This paper highlights the issues arising from the paradigm shift in the mode of operations of the new CGIAR with the implementation of the Strategic Results Framework (SRF) through CGIAR Research Programs (CRPs) and suggests possible options for addressing these issues. The CRPs will cover the entire value chain spectrum from upstream research to on-the-ground delivery as described by impact pathways. Their breadth will usher in an unprecedented array of new institutional partnerships where close attention will be required for management of intellectual assets in order to reach the goals of delivery to the poor and of supporting sustainability through enterprise development.

I. Producing international public goods to achieve sustained impact on the ground level

A. The CGIAR’s traditional role

CGIAR Centers have traditionally produced international public goods (IPGs). By this, it has been generally understood that the Centers produce an array of freely available products, goods, methods, software, and knowledge with financing from the public, that are aimed at reducing poverty and improving the livelihoods of the poor, wherever they reside. In addition, these IPGs could not be produced without the availability to the Centers, of germplasm, knowledge, goodwill, policies, and financing, from many nations, cooperatively. Centers have become adept at using both public and private inputs to produce IPGs, although this has required more commitment for understanding the management of intellectual property for the poor. The CGIAR Centers have carried out their upstream research, producing elite germplasm, analytic methods and models, publications in high impact journals with great enthusiasm. However, there has been some frustration with the availability and use of these IPGs at the ground level.

B. The new CGIAR model

This has led to a change management process that has taken over two years to initiate and describe a new model for the CGIAR. In the new CGIAR, Centers will be producing IPGs in partnership with many other institutions with the explicit goal to achieve rapid acceleration and lasting delivery of sustainable increases in productivity on the ground level. The CGIAR Research Programs (CRPs) will reach beyond traditional boundaries, create new synergies and span the entire value chain from upstream research to ground-level distribution and use, in order to implement the Strategic Results Framework. Each CRP will be geared to increase the flow of an agreed upon set of international, regional, national and local public goods, and private goods, delivered as affordable and accessible knowledge, goods and services. Such delivery should also facilitate sustainable impact through enterprise development.

The Centers will encourage the involvement and collaboration of a network of entities from both the public and private sectors, and from the global and international to the national and local levels. Such entities include other CGIAR Centers, NARS partners, universities, advanced research institutes, private sector research and enterprise, small and medium seed enterprises, service providers, environmental SMEs, civil society and farmers’ associations, development organizations and NGOs, etc. These different partners are complementary actors and have each an
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important role to play as they offer a wide range of activities which must all be carried out in order to achieve impact on the ground level.

Achieving a rapid acceleration and resilient delivery of IPG’s for sustainable increases in productivity and food quality is also going to require policy and institutional changes that stimulate agricultural growth and equity to benefit the poor, especially rural women and other disadvantaged groups, while also carrying out research that encourages conservation, enhancement and sustainable use of natural resources and biodiversity.

C. The challenge of setting up integrated partnerships

To have the promised impact, CRPs need to build solid integrated partnerships along defined impact pathways. These partnerships will be built upon trust and the creation of mutual value. The partners will need to identify opportunities and challenges, benefits and risks, and build a common understanding with regard to the rules governing the partnership and their implementation. A process and adequate resources to achieve this will need to be explicitly provided. Such partnerships could include research, product development and distribution partnerships, and will require different types of agreements. As CRPs are dynamic arrangements and will involve non-traditional relationships for the CGIAR, these partnerships will be innovative, complex, and challenging to set up and manage. While the CGIAR will be expected to play a catalytic and management role to ensure that the broad range of complementary activities (adaptation, dissemination, extension, technical assistance, policy advice, training, etc.) are carried out and have impact on the ground level, the CGIAR must have policies that are compatible with the mandate of the SFR within each CRP.

II. Facilitating sustained impact of CRPs through Intellectual Property (IP) Management

A. The central role of IP management in partnerships

IP management is at the core of effective partnerships as partners will be accessing and sharing new innovative technologies, knowledge and research methods, tools, germplasm and traits and other technology. The more diverse the partnerships, the more central IP management will be. IP management determines what will be made freely available – and what will be restricted – within the partnership. This is especially true with the deliberate inclusion of the private sector in the CRPs. It is envisaged that this inclusion of the private sector is crucial for leveraging the strengths of the public sector with the strengths of the private sector. An overarching concern is that, by having the private sector as a partner in a CRP, the ability to distribute products, goods, services and knowledge for the benefit of the poor, will be constrained. We believe that this can be managed through the development of sound IP practices/policy and management at the CRP level.

CRPs will need practical IP rules and procedures that are clearly set out with regard to: sharing of intellectual assets, both existing assets as well as new CRP-sponsored assets (e.g. ideas, knowledge, know-how, databases, results, genetic resources, etc.); co-creation of intellectual assets with the concomitant issues of recognition of intellectual input, attribution and authorship; and exploitation of intellectual assets in a manner that mutually benefits all parties, taking into account existing values and norms as well as socio-cultural systems. It will take skilled negotiations to identify and fulfill institutional needs as well as those needs required for delivering IPGs to the poor. Compromises between the public sector and the private sector; cultural norms and legal systems, theoretical and

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1 For the balance of the rest of the paper, the authors will use the term “IP” to mean both those practical and tangible intellectual assets that have attracted formal intellectual property rights (IPRs) as well as those that do not have formal IPRs attached to them (e.g., a material asset such as hybridoma tissue culture cells that are producing a specific monoclonal antibody), but that will likely be shared using some sort of transfer agreement or license.
practical operational activities – will all need to take place in an environment where full participation is possible and supported by technical expertise.

**B. What Does Effective IP management Look Like?**

*Tools and instruments* – Many of the tools and instruments of the IP practitioner take the form of written agreements and contracts. By using well-drafted contracts and performance agreements negotiated between the participating institutions in a CRP, a clear understanding and agreement as to roles, rights, and responsibilities can be accomplished. Inputs should be acquired, outputs exchanged or transferred, using agreements that are designed to fulfill the goals of a CRP. For example exclusivity, especially that associated with private goods, can be limited in delivery from CRPs, using market segmentation strategies within contracts, to ensure that both public and private goods will flow to the poor. Agreements that envision and support new partnership arrangements/roles such as brokering, wherein one institutional partner would take on a role of “assembling” packages of technologies from disparate institutions, for other CRP partners, should be investigated and tested as models.

*Pioneering and recognizing new ways of working together* – CRPs could become “testing grounds” for “Open Innovation”\(^2\) thinking and behaviors that would deliberately support co-creation of innovations through explicit recognition/attribute of innovators and creators, as well as recognition of the providers of existing knowledge, goods and services that can be used in new ways. These types of practices would also encourage the incorporation of user innovation and feedback for product improvement.

*Use of IP Tool such as Marketing and Branding* – Some CGIAR Centers have already begun to recognize the importance of branding strategies as a means to ensure that quality products reach the poor. We want to make sure that a farmer can have confidence that the seed that they have received will germinate and perform as expected so as to not waste precious time and other resources that might be in meager supply. Marketing and branding schemes could be developed that would support the production and selling of products for niche markets, at local, regional and international levels. We need to better understand and exploit niche marketing as a way to reward farmers that provide on-farm conservation of biodiversity. In addition, incentivizing local enterprise development through branding/franchising/contract-based supply schemes could be utilized in CRPs as a way of incorporating sustainability into our way of doing business.

*IP and legal tools to manage risk, especially those associated with partnerships* – Additional issues such as those concerned with stewardship of germplasm and pest control agents, privacy/political risks associated with sharing and distribution of some types of data, reputational risks, concerns about quality control along the entire value chain and other risks, will certainly arise in the CRPs that will need to be identified, assessed and mitigated. Many of these risks will likely have an IP component that needs to be addressed, while others might not, strictly speaking, be limited to IP issues. However, many of the mitigation practices could involve shared understandings of responsibilities that could be most easily dealt with through contracts or agreements.

**III. Next steps : Obtaining Clarity on Donors’ Official Concerns and Developing a More In-depth White Paper**

\(^2\) Please see the Open Innovation Blog for the latest news in this area ([http://blog.openinnovation.net/](http://blog.openinnovation.net/)). Open innovation is described by the originator of the term, Prof Henry Chesbrough of UC-Berkeley as “the use of purposeful inflows and outflows of knowledge to accelerate internal innovation and expand the markets for external use of innovation, respectively.” We envision “Open Innovation” in the CRPs as innovation based on soliciting improvements, participatory practices where the intellectual input of many is brought to bear on a problem, and multiple innovators working together to create intellectual assets.
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We would like to obtain clarity on the Donors’ official concerns, if any, and propose to commission a more in-depth White paper on the Intersection between Public Goods, Intellectual Property, Innovation and Partnerships in Delivering Impact for the Poor, specifically addressing any Donors’ concerns. This White paper would be developed by an ad hoc working group of experts on behalf of the Consortium Board, with specific involvement and alignment of the Centers, as well as other system components (ISPC) and stakeholders.

(We need to discuss scope of this paper based on diagram below representing the IP management needs on the CRP level)