

E- Consultation Summary

12 September - 3 October 2007

"If a tree grows in the laboratory, will the poor eat its fruit?" A discussion on a strategy entitled "Global Public Goods (GPGs): From Data and Information to Food" was held by the ICT-KM Programme of the Consultative Group on International Agricultural Research (CGIAR) on FAO's e-agriculture platform. The ICT-KM Programme promotes and supports the use of information and communications technology (ICT) and knowledge management (KM) to improve the effectiveness of the CGIAR System's work on behalf of the poor in developing countries.

Goals:

The e-consultation goals were:

To build our collective awareness around iGPGs access and use and within that context, gain insights to help update, validate and improve the CGIAR's Strategy, and to get more detailed information about users, users needs, obstacles, priorities and methodologies.

The Process:

The four week consultation was made up of a series of asynchronous online discussions grouped in two main areas:

The Strategy - "Global Public Goods (GPGs): From Data and Information to Food"
User's Needs

At the start of the third week, there was a face-to-face gathering during "e-agriculture week" in Rome. The participants were given an overview of our first two weeks' online discussion, and they then explored issues related to opening access to research and knowledge from the perspective of different stages in the research process. The report of that workshop will be made available on the ICT-KM site (<http://www.ictkm.cgiar.org>).

This document offers a brief overview of how the discussion unfolded and a summary of the key points. The CGIAR would like to thank all the participants who read the e-consultation, and specific thanks to the following contributors:

Ajit Maru	Gurusamy Gandhi	P S Janaki Krishna
Anil Kumar	Jim Cory	Peter Ballantyne
Dr.T.Ravisankar	Johannes Keizer	Pierina Benites
Ekanath Khatiwada	Kausar A. Malik	Shambhu Ghatak
Md. Nazrul Islam	Lorna Malicsi	Subbiah Arunachalam
Emefe Oghenevwairhe	Manuel Cervantes	V.Varadarajan
Federico Sancho	Mila M. Ramos	
Fred Snijders	Myriam Sanchez M	

A short summary overview of each week's discussions follows in the next section. The subsequent section provides a more detailed overview of each theme that was discussed.

Discussion Overviews

Week One

In week one, participants were invited to review the draft strategy and offer any general feedback. Contributors noted the importance of the key components of the strategy, identified some current collaborations that are increasing the sharing of data, noted the importance of shifting the practices of scientists to make it easier to share data, discussed intellectual property rights and global alliances, and highlighted the importance of local needs and contributions to the iGPGs.

The issue of access to GIS information, to scientific journals and how Open Access can be provided in local areas through tele-centers were identified. A number of contributors raised issues about scientist-to-scientist, scientists-to-farmer and farmer-to-scientist transmission of knowledge, but not stopping there, and asking us to consider how local universities and indigenous groups are and can contribute their knowledge back to the CGIAR.

Week Two

In week 2 the participants were asked to explore some specific elements of the strategy to see if they are still valid and useful priorities. Participants generally felt the strategy was complete, but there was a desire to think more deeply about the communication to and from the farmer level and the diverse needs of farmer communities along with the importance of partnerships. This led into the complex issue of Users' Needs. It is clear that the users and potential users are a diverse group, making access and use a complex issue.

Week Three

In week three the participants continued to explore more about specific elements of the strategy, with a focus on challenges. This conversation was very linked to user needs so the summary below will include user needs and challenges in one section.

One issue that came up was the larger issue of agriculture data management and all stakeholders participation in these activities. While larger in scope than how the CGIAR can best share its iGPGs, it was an important piece of context.

Ekanath Khatiwada wrote:

“Another issue is agriculture data management. There are various links for agriculture data and information. How to make some standard and more authentic information data. There should be a clear link from central data bank to national e-information system and community e-agriculture centers. To make the system effective, all related sectors and stakeholders (researchers, community, and local /extension practitioner and data manager) should participate equally. Some time the flow of up ground level best practices will make very important contribution. In this context, the two way information flow needs to be ensured. Yes there is a need of regular interaction among all the stakeholders.”

This was echoed in an example from Shambhu Ghatak:

“It is planned that alternate delivery channels spanning Rural Knowledge Centres (RKC), ICT-based extension, farmer-to-farmer extension, NGOs and the private sector should also be promoted simultaneously. The scheme-- 'Mass Media Support to Extension' aims to utilise the impressive infrastructure of Doordarshan (DD) and All India Radio (AIR) for producing and broadcasting agricultural programmes for supporting other extension efforts. The National Agriculture Policy emphasizes upon the use of Information Technology (IT) for achieving a more rapid development of agriculture in India. The Department of Agriculture and Cooperation, therefore, is in the process of preparing a National e-Governance Plan in Agriculture (NeGP-A) for a more focused implementation of e-governance activities in the agriculture sector. In order to promote e-governance in agriculture at the centre and provide support to states/UTs for the same, the Department of Agriculture and Cooperation is implementing a central sector scheme, 'Strengthening/Promoting Agricultural Information Systems' during the Tenth Plan with a budgetary provision of INR 100 crore.”

Week Four

Continuing on from the closer examination of the strategy from week three, there were new discussions on Networking and Capacity Building, Value Added Services and Standards and Metadata. In addition, participants shared what they are doing to share iGPGs at country levels.

Theme Summaries

The value of opening up access

The question “Could opening access to CGIAR research outputs and knowledge (iGPGs) help you do your work?” set the tone for the e-consultation. There was clear agreement that opening up access is desirable along with the recognition that getting value from opening access is far more complicated.

Federico Sancho noted:

“From our perspective certainly yes. Why it will help our work at IICA:

A. CGIAR can serve as an example to other research institute about the importance of sharing information. Some

of them are not willing to provide access to their research outputs and knowledge.

B. SIDALC service in Latin America and the Caribbean (www.sidalc.net) looks exactly for those type of partners, facilitating their full text information to a large community of users.

C. CGVirtual Library is a great step and it is one of the product we like to promote during our working meetings with national networks and communities around the hemisphere.

D. CGIAR contents will add value to the more than 25000 full text materials inside SIDALC, 225 Latin America data bases and information services for the benefit of the region in terms of research, trade, innovation and education.”

Peter Ballantyne wrote summarizing both the value and the challenges:

“The short answer is obviously YES! I'm very interested in certain types of information produced by the CGIAR, mainly about the ways in which the CGIAR organises, disseminates and provides access to knowledge and information. I am keen to track interesting developments in this area, to learn what the CGIAR is learning, so I can perhaps borrow and re-use ideas in my work and recommend them to others.

I am aware that the CGIAR centers collectively produce and hold massive amounts of data and information, presumably also much knowledge and wisdom. I am aware of some services and systems that would allow me to locate some of this.

In recent years, I have seen a gradual opening up of CGIAR information 'systems' so it is now easier to track information about some areas that interest me. I can search more easily (across web sites and libraries), I can keep up with ICT/KM and KS activities via blogs, feeds, newsletters and web sites with more content in them than before. I even meet CGIAR staff now and then, by email or face to face, so I can tap into what they are doing. CGIAR staff seem to be more open to documenting and making available what they are doing with information management.”

Peter noted that it is still challenging to know what exists, where it exists and what is available to a user like him. He recognizes, as did Ajit Maru, that some data may also have been lost.

Lorna Malicsi noted:

“I think that this is a great move for CGIAR to try to open up its doors so that many likeminded clients (with the same passion for R&D to make food available for the food) can access its works. ... Since my organization's mandate aligns with that of CGIAR too (poverty reduction and food security), in my line of work in the area of Knowledge Management, getting to know more about CGIAR's research works/results, experts' data base (for example), is like tapping into a river of information resources -- very much helpful as these resources become inputs to my organization's objective of knowledge sharing and exchange among our Southeast Asian clients (we focus on policy makers and researchers).

There were also some significant contributions exploring what “open access” meant, particularly from Subbiah Arunachalam. Open access involves issues of affordability of journals, dealing with intellectual property rights (IPR) and national policy around IPRs.

“I wish to emphasize the need to mandate open access to all publicly funded research in my first submission to the list....

Today there are about a thousand OA archives (or repositories) around the world. Some are subject-based central archives such as arXiv (for physics and related areas). Others are institution-based decentralised archives such as the one at the Indian Institute of Science, Bangalore. Although the benefits of open access are clear and easy to appreciate, not all scientists deposit their research papers in OA archives. It is somewhat like people not giving up smoking even though they know full well smoking is harmful to them and can even kill. That is why funding agencies and institutions performing research should mandate open access to all research publications resulting from public funding.

Six of the seven research councils in the UK as well as other donors such as the Wellcome Trust have such a mandate in place. The CGIAR should mandate open access to all research papers and reports published by scientists in all CGIAR laboratories. We are told that CGIAR is moving in that direction. We are looking forward

to the day when actually the full texts of every paper published by CGIAR scientists is on OA repositories and can be searched and downloaded by anyone interested.”

General feedback on the strategy itself

Dr. Kauser A. Malik,

“The GPG document has comprehensively indicated the difficulties in accessing the various CGIAR data bases in a consolidated manner. I have been interacting with several CGIAR centers and am aware of the immense scientific information available with CGIAR.”

Ekanath Khatiwada

“Contents are well articulated. Most of the issues are covered in the above analysis. Application part at beneficiaries/users level is very weak. How we can we make accountable to use such information/knowledge at Local level. Some time Public private partnership venture at Local level would be helpful to sustain the approach. How long we will be able to provide free access. Therefore, local ownership and investment is molt important. Another sustainable approach would be linking up such initiatives at local agriculture university courses.”

Anaam Sharma

“Should it be limited to CGIAR's knowledge only? Can't it include local information from other sources as well. The universities, indigenous knowledge, etc. Can we generate a common middle-ware where scattered sources of information can plug in abiding to common standards?”

Who are the users?

The key users identified included:

1. Researchers –
 - a. Researchers looking for hard core scientific information for their research or improving a technology.
 - b. Competing and collaborating research centers needs for details of our technical programmes
2. Policy makers - Policy makers interested in
 - a. knowing the usefulness of various interventions which will improve overall agricultural productivity,
 - b. historical data
3. Extension workers/NGOs
 - a. know different proven technologies for dissemination;
 - b. Scientists at CGIAR should also be continuously trained and motivated to share information with NARS scientists. In the prevalent IPR scenario, this is becoming more and more complicated.
4. Farmers - the farmer is probably not aware of what is happening at CGIAR.
5. Casual users need for information, curiosity – students, activists, etc.

Subbiah Arunachalam suggested that it is not only the users we need to consider, but the interaction between the users.

“As those of us working in the development sector have come to realize, communication is the key for bringing about social change. According to Professor M S Swaminathan four types of communication or knowledge flows are important in the context of development: Farmer-to-Farmer, Scientist-to-Farmer, Farmer-to-Scientist and Scientist-to-Scientist...”

The question was raised about the distinction between “partners” and “users.” Myriam Sanchez noted:

“I perceive there one of the most important aspects for review in the CGIAR scheme of work. Why producers, peasants, cultivators are not considered PARTNERS, but only " users" ?

In a non linear R&D scheme, generation, use and social appropriation of knowledge, makes access to knowledge easier and more useful. Also cheaper and gives a quick way to innovation (knowledge in production). Knowledge FROM scientists only, takes ages to become information and , if it happens, ages to become more and better access to food.”

Building on the idea of partnerships, P S Janaki Krishna wrote:

“Public private partnerships are crucial for the present day societies whose economy is sustained on knowledge base. However, for various reasons both CGIAR institutions /private companies are generally put up on high pedestals and are viewed as highly proprietary ones that cannot be reached very easily...

CGIAR institutions have wealth of knowledge and private companies are known for converting knowledge into user friendly applications. Especially for ICT applications many public software and electronic companies have developed a number of tools and products that can be used for knowledge access and dissemination. A collaborative iGPG project may be envisaged with CGIAR (Knowledge source centers)- Private companies (Tools and products development for data sorting and dissemination) – Regional NGOs (linking people- the end users/ farmers in the villages).

What might stimulate local ownership and investment in iGPGs? Investing in capacity building of local people in application of agricultural knowledge for better agricultural practices. Establishment of locally owned ‘e-agricentres’ in the villages and market yards and training the local youth and women in e-applications for smooth running of centres might lead to local ownership. How can universities and indigenous groups contribute to the iGPGs? They should also become partners in iGPGs projects as traditional state agricultural universities have lot of manpower and research and extension networks.”

Emefe Oghenevairhe also pointed to the importance of partnerships.

There should be research partnerships with developing countries and there are untapped goldmines in them.

What are the users' needs and challenges?

The key challenges and needs suggested by the consultation participants included:

Knowing what material is available

Understanding what is relevant to whom

- “Variations in needs based on geographic location of the user. The user needs vary for head middle and tail end of a canal vary as crops chosen by them drastically vary. Technical knowledge to access the information.”

Accessibility of information

- Finding material and “solving the maze of information dissemination”
- The format of data – how can it be useful for the different user needs?
 - When is raw data useful
 - When is data more useable in a “packaged” form – with how much customization for local context
 - Md. Nazrul Islam: “There are always scarcity of information for them due its management. Though others can meet somehow of their needs but the farmers are always in misconception if they do not have right information at right time. The main channels of data or information to the farmers are extension workers of the government department and NGOs who can not meet regularly with most of the farmers. Others one way channels like TV, radio or print media could not cater need based information because farmers have questions to understand the information provided by these channels which nobody available there to answer. However, the recent approach of developing farmer trainers who are one step ahead and more closer to the farmers may be potential to channel information to farmers.”
- Cost (internet connection, cost of journals, etc.)
- [Ajit Maru](#) on the farmer’s perspective: “Similarly, putting on a "Internet savvy" farmer's hat, if I wish to find information relevant to a smallholder farmer in a semi-arid region with partial irrigation and wanting to grow vegetables, chick pea, lentils, sorghum and keep a few sheep and goats for food, I would have to visit ICARDA, ICRISAT and ILRI websites for any topical information which may or may not be useful to me as a farmer. I would not get any information on growing vegetables. If the CGIAR wants to open up its information access it has to look at integration of information at the CGIAR level and with other

Institutions/organizations to make it useful for producing food and may be marketing it. It will also have to make the information more easily accessible and useful to all stakeholders to agricultural research.”

Local content

- Materials in local languages (or lack of)
 - I.e there are two dozen full languages and about 300 dialects variants in India

The practice of using information:

- Ekanath Khatiwada: “There is no practice of using e agriculture information. Still, there is traditional way of agriculture practices and information flow. Mainly, agriculture extension workers and practitioner in the ground are far behind this concept. We are developing the kind of good concept without considering the real need at ground.”

Communicating about the information between types of users. A scientist to scientist exchange would look different than a farmer to scientist exchange.

- Paul Sillu: “User needs forms the biggest bulk of solving the maze of info dissemination. The accessibility, format and direction of communication would be vital. Channels of info access to the different groups need not to be complicated. For example scientist-to-scientist communication should be eased that one doesn’t need to go through long channels to access the research findings. The findings should be “free” or affordable to a certain group of users. Scientist-to-farmer and vice versa communication should be made easy that each can communicate with each other without fear. Researchers should not intimidate farmers with “technical” jargon or even by being too theoretical. They should create a conducive environment and mood for communication because a lot of unseen noise occurs at this point. Scientists should lower themselves to farmers’ level and talk to them not the way they would address their peers in conference...”

“Generally, information flow between researchers and the consumers have not been effective. The producers of the information had left it at technical level and the interpretation left out thus, the users; farmers didn’t find it easy to use. Avenues between the researchers and farmers need to be opened more to ensure communication of feedback to the farmers (since the researches were carried out among them).”

Impact of Local Government policy

Critical mass of users

- Availability of sustainable Network facilitators

Pierina Benites suggested we cannot fully know what they need and that information use is contextual and involves a series of processes, not just information delivery.

“I have been a research about the agricultural information systems for GTZ Peru, and i have to say that "what they need" is more complicated to "what we can provide them". Usually the researcher or agent (for value chain) thinks "a lot information is better" but that depends who are they and where are....and what product sell them.

The best way of know what they want:

1. What is the value chain's product: A
2. Know what is their part in the value chain: B
3. Know where is their action area: C
4. Value Chain Focus group (with A+B+C limited): Know all about their value chain and others agents
5. Find common interests with other agents and find their own needs”

Paul Sillu offered a related perspective:

“On the issue of intensive study on the user needs, this is prime and should be done to understand the behaviours of the users, their levels of understanding of pieces of information given and how they have been searching for any information they need whenever they need it. This would help in the repackaging of the information for dissemination to different users...”

Forming of networks among all the groups is vital. Info sharing in networks as peers or from Top-down or Bottom-up is good. One tends to learn easily and communicate freely. Research groups, farmers, farm groups and other information generators and users all need to form a network.”

From the perspective of user needs, there were several discussions about how users understood, accessed and used data. For some, there is value in accessing raw data which may then be used in a different manner than originally intended by the CGIAR. An example in this are was data used by IRLRO in their report, "Mapping Poverty and Livestock in the Developing World" by Thornton et al. (2003). Dr. Anil Kumar wrote:

“The authors have put in lots of time and resources in coming out with this excellent publication containing very relevant information. They would have compiled district wise/ state wise data of India (and the other developing countries) and come out with classifying India under different production systems.

The background data collected for this publication is of tremendous importance for us, because:

- 1) collecting and collating the information is a Herculean task
- 2) finding resources for making an attempt to collect these information is difficult but, had the data been available to us, it would have enabled to make plans at micro level at a fraction of cost. We still eagerly look to lay hand on those data set to make our task much easier. If the authors of the publication are listening, we may enter into some collaboration to use those data set gainfully.”

With respect to local needs at the farmer level, V.Varadarajan shared some work being done in India.

“I am from Tamilnadu in India. As a company we have given connections to about 150 villages and panchayat in one of the 28 districts of Tamilnadu. But there is a dearth of information in the local language. Tamil. If the forum can have a simultaneous translation service this will be useful not only to this district but the entire group of farmers who have access to internet. This job can be outsourced to these kiosks themselves through a local company called desicrew being incubated by Tenet group of iitmadras. Users of the eagriculture in this part of the world know Tamil only, As I had mentioned earlier I have given internet connections to about 150 villages including village panchayats. But for want of material in Tamil this is languishing. So I wish to introduce to the eagriculture community CEO of Desicrew a company being incubated by TeNeT group of IIT madras. They undertake jobs from customers get them completed in any one of the 20 or odd villages where she has a 5 member crew ready and willing. Saloni checks the quality and delivery and ensures the job is to the satisfaction and makes payment to the villagers on receipt from customer. This is a BPO from city to the villages of India.”

Specific information needs

There were several discussion threads that addressed specific information needs.

GIS

There was a specific thread on the needs around GIS information, particularly the form of data provided and the underlying technical infrastructure issues. Jim Cory asked about the CGIAR’s plans with respect to opening access to geographic information.

The CGIAR, thru the CGIAR-CSI has embraced open-source and open access to spatial data. The GeoNetwork is precisely an open source and free global access to CGIAR spatial data. ([http:// geonetwork.csi.cgiar.org](http://geonetwork.csi.cgiar.org)) Currently, over thousand datasets are discoverable and/or available, from all 15 of the CGIAR Centers, as well as seamless access to UN, FAO, WFP, OCHA datasets. Additionally, the SRTM data and the CRS Climate Data available online on our CGIAR-CSI website (<http://csi.cgiar.org>) has over 1 TB of downloads per month.

Ekanath Khatiwada wrote:

“In my opinion to manage the geographical information management, there may be a need of separate e- agriculture learning networks and data bank It needs lot of efforts on awareness on uses of information and selection ao appropriate information for concern authority and organization. We can take some example e-sewa initiatives of India and Srilanka Kotmale women group initiatives.”

Fred Snijders added additional thoughts about the form of the geospatial data:

“... Searchable digital map libraries are very important and all scientists should be requested to store the results of their work in those libraries. Geonetwork provides the tools the set them up. But, when it refers to "live" services in the sense

of providing a user-selected view of the map I am not convinced. Map services are technically very interesting but mostly slow, cumbersome, bandwidth hungry and not very convincing, beyond applications such as finding the best route from A to B. Most of the geodata that needs to be made available are thematic coverage. These should be made available both as GIS file, such that the end user can download them and work locally with the data, and in the form of nice maps in, for instance, PDF format that can be looked at just like a paper map. Both for the downloading and the access no special software is needed.”

Providing access to journals and online databases

[Mila M. Ramos](#) raised the specific issue of cost and access to journals and online databases.

“CGIAR has the technology to provide instant access to electronic information, but with the continuing increase in prices of journals and online databases, it becomes difficult for information providers like me to provide everything that our users need. Of course, we have the CGIAR LIS Consortium and through joint subscriptions, we are able to access more journals. But this is not enough. The scenario is we have to cut down on subscriptions every year. We need to have more resources to be able to satisfy the demands of our scientific staff and other end-users. How do we cope with this problem? I hope AGORA and HINARI would be made available to CGIAR Libraries, as we cater to the needs of developing countries.”

Subbiah Arunachalam wrote:

“From 1665, when the first scientific journals began publishing, the scientific journal has become the single most important method of scientists announcing their findings and communicating with the rest of the scientists. Needless to say, the journals have played a key role in the growth of science (and knowledge). For nearly four centuries these journals depended on Gutenberg's technology - print-on-paper. Unfortunately, there is a proliferation of journals and no one can keep track of all that is published - for two reasons, viz. the sheer volume and the prohibitive costs of many journals.”

Standards and metadata

In the strategy document, there is a section on Standards and Metadata which garnered one comment from Johannes Keizer, reflecting on FAO's work in this area.

“FAO is trying for some years now to do useful work in this area through the "Agricultural Ontology Service Initiative" with the Webportal on Agricultural Information and Knowledge management -Standards (<http://www.fao.org/aims>).

Overarching goal of our initiative is to create agreed information exchange standards that make it possible to have common services on heterogeneous information repositories.

- A good example for this is the collaboration between the AGRIS and GFIS (Global Forestry) Information Services. Both networks use the same Exchange Standard (AGRIS-AP) to describe publications. In this way GFIS can use AGRIS data and vice versa.

- Another interesting story is AGROVOC, the multilingual thesaurus of FAO that now links semantically multiple information systems through common concepts, expressed in different languages. AGROVOC is now taken up also by systems not working strictly on science and technology. In India they have created a Hindi version of the thesaurus that makes it possible for extensionists to search for English material in Hindi.”

What else should the CGIAR be considering with respect to their strategy?

Dr. Kauser A. Malik,

“Scientists at CGIAR should also be continuously trained and motivated to share information with NARS scientists. In the prevalent IPR scenario, this is becoming more and more complicated. Here I would like to quote a sentence from your document. " A sensitivity raising activity is required to get across to CG staff the fact that their work is the property of their Centers, that it is a Global Public Good and that they have a responsibility to make it available freely and widely." On the contrary, there has to be clear cut and transparent policy for sharing

information so that contributions of every scientist are duly recognized.”

Ajit Maru

“The CGIAR is a large repository of information in this area. However, there are several problems since the information is either scattered across websites such as of the CGIAR, CGIAR Science Council, IFPRI and several of the CGIAR International Agricultural Research Centers. One of its major resources, the ISNAR Website is now deeply buried in an archival state which requires significant effort and professional contacts to access. This is not a very good example of CGIAR wanting to open up its information resources.”

Lorna Malicsi

“I suggest, that part of CGIAR's strategy is to work hard on "branding" by sorting out all their data base and harvest key or major "brands" that they can raise awareness among segmented users/audiences (policymakers, researchers, extension workers, farmers, etc). If indeed the harvest is full, CGIAR can at least prioritize which products should be given utmost "branding attention." Say for example, for the first phase, work on a top branded product/information that is common to all CGIAR centers, and let this product (knowledge product, material product, or whatever) be 1) trumpeted or carried by champions (well known personalities from all walks of life, say a champion for policy makers, a champion for farmers, etc). Creating a strong memory recall among "segmented" users can become key strategy for CGIAR as it strives to connect effectively with its audience. 2) "webertizing" these CGIAR brands by uploading/crosslinking with all development-oriented websites...”