

## Science Council of the CGIAR

### Commentary on the 1<sup>st</sup> External Review of the Generation Challenge Program

*SC Secretariat, 18 April 2008*

The results of the 1<sup>st</sup> Generation Challenge Program (GCP) Review were presented to the Science Council at its 9<sup>th</sup> meeting on March 31<sup>st</sup> 2008 in Nairobi, Kenya, by Dr. Wallace Beversdorf, the Chair of the Review Panel. The Program's response was presented by the GCP Director, Dr. Jean-Marcel Ribaut. The Council thanks Dr. Beversdorf and the review panel for a very analytical, succinct and constructively critical report. The Panel covered adequately all essential elements in the Terms of Reference and provided a useful assessment of the specific issues included in the review of the GCP. The SC wishes to commend the Program for the overall favourable evaluation given by the Panel. **The SC endorses all the nine recommendations of the review and is pleased to note that the Program management has found the Panel's assessment accurate and helpful and is therefore committed to implement the recommendations.** The recommendations, five of which are of a programmatic nature and four about governance and management, are all both feasible and essential for the Program to implement to ensure that there will be a high probability of success when the program ends in 2013. The SC commentary draws from the discussions at the SC9 meeting and covers aspects of a programmatic nature.

#### **Achievements to-date**

The most important achievement from the GCP has been the creation of well characterized reference collections for a number of crops; 21 in total when the work is fully completed. The Panel convincingly rates these collections as extremely relevant for research to follow years after the GCP has been completed. The SC shares the Panel's feeling that the management and handling of these collections needs to be carefully planned. The SC supports the development of an agreement among the GCP, the CGIAR curator community that holds the sets and the donors. In the SC's opinion the responsibility for securing their appropriate handling in the future cannot be left for the CP alone to carry, but the CGIAR System needs to take ownership and responsibility of this potentially highly significant and useful product immediately. **Thus the SC recommends that a task force including the GCP and the curators of the CGIAR genebanks be set up by the Alliance to develop a plan for the long-term stewardship of the reference collections.** The same consideration should be made for all other genetic stocks and characterised populations generated by the GCP.

The report has only briefly evaluated the Program's scientific merits. Despite the limited attention on the GCP's scientific content in the report, the SC is satisfied that the Program is capturing and using the best science and has been productive in publishing the results, which are appearing in high quality journals. Setting up the technical, information and capacity platforms also represents important progress in the early years of the GCP, and the integration of these platforms is a task for the second phase. The SC notes the Panel's assessment that outputs and outcomes have already been achieved, particularly in Subprogram 4 linking integrating information components and analytical tools that could not have been accomplished without the GCP. The Council believes that a Program of this size and composition, to justify the large investment, should be able to deliver highly

innovative research results leading to novel solutions to hitherto intractable problems, such as the proof of concept case on drought. In the SC's view, the products from this Program must reflect a high quality and innovativeness of the science.

### **Added value**

The CP begun its activities in the beginning of 2004 and the Program can be congratulated on its achievements during the first four years. The CPs were designed to bring a programmatic approach to CGIAR research and to add value to Center research by engaging new kinds of partnerships. The SC is particularly pleased to learn that this program has been successful in, to quote the Panel, "establishing a broad network of R&D participants with extensive capability and capacity to support GCP objectives". In the Panel's assessment the CP has made very considerable progress that probably would not have been achieved without the GCP. In the Panel's view, the capabilities that the GCP has developed are beyond those available to any individual Consortium partner. The SC agrees with this view and believes that **this CP has been effective in mobilizing science from outside the CGIAR, engaging the best expertise and in adding value through that process. Yet, as the Panel has emphatically expressed, what the GCP is going to be judged for, are the products that it can deliver to the national plant breeding institutes and others that can contribute to the developmental goals relevant for smallholder farmers. It is here that the SC believes as does the Panel that the GCP will need to focus in the second phase.**

### **Program coherence and focus**

The GCP has set itself a strict 10-year timeline, which the Panel considers realistic and appropriate and the SC endorses as a suitable approach for any CP. However, in order to achieve success at the end of the ten-year period, the GCP needs to increase the focus of its research considerably. While it may not be realistic to expect the GCP to build grand industry-scale platforms, it is essential to lead the leveraged effort towards a more focused program with a proof of concept model that can be shared with the larger research community in the CGIAR as well as NARS. The Panel has recommended that the GCP select around seven crop-trait priorities and a) ensure that they will be fully resourced and b) put in place management teams that will be directly responsible for each of the products. In other words, the imperative of the second phase of the GCP is to demonstrate proof of concept based on the most likely products and neither resources nor management should restrict that progress. **The SC strongly endorses the Panel's recommendations for greater focus** while understanding that some other projects will continue in order to maintain the enthusiasm and scientific capacity of the Consortium. The SC is pleased to note that the Program's *ex ante* impact analyses on drought tolerance in crop farming systems were considered very appropriate by the Panel and the SC encourages the results to be used for prioritising the GCP research agenda and goals.

### **Likelihood of impact**

The GCP's remit is clearly on upstream research. However, the Panel has acknowledged the projection the Program has of its responsibilities that includes testing and validating breeding solutions to specific problems smallholder farmers face, drought in particular. Where the CP will rightly not move is breeding of varieties. The SC appreciates the Panel's strong notion of the Program needing to plan how its research results are delivered along the impact channel and also needing to develop success indicators to monitor that progress. It

would also like to be assured that the IPR regimes that are in place will facilitate and not hinder this process; the Panel report did not elaborate on this important component, although in discussion it appears it felt adequate IPR arrangements are in effect. The SC was concerned to learn for example that publication imperatives have caused some delays in making GCP information readily available to partners in the program. The SC endorses the Panel's suggestions that an explicit monitoring and evaluation process should be built into the CPs from the start. This should include a clear definition of what is expected to be achieved; a definition of the objectives and criteria for success.

**The SC strongly endorses the concept and recommendation by the Panel on Product portfolio management.** The SC supports the request to create "demand pull" by the intermediary clients of the Program that are the national level breeding programs. The notion of crop leaders and the reinvigoration of the Stakeholder Committee may be ways of achieving this. The SC observes that despite the impact orientation of the CPs in general, there doesn't seem to have been a deliberate consideration of end-product development and that the GCP has, in its own words, been more opportunity driven than end product demand driven. In general, the SC finds it important for the CP to define clearly how its exit strategy will be implemented. Many of the products from the CP require that their sustainability be ensured after the GCP's lifetime. As was mentioned with relation to the genetic resources reference sets, also the information and other platforms need to be sustained. Furthermore, there is a capacity issue so that those NARS who are the GCP's main intended user group can receive support even after the GCP's conclusion for utilizing the validated products and methods. Most NARS may be able to undertake basic breeding activities such as selection and back-crossing but moving towards a more integrated molecular marker assisted breeding program will need a deliberate capacity building effort that the GCP may need to invest in now. The SC emphasises that the current needs of those NARS that are expected to take up the new technologies should be addressed. While the Consortium involves mainly large NARS with good capacity, it is encouraging that there are many other NARS heavily involved in the research. It is a concern to the SC that the NARS support base be maintained also after the GCP ends, particularly in SSA to sustain the adoption of the products from the Program.

### **Research Management**

**The SC notes with some concern that not only the competitive grants projects but also the commissioned projects have been very dispersed and not aligned with the Program's main objectives.** It is however understandable that a broad approach may have been needed initially to create an extensive partner platform. But it also reflects the history of the Program and the influence of its initial governance structure where inclusiveness has been more important than a sharper focus. The Panel has concluded that many of the crop targets and trait targets will not be achieved within the GCP's timeline. In the Panel's analysis, the management orientation is currently too much Subprogram centred and a much more Program oriented and focussed approach is needed. The task will be to integrate the closely related components of the research done in the Subprograms through realigned management with a coherent Program orientation. The Panel suggests that a way to enhance this integration could be inclusion of crop leaders that would think across the Subprograms.

The SC notes that these significant changes essential for enforcing the GCP's focus cannot be achieved without the changes in Program governance already initiated and endorsed in the Panel's recommendations. The SC agrees with the Panel that there is need to better align the thinking of the governance and management with the mission.