenge Programs</b>	<b>Year</b>		
	<b>2003 (actual)</b>	<b>2004 (est.)</b>	<b>2005 (proj.)</b>
<b>Water &amp; Food</b>			
CGIAR Centers	3.2	3.2	5.2
Partners	1.8	4.1	6.8
<b>Total</b>	<b>5.0</b>	<b>7.3</b>	<b>12.0</b>
<b>HarvestPlus</b>			
CGIAR Centers	2.0	5.7	11.4
Partners	1.0	4.2	5.0
<b>Total</b>	<b>3.0</b>	<b>9.9</b>	<b>16.4</b>
<b>Generation</b>			
CGIAR Centers	0.8	5.3	8.4 <sup>a</sup>
Partners	0.0	3.1	4.9 <sup>a</sup>
<b>Total</b>	<b>0.8</b>	<b>8.4</b>	<b>13.3</b>
<b>Total CP</b>			
CGIAR Centers	6.0	14.2	25.0
Partners	2.8	11.4	16.7
<b>Total</b>	<b>8.8</b>	<b>25.6</b>	<b>41.7</b>

<sup>a</sup> Projected.

### 3.2.5. Cost Effectiveness of New Partnerships

There are significant transaction costs associated with CPs. By definition, CPs involve partnerships with a wide range of institutions. Developing and managing those broad-based partnerships will require more resources, at least at the initial stages, compared to more narrowly based and in-house CGIAR teams. Transaction costs are defined in this report as the overall cost of governance (steering or advisory groups, research evaluation panels, Secretariat where such mechanism exists). These costs are in addition to the Centers' indirect costs of about 18-20% for "overheads" such as utilities and center administration.

Table 3 shows the estimates of transaction costs in comparison with the research costs of the pilot CPs. In 2003, transaction costs (\$2.05 million) accounted for about 23% of the total cost. The bulk of those costs were incurred by Water and Food CP and HarvestPlus CP which both had their inception activities in that year. Total transaction cost is projected to increase to \$2.32 million in 2004 because of the first full year of operation of the Generation CP. The amount, however, represents only 9% of the total projected funding of all activities of the three CPs. It is projected to decrease further in proportion to the total estimated funding.

Averaging about \$2.5 million per year or 8% of total budget, CP transaction cost is comparable to similar cost, estimated to be about \$2.7 million, incurred by the CGIAR systemwide and ecoregional programs operating in 2004. One significant difference, however, is that the CPs, as noted in section 3.2.3, are projected to generate additional funds of about \$8 million in 2004 and \$13 million in 2005 to the Centers. Furthermore, the CPs have also mobilized about \$10 to 15 million for CGIAR partners. The CP transaction costs are leveraging growth.

<b>Table 3. Comparison of CP research costs and transaction costs.</b>			
<b>Challenge Programs</b>	<b>Year</b>		
	<b>2003</b>	<b>2004</b>	<b>2005</b>
<b>Water &amp; Food</b>			
Research Costs	3.8	6.5	11.2
Transaction Costs	1.2	0.8	0.8
Total	5.2	7.3	12.0
<b>HarvestPlus</b>			
Research Costs	2.2	9.0	15.3
Transaction Costs	0.8	0.9	1.1
Total	3.0	9.9	16.4
<b>Generation</b>			
Research Costs	0.8	7.8	12.4
Transaction Costs	0.03	0.6	0.9
Total	0.8	8.4	13.3

In summary, interdisciplinary-multi institutional ventures that attempt truly new, high-impact science are likely to have high up-front costs. These can yield discrete advances in relevant science, but it takes a year or two of intense interaction between team members to get vocabularies, methods and divisions of labor sufficiently straight to make real progress. In corollary, if the early transaction costs are not high, it is unlikely that there would really be much new, integrative science emerging from the effort. What matters is the benefits-to-transaction costs ratio. The benefits in terms of actual outcomes vis-a-vis the objectives of research partnerships cannot be assessed at this early stage of the CPs' implementation. Certainly, the concrete benefits are not just in terms of additional resources that are being generated by the CPs.

***Lessons: Incurring transaction costs is unavoidable in developing and implementing CPs. Good oversight is key to managing transaction costs. This includes monitoring of the establishment and maturing of partnerships, implementation of the competitive grants schemes, and associated changes in the transaction costs.***

#### **4. Conclusions**

The following are the main conclusions emerging from the experiences on the CP approach so far:

- Although the nature of the challenges in the three CPs is different, they are all moving toward meeting the main criteria of a CP, albeit at different rates. They are designed for time-bound, science-based interventions aimed to provide international public goods of global significance to reduce poverty and hunger.
- The CPs have shown innovative approaches to problem solving and, although it is early to judge definitively, they appear to add value to the System.
- CPs should identify and remove “roadblocks”, i.e major constraints to achieving relevant development goals. Based on experience thus far, clarity is needed on what the roadblocks are and what can be done by research to remove them including institutional change.
- Each CP has developed partnerships but for different purposes (in the initial phase). However, establishing partnerships is not an end, but a means to generating and improving research outputs. The reasons for the partnership should be explicit at the planning stage with focus on the added value of partnerships on the effectiveness of CPs.
- CPs are helping open the System by attracting new partners who would not otherwise be engaged, and bringing in new science. However the level of engagement of the advanced research institutes (ARIs) and the private sector remains limited. CPs have enhanced collaboration between Centers.
- A large number of new partners can create a risk of lack of focus and this can be

exacerbated through “open” competitive bidding. Priorities should be set first, followed by commissioning research and using competitive bidding to mobilize the best providers of the science and services. This should result in a balanced research portfolio.

- CP need to remain focused on the development of International Public Goods (IPG). Priorities must be right and clear in order to create a cohesive program of high quality science such that findings at the local level can be extrapolated to develop IPG.
- CPs have been able to attract resources of all kinds (human, as well as financial, and access to facilities). CPs have also attracted additional funding from traditional donors.
- There are significant transaction costs associated with the CPs, largely due to the wide range of partnerships and the nature of CP governance, and there should be opportunities to reduce these costs. However, what matters, are the benefits from the added value, relative to the transaction costs, but it is too early to assess the cost-effectiveness of this organizational model.
- There is no single, optimal model for governing and managing CPs. There are issues of governance related to the responsibility of center boards and to the boundaries and linkages with on going programs.
- CPs need to be given time to get established and show outcomes before a full evaluation is done (at least 5 years).

## **5. Recommendations**

The following are the recommendations based on the experiences and lessons learned to date from the CP pilot process and from the SC’s deliberations on CGIAR System priorities and the appropriate strategies for implementing them:

- *The current CPs should continue and they should be evaluated by an external panel after five years from start to assess the value added provided by the CP structure in terms of the effectiveness of partnerships and generation of outputs, evidence of adoption and impact, cost effectiveness of operations and sustained donor interest.*
- *CPs need to be developed in the context of agreed System Priorities through a directed call and only when alternative organizational instruments, i.e. systemwide programs, Center programs, task forces and/or coalitions are not appropriate.*
- *The time-bound nature of the CPs should be emphasized, and the implications of it to the planned program scope and focus defined. There is a clear concern that, once established, it is difficult to end these programs.*
- *Irrespective of the orientation of the programs, the IPG nature of the planned outputs must be clear at outset.*

- *Prescribing a single model of governance is deemed inappropriate. However, it is recommended that a set of governance parameters for the CPs be developed spelling out the key questions on governance systems, including management and related legal and administrative matters. The guidelines could build on the principles prescribed by the CP Task Force in 2001 and on benchmarking with similar types of research and consortium instruments.*
- *Linkage mechanisms between the governance bodies (committees) of the CPs and the Centers should be clarified to avoid potential problems in financial, legal or other form of process oversight of CPs. Lines of accountability to investors should be more clearly defined and stated.*
- *Good oversight is required to properly monitor transaction costs associated with the conduct of CP research.*