The CGIAR's Challenge Program Experiences:
A Critical Analysis

A contribution to Consortium and Mega-program design

Jonathan Woolley (CPWF), Jean-Marcel Ribaut (GCP), Howarth Bouis (HarvestPlus) and Adewale Adekunle (SSA-CP)

6 February 2009

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Introduction

Over recent years, several analyses of Challenge Program experiences have been produced: by the CGIAR Secretariat and CGIAR Science Council (2004, 2007); the Alliance Deputy Executive (2007); the Challenge Program External Reviews (CPERs); and by Palenberg (2008) in a useful synthesis of governance and management aspects of those reviews (Palenberg, 2008).

Unlike these analyses, this document is written by the CPs. As such, it enters into more detail about the processes of running CPs than was possible in the integrated reform proposal (Change Steering Team - CST, 2008), especially where we consider CP experiences to be potentially relevant during this unique period of Consortium and Mega-program (MP) design. While at times the paper compares and contrasts CP interpretations with other sources, it is not intended to be a synthesis of reviews.

CPs and MPs have many obvious similarities that mark them as different from CGIAR Centres: they are both programmatic in nature, they both depend for success on broad partnerships beyond the CGIAR, aiming to treat CGIAR and non-CGIAR partners equally, yet both can function only if they have access to skilled researchers lodged in thriving CGIAR Centres. CPs' relative independence has been critical for objective priority-setting. MPs may have the advantage of operating under a purpose-designed legal entity which will act as their legal and fiduciary representative, as opposed to CPs experience in operating under the policies and procedures of their individual host institutions; our experience has demonstrated the wisdom of independent legal status for the MP structure.

In a complex new CGIAR program of 10-15 years or more, be it CP or MP, a significant amount of time needs to be spent on process and team building, as is necessary for effective science. All CPs needed approximately one year after the Program leader's appointment for hiring staff, setting up administrative processes, conducting planning meetings among collaborating organisations and launching the first calls for research. This reflects the fact that such programs change the way of doing things among people as much as they change the science. Process should not be criticized as somehow inferior to science, as can happen in the CGIAR community. Insufficient initial attention to process will almost certainly lead to problems for science development. At the same time, processes need to be tested and to evolve; design is iterative and the advantages of learning from mistakes are indispensible.

An approach that leaves creative space for innovation by scientists must be combined with the need for focus and advance programming, *inter alia*. It is useful to remember that successful research activity depends on low-frequency and often unpredictable events and, therefore, requires investment across a range of concepts, not all of which are easy to map from the beginning.

Governance and financial management

Governance priorities emphasised by the CST paper (p17) are: Simplicity and clarity of governance; Greater efficiency and cost-effectiveness in terms of the proportion of available resources devoted to research; Avoidance of over-centralised decision making, and; application of the principle of subsidiarity.[2]

Independence of the governing body: Theory and practice.
The principles of setting up independent boards without conflicts of interest are well-known in the governance literature. In their learning processes, CPs dealt with the following paradox: In order to make the CPs truly functional and attractive to non-CGIAR partners, and hence more useful to the CGIAR Centres, it was necessary for the Centres to relinquish control of the governance process.

The key recommendation from the review of three CPs by Palenberg (2008) was that conflict of interest should be avoided by having governance invested in a Board of independent individuals. Host Centres should be represented on such a Board, but with a vote only on legal and financial matters that directly affect their host Centre. Also; a conflict of interest policy and procedures document should be agreed upon by Board Members.

One CP, *HarvestPlus*, already had a structure similar to that recommended by the external review teams, while two others, the *Generation Challenge Program (GCP)* and the *Challenge Program on Water and Food (CPWF)*, made radical changes in their governance so as to conform as closely as possible to external review recommendations.

In the case of *GCP*, because amendments to its Consortium agreement require a unanimous vote by the members, it took a considerable length of time and several in-person meetings for *GCP* to be able to amend the unanimity clause and pave the way for governance reforms. Finally, *GCP* has an Executive Board, and the Consortium Agreement is under review. Its Program Steering Committee should soon be converted into a Consortium Committee. This illustrates another of Palenberg's key recommendations: that majority voting rather than unanimous approval should always be a feature of CP - and presumably CGIAR Consortium and Fund - governance.

The *CPWF* was able to implement broader governance reform in one step, because amendments in the Joint Venture Agreement could be made with a two-thirds majority; it is however still in a process of evolution concerning the relationship and rights of independent members (the majority) and representative members.

The Sub-Saharan Africa Challenge Program (SSA CP), not included in the review by Palenberg (2008), decided to reduce costs by replacing its initial fairly autonomous steering committee with a Program Committee which depends upon the Board of FARA.

Obtaining diversity and balance if several institutional partners make nominations.
Obtaining balance of disciplinary experience, gender, *etc*, can be difficult in a group where each institution nominates its own representative, subject solely to no objection from other members. This was certainly a challenge in the early stages of at least one CP in both its steering committee and management team.

In the case of Consortium and MPs, if any process of nomination from different Centres or other groups were to be considered, agreements about obtaining overall balance would be needed; each institution or group of institutions could not necessarily nominate its first choice.

Unambiguous, direct chains of command.
Palenberg commented on the need for an unambiguous chain of command from CP Boards to all CP managers, without confusions caused by the host Centres of different CP staff. As such, CP managers should be 'purpose hired' for the job, not seconded from individual Centres, and the CP leader should play a major role in their selection. This has definitely been the case with all CPs; even one which started with an approach closer to institutional representation in constituting the management team has clearly moved to direct appointment of

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[2] We note that the governance mechanisms to be designed will only be at the level of the Consortium and Fund, not at MP level; however, we record here the lessons from CPs.

all managers. Certainly some CPs had important difficulties with 'two masters' problems when key staff were appointed and supervised by one of the contributing Centres.

Responsibilities of Centres and of CPs.
If CP experience is a guide, MPs of USD 50 million per year (the size of the largest Centres), or even USD 15 million (about the size of a present CP or of a small CG centre) will need their own independent and fully-dedicated staff in program leadership, project monitoring and communication. One of the difficulties of the CPs has been the huge load placed on leadership because the system has required the same procedures as for a centre – such as annual reports, medium-term plans (MTPs), and now perhaps performance management - while staffing has been a fraction of that in Centres. In the CPs, Centres are responsible for employment and performance review of project personnel, but CPs are responsible for M&E and impact assessment of individual projects.

Location.
From CP experience, it appears that MPs should be hosted at locations where high quality, affordable technical and managerial support is available and where conditions are suitable for the frequent, global travel of MP staff - which could be significantly more wide-ranging than for typical Centre staff. Transferring the experience of some CPs, location at a CGIAR Centre can offer advantages for smooth administrative support and staff interaction; a clear host-centre agreement can set out roles and obligations of each. The *SSA CP* shows that non-CGIAR institutions can also host CPs and perhaps MPs.

Other CP experiences indicate that it may be better to have an independent base in an institution with a complementary mandate, rather than sharing an address with a well-known host CG centre that works in a similar field, to avoid confusion in MP 'branding' and perceived conflicts of interest. The CPs' experience is that, regarding conflicts of interest, perception counts for more than reality and thus can be very damaging, despite safeguards.

Funding issues in MPs that may be similar to CPs.
The movement to MPs is desirable because it overcomes one of CPs' greatest challenges in funding: combining time-bound, project-like phases that assign research funds through projects, with the potential uncertainty of year-to-year funding, as experienced by the CG centres. This subjects them to the most difficult aspects of project management—the need to produce definite outputs by determined deadlines—without obtaining the advantage of knowing the time-bound budget in advance.

Individual donor preferences for regions, research themes and approaches have been successfully handled by CPs within a broader range of program research priorities, without necessarily running separate calls for each donor. Whatever method is used, consistent rules should be applied in order to ensure transparency.

Given that the Fund Council may take the decisions on what to fund in each of the MPs, and that it is unlikely that the Council members are experts in all subject matter of the MPs, a question stirs: Who will advise them? In this, the experiences of CPs, positive and negative, with independent selection panels (below) appear important.

It may be necessary to find an acceptable balance between more modest funding limits per proposal (Disadvantage: each proposal is more limited in the breadth of institutional participation it can attempt) and higher funding limits per proposal (Disadvantage: fewer proposals can be funded and therefore more groups of proponents may be excluded).

In Annex 1, a note shared amongst those responsible for the finance of CPs analyses lessons in financial reporting that may be useful in design funding for MPs.

Management and leadership

Difficulty of split appointments for management and leadership.
Part-time dedication of research staff from different partner institutions is a CP strength that enables the inclusion of a range of suitable institutions in networked research. Typically it is achieved through contracted research, and a researcher may engage in both CP and non-CP projects. However, for management and

leadership, split appointments between a CP and one of the partner institutions were generally found to be unsuitable.[3]

Our conclusion is that they are best avoided because they make loyalty and availability difficult in the already complex CP environment. We found that staff provided by different CP member institutions should dedicate 100% of their appointment to the CP. CP management operates more effectively if it has the primary responsibility for performance evaluation, taking into account the procedures of each institution that offered staff.

Inspired and flexible leadership.
Good coordination and leadership is identified by several CPERs and the ADE as key for effective team work and realization of goals and, indeed, it seems obvious. We emphasise here management team flexibility and motivation because of the dual task of CPs: leadership needs to guide the particular CP community in both the research-for-development agenda and in inducing effective partnerships to carry it out.

The distribution of these two key responsibilities among different managers depends on the particular CP, but two points are clear. Firstly, all program management team members should have knowledge and skills of both key areas as a person operating exclusively as a scientist or a networker would be unlikely to succeed. Secondly, it follows that it should not be assumed that the Program leader will be first and foremost a top scientist in the focus area; diplomacy and partnership building might be more important and the science credentials and skills might be supplied more by others in the team.

Partnerships for research

Partnerships are highly valuable to innovative research for development because they provide improved performance in at least five fields that are all relevant to implementation of both CPs and MPs. *(See box below)*. Yet partnerships require extra investment in the sensitive coordination of different institutional cultures. They also increase the risk of poorly focused or executed research.

In reductionist terms, one could therefore argue that CPs should only partner with the minimum number of institutions obviously needed for a particular piece of research. The combined experience of CPs, however, is that *a priori* definition of the exact set of partners may either not be possible, or may limit innovation because it is not usually feasible to foresee each of the partner's roles. There are, however, common-sense rules of thumb about how to limit duplication among partners.

Role of partnerships may be different in natural resources management and genetic research.
Experience with partnerships has been somewhat different in the CPs. In those focussed on more specific issues with clear boundaries (*GCP* and *HarvestPlus*), partnerships were more specifically tailored ex-ante to the research task. For example, it is clear for each crop biofortification challenge in *HarvestPlus* that it needed to bring together specific expertise in crop breeding, nutrition, social sciences and specialised extension communication about biofortified crops. As a result, neither *GCP* nor *HarvestPlus* expects an increase in their partnership base in their second phases; rather, they will tend to focus on those who have been the more efficient suppliers in their first phases.

In contrast, the original mandates of *the CPWF* and *SSA CP* focussed on broader challenges and their partnership experiences are different. In natural resources management research (NRMR), it seems that systems boundaries need to be placed more broadly to improve the chance that research has impact for development. Thus, *CPWF* and *SSA CP* typically needed to involve a range of partners whose roles were not always strictly defined from the outset. That is, the partnership was not just a tool for doing research, but the partnerships and the science together created the research content and results.

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[3] The *GCP* ER observed that because of the increasing weight of "hands-on" management responsibilities, it is necessary to avoid spilt responsibilities for sub-program leaders between *GCP* and the sub-program leaders' home institutions. The *CPWF* ER commented on the excessive management workload and the "two masters problem" because several management team members, theme leaders and basin coordinators were provided part-time by partner institutions.

Objectives of partnerships

1. Knowledge sharing or creation: Foster information sharing and collaborative learning; cross-fertilization of solutions; deployment of successful technologies
2. Political motives: Accountability to stakeholders, greater leverage and political legitimacy
3. Strategic motives: Access to resources and efficiency of resource use
4. Foster systemic solutions to systemic problems, mimicking the complexity of the system
5. Foster/accelerate behavioural and institutional changes through social learning

Sources: Huxham & Vangen (2005); Hardy, Phillips & Lawrence (2003)

For this reason, while focussing the content of its research in its second phase, the *CPWF* expects and requires its partnership base to change in each river basin as more suitable partners are found for different aspects of research.

The scope of the challenge and the resultant practices in handling partnerships is therefore the area in which most diversity can be seen among CPs. This is likely to be useful for considering the range of possible MP designs. Naturally, as more subcomponents are included in a CP or MP, it will become more able to deal with complex problems, but will also become more complex administratively.

The experience of *CPWF* shows that, as research-for-development becomes more complex on both social and technical dimensions *(see Figure 1),* it is more likely to need major investment in partnerships. This has resulted in increased costs, which is justified for complex problems because otherwise the research would simply not have succeeded.

There are other implications: there is a time-lag in obtaining the first results, and the results are more difficult to predict *a priori*, which therefore requires planning and M&E to be more flexible. Field research is usually restricted to a few specific locations, or even just one, so that the diverse research and development institutions can work together. Often project researchers have used action research and the progress of their mutual understanding is best described through the processes of social learning. Even work done at a single location, if properly designed, can just as validly contribute international public goods as work done in many locations on, for example, varietal testing.

By giving more leadership responsibility to non-CG partners, the *CPWF* found that the science questions are often differently handled, typically through better attention to integration and scale issues, through connection in policy making, and better attention to on-ground impacts. There are clear opportunities when national institutions participate as equal partners, contributing to, and even leading research projects.

Not always possible to assign exact roles to partners ex ante.
One of the key opportunities for CPs and many MPs is provided by the broad partnerships of research for development, through stepping beyond CGIAR's traditional networks and daring to include more unusual partners in a project than might previously have been attempted. Investment in networks is therefore an investment in more effective science and not a transaction cost. CP and MP leaders therefore need to monitor the trade-offs between investment in partnerships to generate effective results from complex research and the additional time and cost requirements.

Palenberg (2008, p10) says that it is important to set concrete goals for each field of program activities as a basis for a successful partnership strategy. We agree, provided it is remembered that the partnership members themselves shape the research and lead it to innovation and new, unexpected hypotheses. If research is conceived by 'the few' and partners are merely sought to 'fill the boxes' according to that concept of the research needed, then several of the key features of innovation processes will be removed at the beginning.

The CST document speaks (p13) of "standardized arrangements" for inter-Centre collaboration. This implies regimentation. Yet in general the CPs found that the place of each CG centre is best allocated according to its

research and other skills, whether through competitive or commissioned processes. When applying this theory to non-CGIAR institutions, the likelihood decreases of a one-size-fits-all arrangement working well for MPs.

There was concern from the ADE (2007) that partnerships were often formed to "tick the box" (their words). This is not a common anomaly within CPs. Furthermore, if it does occur, it is relatively easy for selection panels to spot the distortion. Indeed, if not detected in time, then during project execution the existence of "sleeping" partners becomes overt and the project adjusts. Existing CPs do not consider this to be an issue beyond the careful design of screening and selection processes.

In Annex 2, we suggest best practices for building collaboration among institutions and individuals.

Quotes about CP partnerships

"When new partnerships form, new paradigms, and even science, emerge that could never have been achieved by the individuals alone. It is trans-disciplinarity; much more than simply having people of different disciplines working together. Completely unexpected information and understanding have emerged when diverse CP participants meet, leaving behind their preconceived disciplinary or institutional notions, biases and knowledge" - *A CP project leader.*

" Partnerships are difficult to cultivate but there are so many things good about them. Partnerships within the CP have remarkably brought capacity building in a most effective manner"- *A CP Project Leader*

"Perhaps the most important value of this CP thus far is the opportunities it has provided for people of diverse backgrounds to think collectively about solutions to complex problems, and, in the process, to learn from one another." - *One of the CPER reports*

"The value added by [this CP] is the very important network capital that is created. [The CP] has been able to tackle issues that would have been impossible to cover by individual CGIAR Centres or NARS" - *EIARD*

Communication in dispersed inter-disciplinary networks.
The CPs spend considerable effort improving their inter-disciplinary communication and learning in dispersed networks; these experiences are likely to be useful to MPs, alongside those already available through other types of inter-Centre cooperation.

Dispersed scientific networks in a CP have been made to work via virtual communication; however, personal face-to-face contact remains vital, especially for interactions where preconceived notions are left behind. A typical challenge requiring plenty of face-to-face interaction is that technical language is either misunderstood, or has different connotations, to different disciplines, cultures and languages. We have also found that issues are resolved best in more formal decisions among partner institutions when it is built on plenty of informal communication among individual researchers and managers.

Communication tools such as a regular newsletter[4] can help dispersed CP members identify with a community of practice. The CPs additionally developed the virtual equivalent of face-to-face brainstorming and spontaneous meetings to deal with specific urgent issues. Other useful practices include an early face-to-face meeting of the team that will work virtually and maintaining a calendar (as much as one year in advance) of upcoming in-person meetings as well as key virtual meetings, to ensure focus and good attendance.

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[4] All four CPs have a newsletter and have each discovered that it is one of the most widely read and influential of their publications.

Independent advice on research, partnerships and development outcomes[5]

It is important that advice functionaries do not breach into policing roles, and that advisors stimulate innovation in science and process. For this reason CPs have so far relied more on Program Advisory Committees, Program Steering Committees or their Boards for independent advice than on CG-wide mechanisms such as the Science Council.

During their inception and early first phase, we feel that the CPs worked to 'broaden the mind' of the Science Council on the future needs of research for development, rather than vice-versa. Issues have included the role of NRMR, the difficulty of fitting CPs into an MTP structure designed for Centres, and the relevance of the International Public Goods concept. Happily, the Science Council recently moved closer to the perspective of the CPs, thus making its advice much more specific and applicable.

Challenges to be factored into future science and partnership advice include the following: Flexibility in the design and outputs of projects implemented by networks; Finding a logic model for Program planning that is compatible with emergent learning; permitting a mix of project outputs so as to engage diverse research-for-development partners, and; Allowing time for learning and development of social capital in partnerships, by regarding them as investments, not as transaction costs.

Reviewers of competitive or commissioned research proposals constitute another stream of independent advice. These panels work best if they include both international experts in the thematic area and those familiar with the particular region or country/countries where the research is to be conducted. Despite any extra cost, all, or at least the final part, of the selection process is best conducted with the panel members face-to-face. Beyond this, CPs have had rather different experiences. *GCP* and *HarvestPlus* report no problems with the acceptance of selection results. The *CPWF* and the *SSA CP*, probably because of the broad range of their research, have found that the greater the level of specialization of research proposals, the more demanding it is to find independent reviewers of sufficient calibre, and the more likely it is that some proponents will be dissatisfied with the review.[6]

The challenge of putting together selection panels for a wide range of MPs makes it important to develop an excellent database of the reviewers available.

Priority setting for research

Some documents that review CPs tend to merge the scoping of whole CPs with the scoping of priorities of individual CPs. Scoping of whole CPs is covered in the first three recommendations of the CP lessons learnt review (CGIAR, 2007) and in a paper by the Alliance (Izac 2008). The key area mentioned by the CST paper in this regard (p17) is the need for a clear strategic focus that aggregates the collective wisdom of Centres and partners to develop and manage a high level strategy.

Who sets the priorities within a CP or MP
Determining who should be involved in setting priorities for Programs is a sensitive matter. On the one hand, leaders and staff of CGIAR Centres are cognizant about CG system outputs and often also have a good grasp of the knowledge demands in the field. In *HarvestPlus* and *SSA CP*, priority-setting is primarily the role of management, with advice from the Program Advisory Committee that has the ultimate decision-making power On the other hand, a priority-setting process that relies solely on institutional information can degenerate to territorial ownership over direction, or to an exercise that includes everything to avoid bias. Both *CPWF* and *GCP* experienced this phenomenon initially, leading to sets of priorities too broad to allow a workable Program

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[5] This important requirement is cited on p7 of the CST document.

[6] Furthermore, if one tries to establish advisers with diversity in gender, national origin and age, traditionally-minded scientists are even more likely to be unwilling to accept the results. This occurred in the first competitive call of the CPWF, in which 30 panelists (21 for full proposals) were extremely diverse.

focus. Conflicts of interest inherent in the governance or management structures interfered in *GCP* and the *CPWF* because the decision makers were also direct beneficiaries of the decisions they made. Both programs therefore introduced an element where independent expert panels decided specific priorities from among the broader range set by advisory groups of scientists (CGIAR and non-CGIAR).

User-responsive priority setting for large CPs or MPs.
Mega-programs will need to meet the unresolved challenge of combining top-down and bottom-up priority setting. Top-down priority setting, such as developed by IFPRI and ISNAR, uses national statistics and policies and, sometimes, the opinions of representatives of national stakeholder groups. Bottom-up priority setting, such as developed by many CGIAR Centres and others, works with a farming systems approach, analyzing constraints and opportunities and their causes and building priorities for communities and small regions.
Consolidating the needs of a very large number of communities into a national picture without merely letting the (often self-appointed) national spokespeople dominate requires delicacy and perseverance. If the target is transnational, for example a transboundary river basin or an ecoregion, then the challenge is even greater. The International Federation of Agricultural Producers (IFAP) worked with the *CPWF* in parts of the Mekong basin to attempt to design such a methodology, using its network of farmer associations. The effort was unsuccessful and remains at the level of a bottom-up process, probably because the participation by institutions at provincial, national and river basin scales was not adequately incorporated.

Selection processes for research projects

In CPs, and now presumably in MPs, a battery of process tools with different levels of competition, from direct commissioning through competitive tendering to open competition, may be required to address research areas.

Competitive bidding is effective in opening up the research agenda to new suppliers, in stimulating new partnerships and ideas beyond those that were known to CP management and in setting high standards of planning and science. Yet when used alone it is less effective in balancing the coverage of a large set of priorities, research themes, geographical target areas and types of lead institution.

Competitive bidding can hinder building of the community-of-practice in three ways. First, if a proponent does not know whether her proposal will be selected, she will be more reluctant to fully commit to the planning process.

Second, a winning bidder has agreed to undertake a specific activity. CPs must be flexible as ongoing research and external circumstances dictate changes in overall plans. Unless fully integrated into a culture of teamwork, the winning bidder may be reticent to alter the content of the winning bid, which may have taken quite a substantial amount of work to prepare. Even if all players are amenable to adapting their proposals, traditional procurement rules do not allow the winners to be approached to modify their proposal, as this could be appealed by those not selected as being a change in the conditions of selection.

Third, it is usually expected that competitive bids will be decided only on the basis of technical competence, institutional capacity and partnership quality within the proposal, perhaps with a value also placed on capacity building. The ability or willingness to collaborate across project boundaries is essential yet difficult to assess in evaluating formal proposals.

The relevance of competitive approach can evolve over time. For example the *GCP* found it very suitable during the first phase of the program to build the research community and identify the winners, but *GCP* management is currently questioning the need for further competitive calls during the Program's second phase as their research objectives are now more focused with deliverables clearly defined.

For competitive grants the CPs discovered that their governance structure must remove any appearance of conflict of interest in research selection; if this cannot be achieved, it may be better in the current environment to avoid the use of competitive mechanisms. The attractive mixed model, in which a group of institutions agree to conduct research and invite others to compete with them for funds, is untenable under typical procurement rules.

Procurement and audit specialists should not become the final arbiters of the competitive process design, as experience demonstrates that they usually do not have the necessary understanding and experience of the

needs in research for development, nor of the difference between research and the standard procurement of goods and services.

If competitive processes are to be used in MPs, then work with innovative procurement specialists to extend beyond present CGIAR Financial Guidelines will be necessary. Palenberg (2008, p11) both expressed surprise that the Guidelines were deemed to apply to CP competitive processes and also pointed out the large amount of extra work involved, on top of already demanding administrative selection processes. He also expressed the view that it is reasonable to award a "sizeable but not dominant" budget share through competitive mechanisms.

All CPs have a wealth of detailed processes, including guidelines and formats, that could readily be adapted to the needs of MPs and which represent a major investment of staff time and experience. CPs will be happy to provide this information as MP design and implementation proceeds. They would also be pleased to provide detailed insights into the implications of the present CGIAR Financial Guideline 6 on the design of competitive processes.

Monitoring, evaluation and impact assessment

Performance contracts.
Contracting research for development is certainly not the same as contracting the construction of a bridge. Palenberg (2008) raises the question of how far it is possible to design binding research contracts with measurable performance indicators. Given that effective research often needs to adjust along the way, how should this be handled? Furthermore, if part of the aim of MPs (like CPs) is to build broad, innovative partnerships to do the job better, how can new partners be encouraged when performance contracts will often lead to sanctions being passed from the lead institution that signs the contract to other research providers further down?

The contracts arising out of competitive processes make it difficult to negotiate substantial adjustments in research plans so as to respond to new developments or knowledge. Combining the best institutions and ideas from two or more projects in a competitive call would often provide the best research design, but is typically – and unfortunately - prohibited by procurement rules.

A different planning mechanism is needed for programmatic structures.
Almost every CP project is collaborative; furthermore CPs have relatively few researchers of their own. With a growing number of projects to manage, with various partners, various timelines, and projects standing on the shoulders of other projects, we have found that the present MTP template, designed for CGIAR Centres is often not appropriate for CPs. Specifically, the MTP logical framework does not allow sufficient detail of individual CP projects to be useful as a planning and monitoring tool for CPs. The present template also fails to address the 'sandwich' situation of most CPs—they are both the recipients and disburser of funds for and to projects.

The balance between research and impact.
As well as to those in the science community, it is important that knowledge reaches those who apply science to development; there is a need to identify ground-breaking pioneers in application of research to development and to share new information with them. Existing CPs demonstrate the potential for development impact through their broadened partnerships in research for development. On account of the complex social and political issues involved in the process, the time frame and any assumptions for achieving impact should be set realistically.
To achieve the development impact from the focused research expected from CPs within a tight time frame, it is heartening to note that the Science Council has re-evaluated its previous rejection of research with local impact. All large scale impact as International Public Goods must first grow from local testing and impact. Without this openness, NGO and other development partners would not have been able to work effectively with the CGIAR's CP initiatives.

Participatory analysis of 'impact pathways' is a methodology becoming increasingly important in bridging the gap between research and development; it has been applied particularly by the *CPWF* (Douthwaite et al, 2007). Uptake pathways need to be established and periodically revised so as to monitor the progress of research.

Strengthening to linkage of CGIAR research to impact.
CPs have followed their mandate to open up broader partnerships and to link strongly their research to impact. During these processes we have become aware of other opportunities that we might pursue in the future. Development projects could be connected to research networks through a light earmarking of grants and loans to developing countries, to collaborate with, and buy services from, the CGIAR system.
Similarly, donors could be asked to strengthen incentives for donor country ARIs to collaborate with CG networks. Within CP and, potentially, MP practice, longer project time horizons and funding of stakeholder capacity building could help develop social capital: networks and social capital could be treated both as the means and an output of projects.

Intellectual property

In multi-partner programs such as MPs or CPs funded partly or wholly by public funds, the safeguarding of intellectual property (IP) for broad use in the public interest is a major concern. An experience of GCP illustrates the difficulty of ensuring that practice by all partners follows the rules. HarvestPlus and CPWF face similar challenges to GCP, which they handle in slightly different ways.

In order to realise GCP's mission and mandate to generate international public goods for wide dissemination, the GCP Consortium Agreement and project contracts include provisions on IP. However, GCP found that some partners are not complying with contract provisions to make GCP-funded products available to all.

These provisions need to be revisited with a view to removing any ambiguities in interpretation, and to sealing gaps to ensure sharing of germplasm or other IP material with other researchers in the GCP network. GCP is exploring ways to compel compliance to the contractual documents, including ultimately requiring reimbursement of funds from partners who fail to live up to their obligations. Respect for IPR must be balanced with furthering the overall humanitarian mission of GCP.

In the _HarvestPlus_ IP policy, individual research partners can take out patents on their own discoveries, but they must make their results freely available in the public domain for use in developing countries.

IP issues in NRMR are more connected to aspects of methodologies and processes, and tend to arise less frequently. In the _CPWF_'s case, its legal representative IWMI holds the IP resulting from _CPWF_ contracts through an assignment agreement on behalf of the CPWF Consortium. _SSA,CP_ for its part proposes shared IP rights among partners.

Data sharing and synthesis

Data sharing.
The issue of data sharing is closely related to that of intellectual property. There are two interrelated aspects, both of which have been relatively difficult for CPs. These are (a) design of suitable platforms to receive data and (b) enforcement of contractual rules to ensure that data from financed projects is deposited in those platforms.

The _CPWF, SSA CP_ and _GCP_ have established data platforms. The _CPWF_ has invested in this area since program inception, but this has been an area of little success - indeed great frustration - in establishing attractive user-friendly platforms suited to the diverse data generated by NRMR. In order for some projects to fulfil their contractual requirements to share data, it has been necessary to receive data via CD-ROM. _GCP_'s effort to establish platforms is more recent and has been more successful but it too is still struggling with data presentation, access and sharing, especially for multi-partner initiatives. _SSA CP_ tapped into its partners' strength of some partners in data management to develop the platform through which it could share its data. Its effectiveness is soon to be tested. We note that the ADE is similarly concerned about this data challenge.

Even when a platform is available, all CPs have experienced variability in the quality of data from their partners, due to diversity and geographic dispersal, as well as the different capacity of partners to generate data and ensure its quality. This may be resolvable through retaining final contract payments until quality and well-documented data is deposited and through reminding project partners of requirements and the larger Program rationale. Such a process is already in place in the _GCP_ but might not be sufficient.

Synthesis.

We learnt in the CPs that research suppliers tend to focus on reporting and promoting the achievements of their own institution, even when they are part of a network of projects. Synthesis of the results of various projects led by different institutions has therefore been one of the greatest challenges for CPs – one that has not always been adequately met. We anticipate that synthesis will be a similar challenge for each MP.

Based on CP experience, it will require advance agreement (and probably contractual agreement) with different projects about the information to be gathered, followed up by MP staff as well as project staff from implementing institutions.

Again by analogy with CPs, a specific effort will be necessary to build the visibility and identity of each MP, including strict requirement for crediting the program and using its logos; this is necessary to encourage others to contribute to and support the MP network. They may not even realize such a network exists if individual institutions do not share the credit, or if they treat the MP as though it were 'another funding agency' rather than a scientific joint venture.

References

ADE (2007). *ADE Study: Lessons learnt in first cycle Challenge Programs*. Alliance Deputy Executive of the CGIAR Centres, Rome, September 2007.

Austin, J.E. (2000). *The collaboration challenge: How nonprofits and businesses succeed through strategic alliances*, Jossey-Bass Publishers, San Francisco.

CGIAR (2004). *Synthesis of lessons learned from initial implementation of CGIAR pilot Challenge Programs*. CGIAR Science Council, Rome and CGIAR Secretariat, Washington, DC, October 2004.

CGIAR (2007). *Lessons learnt from selection and implementation of the CGIAR Challenge Programs*. CGIAR Science Council, Rome and CGIAR Secretariat, Washington, DC, October 2007.

Change Steering Team (2008). *A revitalized CGIAR – a new way forward: The integrated reform proposal*. CGIAR Change Steering Team, 3 November 2008.

Douthwaite, B., Alvarez, B.S., Cook, S., Davies, R., George, P., Howell, J., Mackay, R. and Rubiano, J. (2007). Participatory Impact Pathways Analysis: A Practical Application of Program Theory in Research-for-Development. *Canadian Journal of Program Evaluation.* 22(2) pp. 127–159

Foster-Fishman, P.G., Berkowitz, S.L., Lounsbury, D.W., Jacobson, S. & Allen, N.A. (2001). Building Collaborative Capacity in Community Coalitions: A Review and Integrative Framework, *American Journal of Community Psychology, 29(*2): 241-261.

Hardy, C., Phillips, N. & Lawrence, T.B. (2003). Resources, Knowledge and Influence: The Organizational Effects of Interorganizational Collaboration, *Journal of Management Studies, 40*(2): 321-347**.**

Hudson, B., Hardy, B., Henwood, M. & Wistow, G. (1999). In Pursuit of Inter-Agency Collaboration In The Public Sector: What is the contribution of theory and research? *Public Management Review, 1*(2): 235-260

Huxham, C. & Vangen, S. (2005). *Managing to collaborate: The theory and practice of collaborative advantage*, New York: Routledge.

Izac, A.M. (2008). *Analysis of comments from the SC on the pre-proposals for CPs.* Alliance of the CGIAR Centres, Rome.

Linden, R.M. (2002). *Working across boundaries: Making collaboration work in government and nonprofit organizations*, San Francisco: John Wiley & Sons.

Roberts, N. (2001). Wicked problems and network approaches to resolution, *International Public Management Review, 1*(1), downloaded from:
http://www.idt.unisg.ch/org/idt/ipmr.nsf/ac4c1079924cf935c1256c76004ba1a6/1f3bcad88f16e7c6c1256c76004be2c4/$FILE/IPMR_1_1_WICKED.pdf

Palenberg, M. (2008). *Cross-cutting observations based on the review of three CGIAR Challenge Programs.* Institute for Development Strategy, Munich, 24 April 2008. presented at CGIAR ExCo 14, Ottawa, Canada, May 2008.

Patton, M. Q. (2007). *Development Evaluation*. Presentation given at the American Evaluation Association Conference, Baltimore, Maryland, USA, November

Stokols, D., Hall, K.L., Taylor, B.K. & R.P. Moser (2008). The science of team science: Overview of the field and introduction to the Supplement, *American Journal of Preventive Medicine, 35*(2S): S77-S89.
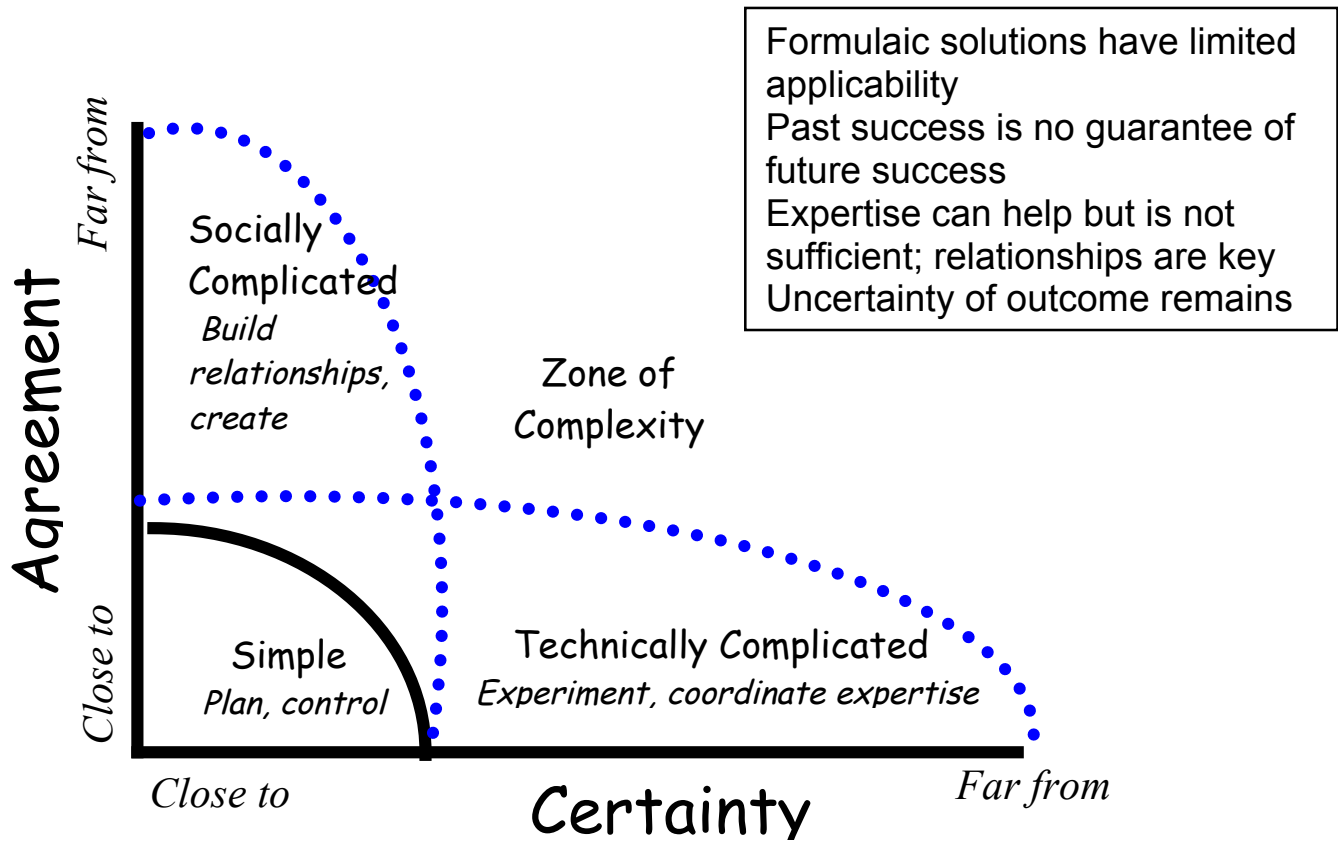
Source: Patton, 2007

Figure 1: Research for development on complex challenges

Annex 1. From Challenge Programs to Mega Programs – The Implications for Financial Reporting.[7]

The Annual General Meeting of the CGIAR December 2008 confirmed in principle to follow the recommendations of the document "A Revitalized CGIAR – A New Way Forward."

A key change in operations and financing thereof, will be the development of a Strategy and Results Framework which will create "Mega Programs." These Mega Programs will be funded by the Donors through the Network Fund to the Alliance. There are fundamental issues to be addressed with this proposal structure: How will these Mega Programs report? Will they be separate legal entities with Boards of Trustees? How will the Mega Programs be audited?

These same three questions all arose when the CGIAR embarked on Challenge Programs in 2003. The fact that each of the four existing Challenge Programs (Water for Food, Generation, HarvestPlus and Sub Saharan Africa) ended with different Governance Structures and somewhat inconsistent financial reporting formats has been a criticism of the CGIAR review teams in 2008. It is therefore important to agree on an overall financial reporting structure for the proposed Mega Programs to ensure consistency in approaches and especially to ensure that these reports may be audited in accordance with Generally Accepted Auditing Practices (GAAP) and satisfy the Donor's reporting needs.

Reporting by Challenge Programs – HarvestPlus

The comments below relate to the HarvestPlus Challenge Program which is jointly managed by two Centres (CIAT and IFPRI.) It is likely that many of the Mega Programs will also have joint (or several) Centres managing the research activities.

HarvestPlus is categorized as a "jointly controlled operation" involving the use of the assets and other resources of the venturers rather than the establishment of a corporation, partnership, or other entity, or a financial structure that is separate from the venturers themselves." This arrangement is in accordance with International Accounting Standard No. 31 (IAS-31.)

Financial Reporting of Interests in Joint Ventures

The annual reporting of the HarvestPlus Challenge Program financial activities was developed in accordance with the underlying principles of a proposal from IFPRI to the then committee of Deputy directors General. The financial reports consist of cash basis reporting showing income flows (Cash Receipts) from Donors and payments made to agencies (Cash Disbursements) engaged to carry out the work. The outflows of funds are made against deliverables and progress statements in the same manner as, for example, the main contractor in a construction enterprise would schedule payments to subcontractors against finished work. This format of reporting has the important advantage from the donors' perspectives of seeing the rate of distribution of Program funds on an annual and cumulative basis. The "cash on hand/investments" of the Program are shown in the Balance Sheets of the managing entities. However, one of the disadvantages of the Cash Receipts and Disbursement format of accounting is that it does not show on an annual basis the actual "costs" incurred in the fiscal year by the contracting agencies. This is shown via the individual audited accounts of the contracting agencies.

Practical impediments to moving to an accrual basis of reporting include:
1.   Timeliness

   a. Many of the contracting agencies' externally audited accounts are not co-terminous with the calendar year end of the CGIAR Centres and would require separate certification by the agencies' external auditors.
   b. Even in cases where the contracting agency reports on a calendar year basis, there may be significant delays in receiving the audited accounts. For example, a number of universities that

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subcontract for HarvestPlus do not report until June or July, several months after CGIAR Centres are obligated to issue their audited financial statements.

2.   Audit Reporting

External auditors issue full opinions in accordance with GAAP on legal entities to the shareholders/Board of Management of the particular entity. The transactions of the entity/company are recorded in the books of the entity and are subject to the internal control processes and procedures of the entity. External auditors are fee to examine all transactions of the relevant entity and can do so with their underlying knowledge of the internal control system, which is relied upon by management. In the case of Challenge Programs often sixty percent or more of the research may be carried out by other organizations which are audited by audit firms different from that of the managing entity. Even in the case of HarvestPlus, IFPRI is audited by RSM McGladrey and CIAT is audited by Deloitte. In such circumstances, the external auditor would be unable to issue a full opinion on the financial statements even with the benefit of cooperation of the other entity's external auditors.

Possible Solutions

The New Consortium Legal Entity (NEWCO) will prepare conventional accrual based financial statements including a Balance Sheet, Statement of Activity (Profit and Loss Account) and Funds Flow Statement with accompanying notes.

The Statement of Activity will include as income the "unrestricted contributions" of the Donors via the new Trust Fund. Expenditures of NEWCO will include payroll costs for staff employed directly by NEWCO (not the staff of implementing CGIAR Centres.) Costs incurred by the CGIAR Centres in implementing the various Programs would be classified as contractual costs (or collaboration field expenses.) In practical terms NEWCO will make contracts with the Centre leading the activity and would show the costs as "contract costs" with appropriate footnote disclosure. The implementing Center (prime contractor) would issue certified statements of expenditures incurred. The unresolved question is to establish how would NEWCO and ultimately the Donors obtain independent audit satisfaction on the management certification?

If the foregoing outline does not satisfy NEWCO and the Donors, there would have to be additional governance and administrative structures put in place. This of course was not the intention of the "revitalized CGIAR new way forward" which focuses on simplification of processes and procedures. Relating to Reserves (Net Assets) will also need questions to be addressed in any reporting format.

Another fundamental question under the "new way forward" will be at what point in the transaction chain does unrestricted funding from the Trust Fund become restricted? Restricted projects do not generate reserves as income is only recognized to the extent that costs have been incurred.

Thus, as an illustration, if Centre 1 receives $18M for work on Mega Project A but only incurs costs of $15M, how will the accounting be handled? If the $18M is recognized as "unrestricted" funding in the books of Centre 1, it would generate Reserves (Net Assets) of $3M.

	$M
Funds received for Mega Project A	18
Costs incurred	15
Surplus (or Net Assets)	3

However, the contractual arrangements between NEWCO and Centre 1 when making the contribution could result in a designation of the funds as being restricted. If that were to be the case the accounting would be:

	$M
Funds recognized as Income	15
Costs incurred	15
Surplus	Zero

The Balance Sheet would display:

	$M
Asset Cash	3
Liability Unexpended Project Funds	3
Net Assets (Reserves)	Zero

In such circumstances, Centre 1 would be unable to generate Reserves and the CGIAR rules on Performance Indicators would need to be re-examined.

Time Recording and Staffing

The Consortium approach has stressed the need for full cost recovery (including indirect costs) for Mega Programs. However a more basic cost to be first tracked is the time of Researchers spent on Program/Project activities. Most of the CGIAR Centres do not currently have a rudimentary time recording system. For the system to properly account for activities and costs an integrated time/financial management system will need to be developed and installed in Centres.   The assumption continues that staff will be employed by the "legal entity" Centres and not the Mega Programs.

Other Reporting Issues

The consortium will take on a number of the management and governance activities that have been the responsibility of the individual Centre and board to this point. Policies and procedures can be pushed down to Centres by the consortium. The CEO of the consortium will be the voice of the Centres (Mega Programs also?) and partners and will be responsible for reporting annually to the Fund Council on the performance and management of the consortium. The report will update the council on the status of the mega-programs and on progress towards achieving the objectives of the Strategy and Results Framework.
Given the CEO's responsible for demonstrating achievement and compliance with objections of the mission and framework, it's likely he/she will put in place a management structure where the 3 funding windows will have a manager at the consortium level. These managers will assist the CEO in ensuring coordination with Centres/partners via program agreements to satisfy the requirements of the Strategy and Results Framework. This is a profound change that will likely result in the transfer of much of the program management responsibilities from Centres to the consortium ("separating the doers from the funders").

These are just some of the issues to be addressed in implementing processes and procedures for the New Way Forward.

Accounting Standards Developments

Finally, the accounting and auditing profession through the Financial Accounting Standards Board (FASB) is considering development of a statement of Standard Accounting Practice to cover "Mergers and Acquisitions by Not-for-Profit Organizations."   FASB decided in November 2008 that the final statement should make explicitly clear that the formation of joint ventures is excluded from its scope (see FASB website.)

It is clear that while FASB is updating its guidelines and prescriptive statements there is still a lack of clear guidance on these topical issues for the CGIAR and the system needs to obtain professional advice from practitioners in the accounting profession.

Annex 2. Best practices for building collaboration, including the CP experience

Best practices identified in the collaboration literature - Austin (2000); Foster-Fishman et al (2001); Hudson et al (1999); Linden (2002); Roberts (2001); Stokols et al (2008)

Get the right people and organizations (commitment, competence, continuity & complementarity).

Agree clear guidelines about how responsibilities are shared (who does what?) and how conflicts are resolved.

Agree clear, shared, flexible objectives: designed by all; reflect stakeholders' diverse interests/needs.

If necessary, budget for capacity building of weaker partners.

Agree on how to disagree (conflict resolution processes).

Share recognition and responsibility for outcomes.

Allow time for development of social capital *(social capital = trust + common language),* but balance concern for process with focus on task outcomes. Thus, look for many small wins to foster trust; strengthen capacity in facilitation, negotiation, and participatory M&E; reward the work of those who span the boundaries among disciplines.

Additional best practices identified from CP experience

Give more leadership responsibility to non-CG partners. This often changes the way the science questions are handled. Examples of improved handling: better attention to integration, attention to scale issues, connection to policy making, impact. However, this may also introduce cultural practices that damage the research, such as lack of flexibility of partners located in regimented and hierarchical bureaucracies.

Clarify expectations of team members from different institutional and national cultures about their different expectations about time investment in decision making, who speaks when, *etc.*

Base virtual communication in dispersed networks on initial face-to-face contact, and its use for complex debate.

Work with projects to make their impact pathways explicit and understandable by all partners and then make sure they regularly revisit and update them.

Agree on team standards for response time, sharing information, giving credit, and time to be invested in discussion.

Agree on criteria for diversity (disciplinary experience, age, nationality, gender) across institutions involved.

Consider that full-time dedication is more effective than part-time for managers.

Agree on supervision responsibilities across institutional boundaries.

So as to find an effective role for diverse partners, assign responsibilities at different levels (such as project activity, project oversight, basin or theme coordination, program management).