



High-Level FAO-CGIAR Meeting

FAO-CGIAR Collaboration: The present and the way forward

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1. Introduction

Cooperation between FAO and the CGIAR dates back to the 1960s, long before most IARCs were created. At the beginning, cooperation focused on genetic resources, but throughout the last decades, it has both expanded and diversified. The results of the survey conducted in 2006 by the Science Council Secretariat on the CGIAR Centers' collaboration show that FAO is the only organization, among the three thousands identified, that is involved with all of the Centers.¹

The evaluation undertaken by FAO in 2005 on its partnerships and alliances with other organizations (including research institutions, the UN system, international financial institutions, intergovernmental organizations, private sector, and non-governmental and civil society organizations), identified academic and research institutions as FAO's main partners. Within the research institutions, the CGIAR and its fifteen IARCs ranked by far as the Organization's most frequent partners, and relationships with them were described as especially intense and the assessment was positive overall.²

The report noted that FAO staff seem to know more about the work being done in the CGIAR than vice versa. It suggested that increased awareness of FAO's work by CGIAR Centers would improve interaction at the working level. It also indicated that problems have arisen from this lack of adequate mutual understanding, which has led to risks in overlapping of roles between the two institutions. The evaluation recommended the need for streamlining their respective roles in the research and development continuum.

This background note intends to achieve the following: (i) take stock of the major ongoing successful FAO-CGIAR collaborative activities; (ii) identify and suggest specific topics and areas for future FAO-CGIAR cooperation, and (iii) suggest a possible way forward for more effective and efficient collaboration with the CGIAR.

2. Highlights of successful ongoing CGIAR-FAO cooperation

An FAO note prepared in 2001 on CGIAR-FAO linkages indicated that the linkages were diverse and at different levels: governance, strategic planning, normative and technical cooperation, and information exchange.³ Highlights of successful activities are presented here under a few thematic areas, which in some cases overlap: genetic resources; crop production systems; animal production and health; forestry; fisheries; National Agricultural Research Systems (NARS), and information and communication systems.

2.1 Genetic resources

Collaboration on genetic resources between FAO and the CGIAR goes back to the 1960s. Its first major turning point was the creation of the International Board for Plant Genetic Resources (IBPGR) in FAO in 1974. This latter ultimately became a fully autonomous CG Center as the International Plant Genetic Resources Institute (IPGRI) in 1994, now Bioversity International.

¹ Science Council Secretariat. 2006. *CGIAR Center Collaboration: Report of a Survey*. Consultative Group on International Research Science Council

² PC 95/4 b) http://www.fao.org/unfao/bodies/pc/pc95/pc95_en.htm

³ FAO. 2001. *A note on FAO-CGIAR Linkages*. Sustainable Development Department.

In 1979, some countries raised questions regarding ownership of the germplasm held in the CGIAR Centers' *ex situ* collections, and the need to clarify issues, in particular, regarding legal ownership of the germplasm. The fact that the germplasm could be collected from developing countries and then modified, patented and privatized, without any regulatory framework, became an issue of global concern. The need for an intergovernmental platform to tackle these issues led to the establishment of the CGRFA by the FAO Conference in 1983. In 1990, the *ex situ* collections of the CGIAR Centers were brought in trust under FAO's auspices. This provided the legal framework under which the CGIAR currently works.

With the creation of the CGRFA, and the adoption by the FAO Conference of the International Undertaking on Plant Genetic Resources for Food and Agriculture in 1983, collaboration between FAO and the CGIAR was greatly strengthened, while the Centers recognized the CGRFA as the intergovernmental authority that defines policies for their *ex situ* collections. Since then, the Centers have been providing technical and scientific support to the CGRFA and reporting regularly to it.

The CGRFA became an FAO permanent forum, where governments discussed and negotiated matters relevant to genetic resources for food and agriculture, the conservation and sustainable utilization, and the fair and equitable sharing of the benefits. In 1995, its mandate was broadened to cover all components of agro-biodiversity of relevance to food and agriculture, including plants and animals, forestry, fisheries and micro-organisms.

Since 2001, the policy role of FAO has been strengthened by the adoption of the International Treaty on Plant Genetic Resources for Food and Agriculture, which replaced the International Undertaking. The Treaty, which entered into force in 2004, recognizes the importance of the Centers and their *ex situ* collections, and under Article 15, provides them with a legal framework. The Treaty also provides for Contracting Parties to give the CGIAR Centers access to plant genetic resources for food and agriculture. On 16 October 2006, the Director-General of FAO, acting on behalf of the Governing Body of the Treaty, signed the new agreements with the CGIAR Centers placing their *ex situ* collections under the Treaty.

FAO's Animal Production and Health Division (AGA) is the CGRFA-mandated global focal point for the implementation of Animal Genetic Resources (AnGR), which includes the preparation of a country-driven First Report on the State of the World's Animal Genetic Resources. This Report will be considered at the First International Technical Conference on Animal Genetic Resources to be hosted by the Government of Switzerland at Interlaken, in September 2007 after it has been submitted to, and commented on by, the 11th Session of the CGRFA in May 2007. ILRI, ICARDA, Bioversity International, and the CGIAR's System-wide Genetic Resources Programme (SGRP) have been associated with this process from the outset in various ways.

Working contacts also exist between FAO and ICARDA on the improved use and conservation of AnGR. ICARDA has offered, and was accepted by a majority of regional governments, to be the hub of the regional coordination on AnGR assessment and action which establishes continuous working relationships on this agenda. Similarly, the SGRP is an important partner in the global AnGR-process, particularly in providing a platform for designing an agreed system-wide research programme on AnGR in line with the respective priorities negotiated in the CGIAR.

With regard to Forest Genetic Resources (FGR), cooperation involves mostly ICRAF and Bioversity International. FAO and ICRAF have developed a long standing and active cooperation in tree genetic resources, including: (i) regular participation of ICRAF in sessions of the FAO Panel of Experts on Forest Genetic Resources; (ii) updating of the Tree Seed Suppliers Directory: sources of seeds and microsymbionts; (iii) contribution to ICRAF Tree Germplasm Toolkit for Farmers; iv) preparation of FAO Review of Tree Seed Extension Manuals; and (v) preparation of Tree Seed Curriculum Modules.

Bioversity International also regularly participates in sessions of the FAO Panel of Experts on Forest Genetic Resources. In addition, FAO and Bioversity International cooperated in the organization of regional training and planning workshops on FGR conservation and management in West Africa, Eastern and Southern Africa, and Central America. Outputs include reports on the regional status of FGR and outlines for regional programmes for the conservation and management of FGR. In addition, the two organizations collaborate in support of national programmes and regional networks on FGR coordinated by Bioversity International (EUFORGEN, APFORGEN, and SAFORGEN). Collaboration between FAO, Bioversity International and the DANIDA Forest Seed Centre/Danish Centre for Forest, Landscape and Planning resulted in the production in 2004/2005 (2204-2005?) of guidelines for Forest Genetic Resources Conservation and Management (3 volumes)

2.2 Crop production systems

Cooperation between FAO and the CGIAR concerns basically the development of crops (rice, cassava, banana, wheat, potato, date-palm), the management of land and water resources, and covers a wide array of domains such as plant protection, seed systems, conservation agriculture and water management. It takes places at the national, regional, and global levels in various regions of the world.

On **rice research and development**, for example, CGIAR-FAO cooperation has resulted in a certain number of successful projects in Asia, sub-Saharan Africa, and Latin America. In Asia, one of them was the Project on Development and Use of Hybrid Rice for Food Security, set up within the framework of the International Task Force on Hybrid Rice (INTAFOHR), of which IRRI, NARS of the region, and FAO are members. Phase I and II of the project were implemented from 1998 to 2005, with funding from the Asian Development Bank (ADB). FAO and IRRI have also jointly provided training on hybrid rice technology to thousands of researchers, seed producers, extension officers, and farmers in China, India, Philippines, Viet Nam, and other Asian countries, with funding from FAO's Technical Cooperation Programme (TCP) and UNDP.

In sub-Saharan Africa, WARDA, UNDP, the Rockefeller Foundation, NARS of the region, and FAO are members of the African Rice Initiative (ARI) to promote the development and use of New Rice for Africa (NERICA) varieties. Projects focusing on training researchers, extension officers, and farmers were undertaken in Ghana and Sierra Leone, with funding from the United Nations Human Security Funds, and in Uganda with funding from the Government of Japan. CIAT, CIRAD and FAO have been coordinating the GRUMEGA network in Latin America. This network exists since 1996 and its focus is on the use of rice genetic resources through the application of advanced breeding techniques such as hybrid, population improvement and molecular tools.

Scope for active CGIAR-FAO collaboration exists also in South Asia with the Rice Wheat Consortium for the Indo-Gangetic Plains, which is an important regional organization for the promotion of sustainable agriculture and the building of regional institutional capacities in the participating member countries. FAO's role is to help upscale and apply research results obtained by the programme which is led by CGIAR Centers such as CIMMYT and IRRI.

Since 1997, FAO and ICRISAT (Regional Hub in West and Central Africa) have been collaborating in the development of the Dates for the Sahel Initiative which aims at establishing **date-palm** based production systems in seven Sahelian countries (Burkina Faso, Cameroon, Chad, Niger, Mali, Mauritania and Senegal) as a means to contribute to poverty reduction, food security and combat desertification. In support of this initiative, FAO has invested more than one million US dollars. ICRISAT has collaborated in the implementation of these projects by hosting training sessions and facilitating the acclimatization of date-palm *vitro* plants at Sadore, Niger.

Active collaboration is ongoing in **plant protection**. The Global IPM Facility, a joint FAO-UNDP-UNEP-World Bank initiative based at FAO headquarters, is a member of the CG System-wide IPM Programme involving approximately ten CGIAR Centers, and chairs the Policy working group of the Programme. IITA and Bioversity International are collaborators in FAO's activities on the Banana Bacterial Wilt (BBW) Control Initiative in Uganda.

ICARDA and FAO are lead partners in a multi-country (Afghanistan, Iran, Iraq, Syria, Turkey, etc.) initiative for IPM of Sunn Pest. In December 2005, FAO hosted a global expert workshop on breeding and disease management strategies for the prevention and control of UG99, a virulent race of the wheat stem rust, with a regional follow-up plan. This was in collaboration with ICARDA, CIMMYT and the Global Rust Initiative (GRI). In March 2007 a technical meeting on UG99 was held at FAO headquarters with the participation of representatives of the national plant protection services and public research centers of the disease frontline countries, as well as some countries that could be in the direct risk areas. An agreement was reached to focus support on improved disease surveillance, building national capacity in disease identification and early warning, integrated disease management, seed systems, plant breeding and GIS-based information sharing.

FAO and CIP have also co-sponsored subregional and national IPM Programmes focusing on reducing pesticide risks in potato production in Peru, Ecuador and Bolivia, which set up Farmers Field Schools, pesticide policy review and development, and adaptive research on late blight and local insect pests. Also, IITA and ICIPE have collaborated with FAO's Desert Locust Programme in developing and testing biopesticides and insect semiochemicals for Desert Locust control in Africa.

With reference to **seed systems**, CIMMYT, ICRISAT and CIAT participated in the seed harmonization work of FAO with SADC (2002-2005). A certain number of joint activities are ongoing: (i) with ICRISAT on the regional groundnut seed project covering Mali, Niger, Nigeria and Senegal, which started in 2003; (ii) on seed security projects with ICRISAT on the EU-funded project in Somalia, and with CIMMYT in the community seed security project in Ethiopia; (iii) with CIMMYT, ICRISAT and CIAT in the preparation of a TCP project on community seed production in Lesotho; (iv) with ICARDA to enhance unfettered access to improved seed by farmers in Central Asia and Caucuses Countries; (v) with CIP in an emergency potato project in Tajikistan for producing disease-free potato seeds; and (vi) with

CIMMYT and ICARDA in Afghanistan to improve technical capacity ensuring the varietal uniformity of foundation seed.

In the promotion of **conservation agriculture**, FAO contributes technical and institutional support for the dissemination of technologies, while the CGIAR Centers provide scientific and research support to the system development. Very positive experiences and results have been achieved. In Africa, collaboration with ICRAF and CIMMYT actively supported regional capacity building through the African Conservation Tillage Network (ACT). In Central Asia, joint projects in collaboration with CIMMYT and ICARDA for the development and promotion of conservation agriculture have been and are still being executed in Kazakhstan and Uzbekistan.

On **water resources**, FAO has been cooperating primarily with IWMI and IFPRI in association with a few other partners. With IWMI and IPTRID, a joint project on irrigation management (Small scale systems- Podium model applications - Benchmarking performance – Networking) was developed, and a manual (on participatory rapid diagnosis of small scale irrigation systems) was published. FAO and IWMI have also been jointly involved in the “Worldwide Survey and Database on Irrigation Management Transfer”, and the “Joint Project on Mapping of Irrigated Areas”. ICARDA experts participate in FAO’s Land Degradation Assessment in Drylands (LADA) project, as well as in drought management and crop water productivity projects. IFPRI experts participate in FAO’s agro-ecological zones and land use projects.

Collaboration between FAO and several CGIAR Centers on the Comprehensive Assessment of Water Management in Agriculture is considered particularly successful. The objective of this initiative is to provide a comprehensive picture of the situation of water management in agriculture, and its implications in terms of policies and investments for food production, environment and human livelihood. It critically evaluates the benefits, costs and impacts over the past 50 years of water development, the challenges that water management communities face today and the solutions found. The results would enable better investment and management decisions in water and agriculture in the future. The assessment is produced by a broad partnership of more than 700 practitioners, researchers and policy makers over a period of five years. It is a unique opportunity to synthesize existing knowledge to make it available to practitioners, including decision makers at all levels and is being carried out through a set of studies covering all main issues, regions and scales of intervention related to water management in agriculture. Its Steering Committee is composed of nine members, including FAO, CGIAR Centers, NARS and NGOs. IWMI hosts the Secretariat of the programme.

2.3 Animal production and health

In May 2002, FAO and ILRI signed “Working Arrangements” whereby the two organizations agreed on the guiding principles and modalities of collaboration and identified candidate areas for collaboration as follows: (i) livestock policy analysis, design and negotiation; (ii) animal health – integrated disease control; (iii) animal - agriculture atlas; (iv) livestock-environment interactions; and (v) AnGR conservation and utilization.

The most elaborate and continuous area of work is the one on AnGR (see section 2.1). Second in line come the areas on the assessment and management of livestock – environment interactions and on livestock policy design and negotiation. In both, there have been coordinated activities, partially carried out over substantial periods of time and often resulting

in joint, co-sponsored publications and/or joint conferences/workshops.. The FAO-executed IGAD Livestock Policy Initiative is housed with its secretariat in ILRI's premises in Addis Ababa, Ethiopia.

Collaboration to-date has fallen short of expectations in some other areas, in particular with regards to animal health. This might, however, change with the intended set-up of the "Biosciences Eastern and Central Africa (BecA)" biotechnology platform at ILRI and its use in animal health research and development. Beyond the five areas of interest mentioned above, mutual advice has been provided on several occasions, such as on evaluation processes, e.g. in the external evaluation of FAO's Livestock Production, Policy and Information Programme (2005) where the Director-General of ILRI was a member of the expert panel.

2.4 Forestry

FAO collaborates primarily with CIFOR, ICRAF and Bioversity International. Collaboration with Bioversity International is mostly on forest genetic resources (see section 2.1 for more details).

CIFOR has regularly participated in COFO meetings as well as meetings of FAO's Regional Forestry Commission, particularly in the Asia-Pacific Commission. On several occasions, CIFOR organized side-events during COFO that proved to be useful contributions to discussions of the Committee. It also regularly contributes to FAO outputs on regional and global issues, including the *State of the World's Forests* (SOFO), an FAO flagship publication on forestry. Another area of common interest for CIFOR and FAO is the review of models to ensure equitable partnership between corporate and smallholder partners (for improved contribution of tree and forest resources to income generation and poverty reduction through better benefit sharing).

FAO collaborates with ICRAF in the support of forestry and agroforestry educational institutions in developing countries in Africa and South East Asia. The two organizations also co-organize international meetings, mostly hosted by ICRAF (Nairobi). The most recent of these were on: (i) tropical secondary forest management; (ii) management of trees outside forests; (iii) new generation of watershed management programmes; (iv) multi-stakeholder platforms as effective interface between research, policy and development; and (v) cross-sectoral planning.

2.5 Fisheries

Collaboration between FAO and ICLARM is a longstanding one that started even before ICLARM became a CGIAR Center. This is reflected in a number of past, ongoing and forthcoming joint initiatives. One of the ongoing programmes is the development of FishBase, a fish species database, which is the best known database of this kind (www.fishbase.com) with millions of hits per month. Another joint activity has been the development of the Fish Stock Assessment Tools (FISAT), a package dedicated to the assessment of fishery resources in data-limited situations. They have also made joint publications, of which one of the most important was a primer on Integrated Aquaculture-Agriculture published as an FAO Fisheries Technical Paper.

Cooperation also covers the preparation of joint projects. A few of them were recently submitted to: (i) the Gates Foundation for the development of Small and Medium-Scale Aquaculture Businesses as Engines for Economic Growth in sub-Saharan Africa (US\$4.5 million); and (ii) a consortium of donors on Integrated Assessment and Management of Small-scale Fisheries in Africa (US\$ 4 million), following the drafting of a joint concept document and a preparatory workshop. The latter will involve collaboration with a large knowledge network including many universities.

2.6 Capacity building and institutional strengthening of the NARS

The systematic exchange of information and the cooperation between FAO and the CGIAR system on the strengthening of NARS declined considerably with the disappearance in 2004 of ISNAR as the IARC with the specific mandate to strengthen the NARS of developing countries. Nevertheless, ad hoc collaboration with ISNAR, as a Division of IFPRI, continued in operational activities and in the organization of special events to draw attention to the need to support research in Africa if an “African Green Revolution” is to be achieved in the future. FAO, jointly with ISNAR and CIAT, developed specialized courses such as the Information Management Resource Kit (IMARK), e-learning modules on the management of electronic documents and digitization of libraries.

Collaboration in plant biotechnology training from CIMMYT, CIP and CIAT with the FAO sponsored network REDBIO for the Latin American and Caribbean countries has been long-lasting since the inception of the network in 1991 to encompass workshops and seminars on useful biotechnologies for plant genetic improvement as molecular markers, plant transformation and micropropagation.

Since 2002, FAO has been collaborating with CIMMYT, ICARDA, Bioversity International and IFPRI in the assessment of national plant breeding and associated biotechnology capacity worldwide in order to design strategies to strengthen national capacities. This joint work formed the foundation for the Global Partnership Initiative for Plant Breeding Capacity Building (GIPB), launched by FAO and its partners in June 2006 in Madrid, Spain.

FAO and CIFOR jointly support regional forestry research networks such as the Asia-Pacific Association of Forestry Research Institutions (APAFRI) and the Forestry Research Network for sub-Saharan Africa (FORNESSA). Recent activities included a review of forest-related research capacity in Eastern Africa (2003) and another one in the Democratic Republic of Congo (year?).

2.7 Information and communication systems

Since the inception of AGRIS in 1975, CGIAR Centers have been a collaborating partner with FAO in the area of information management and dissemination. More recently, in October 2005, at an international technical consultation organized by the Centers along with GFAR, FAO and the CGIAR, they formed an alliance to streamline their resources to maximize the support provided to national institutions and stakeholders. This alliance was expanded to include the Technical Centre for Agricultural and Rural Cooperation (CTA) at the GFAR 2006 Triennial Conference in New Delhi in November 2006, where the four international institutions agreed to strengthen their collaboration in the area of information and knowledge exchange in agricultural research for development.

In 2002, FAO, the CGIAR and the IARCs launched Info Finder, a tool that allows users to search online the wealth of material produced by the organizations by linking their information resources to a single network. As a collaborative effort, Info Finder extends the scope, impact and sustainability of FAO and CGIAR's respective agricultural information management systems, strengthening the relationship between the two organizations and greatly facilitating the way users can access a wealth of specialized agricultural development information. Info Finder allows both FAO and CGIAR to gain information system-wide efficiencies on a global scale.

In a similar manner, FAO and the CGIAR, along with CIFOR, IWMI and WorldFish forged an agreement to implement the electronic Natural Resources Information Centre (eNRIC) project in 2006. This project further expands the feasibility of shared and extended information-delivery services that are more responsive to users' needs and knowledge and strengthens the link between the information resources of all the partners.

FAO and the CGIAR, through the Consortium for Spatial Information (CSI), which is being led by IWMI, have collaborated over the last two years on the CGIAR_CSI GeoNetwork Project that has built a geospatial data-sharing platform for all of the CGIAR system. FAO provided human and financial resources through its GeoNetwork open source project to form the basis for the collaboration. GeoNetwork currently provides access to about 20 000 spatial data resources from over 20 international organizations that are now linked to this comprehensive system (<http://www.fao.org/geonetwork>).

In the context of the Global Strategy for the Management of Farm Animal Genetic Resources, FAO has set up the Domestic Animal Diversity Information System (DAD-IS), a country-driven resource database. ILRI, in turn has developed independently the DAGRIS database, which is more tailored to research process support. Based on these two activities, FAO and ILRI have agreed to conceive mutual system communication facilities.

IRRI and FAO are developing a subregional information sharing network with China, Japan, Malaysia, Republic of Korea, Thailand and Viet Nam on migratory rice plant hoppers. The World Information and Early Warning System (WIEWS) on Plant Genetic Resources, one of the components of the FAO Global System on Plant Genetic Resources for Food and Agriculture under the CGRFA, is a metadata information system which links with the System-wide Information Network for Genetic Resources (SINGER) as well as the European Plant Genetic Resources Search Catalogue (EURISCO) of Bioversity International. WIEWS provides, *inter alia*, services for germplasm information exchange (genebanks coding in passport accession data) to both SINGER and EURISCO. Cooperation is also ongoing with Bioversity International on: (i) monitoring of the Global Plan of Action and on the preparation of the State of the World Report; (ii) assisting countries to strengthen the information system on Plant Genetic Resources for Food and Agriculture-PGRFA; and (iii) establishment of the Bioversity International Facilitating Mechanisms for the implementation of the Global Plan of Action.

3. Selected topics for future CGIAR-FAO cooperation

The partnership between CGIAR and FAO will certainly continue in all the thematic areas of their respective mandates, as described in the section 2 of the present document. Collaboration will be based on information sharing, implementation of specific joint projects at national or regional level, exchange of experts, mutual involvement in programme evaluation, overview functions, or priority setting exercises, etc. The Science Council (SC) Secretariat could play the crucial role of facilitator to that effect.

Among the several areas of cooperation, the following deserve special focus: (i) conservation and sustainable use of genetic resources for food and agriculture; (ii) support to the development and implementation of national food security strategies, including the technological platforms for the Special Programme for Food Security (SPFS); and (iii) strengthening of National Agricultural Research and Extension Systems (NARES).

3.1 Genetic resources for food and agriculture

The conservation and sustainable use of genetic resources for food and agriculture will continue to play a pivotal role in the framework of the CGIAR-FAO partnership. Collaboration will focus on the continuation of ongoing initiatives aimed to provide a square legal framework to the *ex situ* germplasm collections held in trust by the CG system, and to ensure fair access to the genetic resources and equitable sharing of related benefits.

In particular, future collaboration could focus on the following issues:

- (i) *Operationalizing the Multilateral System of Access and Benefit-sharing*. This system is the heart of the International Treaty of PGRFA, into which the CGIAR Centers are bringing their materials. To that end, the CGIAR Governing Body has agreed on a Standard Material Transfer Agreement, i.e. a standard contract between the institutions providing the resources (in this case the CGIAR Centers) and the party accepting them. A joint FAO-Bioversity International multidonor project proposal is presently under discussion to support the implementation of the system.
- (ii) *Defining financial mechanisms for the International Treaty of PGRFA*. Within the framework of this Treaty, provision is made for a funding strategy, with the aim to support developing countries in the conservation and use of genetic resources. A major step has been taken by FAO and the CGIAR (in particular Bioversity International), by jointly establishing the Global Crop Diversity Trust, which seeks to establish an endowment fund of US\$ 260 million.
- (iii) *Identification of needs and opportunities to strengthen national and regional capacity for utilization of PGRFA*, in collaboration with CIMMYT, ICARDA, ICRISAT, IRRI, IFPRI and Bioversity International. FAO and the CGIAR Centres jointly assessed the national and regional capacities in many countries around the world. This work led to the creation of the Global Partnership Initiative for Plant Breeding Capacity Building (GIPB), which aims at strengthening capacities of the developing countries to improve their productivity through the sustainable use of PGRFA using better breeding and seed delivery systems. The joint implementation of GIPB activities is an opportunity for strengthening FAO and the CGIAR Centers' mutual collaboration in the area of PGRFA use. Reinforced Bioversity International-FAO collaboration could be

instrumental for the improvement of traditional and indigenous vegetables involving the Global Facilitation Unit for Underutilised Species.

- (iv) *Development and implementation of the CGRFA Multi-Year Programme of Work (MYPoW) on agricultural biological diversity.* In order for the MYPoW to reach its goals, the first International Technical Conference on AnGR in Interlaken, Switzerland, in September 2007, in close collaboration with the CGIAR, will be an opportunity for further cooperation on the required follow-up.
- (v) *Further development of the Global Strategy for the Management of Farm Animal Genetic Resources.* This again should be part of the follow-up to the First International Technical Conference on AnGR. ILRI, ICARDA, Bioversity International and the SGRP should particularly be involved in this process.
- (vi) *Support to national and regional programmes for the conservation and management of FGR,* in collaboration with CIFOR, ICRAF and Bioversity International. Joint projects could be developed in cooperation with appropriate donors to achieve this goal.

Other topics for collaboration include: (i) updating *The State of the World's Plant Genetic Resources* for 2008; (ii) Updating the Global Plan of Action for the Conservation and Sustainable Use of Plant Genetic Resources for Food and Agriculture; (iii) creating the Global Information System on Plant Genetic Resources for Food and Agriculture, foreseen in the Treaty; (iv) SGRP-supported planning/programming/funding of collaborative AnGR research and development, facilitated by Bioversity International's extended mandate definition (agro-biodiversity); and (v) creating an integrated research programme on food crop drought and salinity tolerance to provide adapted germplasm to NARS (including adaptation to climate change).

3.2 Support to the development and implementation of food security strategies

National food security strategies should rely on strong technology platforms for the enhancement of agricultural practices, sustainable increase of food production and improvement of natural resources management. These technological platforms should include traditional agricultural practices and new technology advancements generated or adapted by both the IARCs and the NARS.

In this respect, enhanced CGIAR-FAO collaboration could include the following topics:

- (i) *Formulation of national or regional food security strategies.* CGIAR Centers can effectively contribute to this exercise by supporting the identification of the technological components of food security strategies.
- (ii) *Dissemination and scaling up of appropriate technologies.* The creation of technological databases and the nurturing of agricultural information systems for technology dissemination would benefit from a CGIAR-FAO partnership. Fruitful collaboration on technology validation and scaling up can also be envisaged.
- (iii) *Promotion of adoption of improved technologies.* A reinforced CGIAR-FAO partnership could be very fruitful in promoting the adoption of improved, validated agricultural technologies. For instance: strengthened WARDA-FAO collaboration

could be instrumental for the development and use of NERICA, while the expansion of IRRI-FAO collaboration could support the development and transfer of the Integrated Rice Crop Management (IRCM) system to farmers in Asia. Strengthened collaboration between the CGIAR-supported Urban Harvest initiative and FAO's work on urban and peri-urban agriculture (UPA) and food security would be fruitful. Reinforced collaboration between FAO and CIFOR and ICRAF could be proposed to review and implement sound technologies for sustainable management of forest and tree resources inside forests and outside, as well as policy and institutional frameworks to ensure increased and equitable benefits for end-users of these technologies.

- (iv) *Adaptation to Climate Change and Variability.* The Intergovernmental Panel on Climate Change (IPPC) assessment reports suggest that the developing world could be affected by increased temperature and water constraints. Smallholders who depend on rainfed agriculture (small-scale irrigation) could be seriously affected. Thus, adaptation to climate risk (both climate change and variability) is a necessary component for a long-term response. FAO provides technical assistance and policy advice on climate change, notably in crop, soil and land management, water management, livestock and grasslands development and in all the different ecosystems (forest, mountains, inland waters, coastal and marine ecosystems). There is room for improved collaboration on agronomic and climate research on climate risk adaptation with a number of the CGIAR Centers. This collaboration could focus on the identification of geographical areas that are most vulnerable to the impacts of climate on agriculture through classification and mapping. Agronomic research that would improve resilience of the production system and the agro-ecosystem to climate risk in the most vulnerable areas could also be explored for future collaboration.
- (v) *Bioenergy.* The importance of access to energy services for achieving the Millennium Development Goals (MDGs), in particular the goal of halving the proportion of people suffering from hunger and extreme poverty, was affirmed at the World Summit for Sustainable Development (WSSD) and other international fora. FAO has been increasingly working on bioenergy, with agriculture and forestry as the main sources of biomass for biofuels, and the linkages of bioenergy with food security and climate change. In 2006, FAO introduced a global initiative, the International Bioenergy Platform (IBEP), which aims to provide the critical links to facilitate transition to an energy-sustainable future. FAO and the CGIAR could support the goals of the Platform through activities such as developing alliances to strengthen key areas of crop research impacting on biofuels.

3.3 Strengthening of National Agricultural Research and Extension Systems

Cooperation between FAO and the CGIAR Centers in the strengthening of National Agricultural Research and Extension Systems (NARES) ought to be revitalized and directed towards integrated support to Research, Extension and Education. Based on lessons learned from the past, this should help NARES become more responsive to the increasing needs of their clientele for appropriate technologies, to better fight for food security, poverty reduction and sustainable livelihoods. This could be achieved through increasing collaboration on the following issues:

- (i) *Strengthening institutional and human capacities of NARES.* There is a need for FAO and IFPRI/ISNAR to reinforce their synergy through a genuine complementary

approach on NARES' policy, organization, and management. This should enable NARES to adjust to their fast changing environments at all levels. Strengthening cooperation capacity of NAREs, particularly at the national and regional levels, in collaboration with regional research networks/fora, could also be part of such efforts. Further CGIAR-FAO collaboration could be built based on positive experiences like the one gained from the rehabilitation of agricultural and forestry research project in the Democratic Republic of Congo, funded by the European Commission.

- (ii) *Fostering the use of ICTs in agricultural research and extension within the AKIS Framework.* It is well established today that new ICTs have the potential to greatly facilitate and improve communication and information exchanges between key actors (researchers, extension workers, educators, farmers, community-based organizations and associations). The goal of FAO-CGIAR collaboration in this regard could be to foster and support integrated NARES that are linked to IARCs, which would involve and empower farmers, relying on an appropriate use of ICTs. Telecentres could be considered in this case as relevant information providers.
- (iii) *Development and harmonization of conducive legal frameworks.* FAO and the Centers can increase collaboration in assisting countries in the development of legal frameworks conducive to research and development, including protection of intellectual property rights, biosafety of genetically modified organisms and seed laws, with special focus on Africa. Support to regional and/or subregional harmonization of the national legal frameworks is also required.

4. Perspectives for CGIAR-FAO cooperation and its implementation

FAO has played a pivotal role in the history of the CGIAR as one of its three founding cosponsors, together with the World Bank and the United Nations Development Programme (UNDP). The current trends in increased budgetary constraints and the need for both institutions to increase their efficiency and effectiveness in achieving the MDGs, provide strong incentives for the two institutions to make innovative efforts to periodically update their partnership for a better focus of their joint activities. More precisely, the common challenge of eradicating extreme poverty and hunger (MDG-1), while ensuring environmental sustainability (MDG-7), provides common objectives that substantiate the need to improve cooperation to better articulate efforts in the area of agriculture and rural development.

FAO has positively taken note of the open and participatory approach adopted by the CGIAR Science Council in the design of the system's research priorities, as it has allowed the development of a constructive environment for stakeholder engagement. FAO also notes that the System Priorities for CGIAR research for the period 2005-2015 coincide broadly with FAO's Strategic Framework for 2000-2015. Therefore, the major endeavour they face in the future is to succeed in working out optimal arrangements that would enable them to achieve increased synergy, to better coordinate efforts and minimize overlapping in their efforts to reach their respective goals.

Any future cooperation should naturally be based on lessons learned from past successes and failures. As part of the effort to learn from past experiences, the FAO Programme Committee requested the Organization to evaluate its partnerships and alliances which included NGOs, CSOs, the private sector, UN system organizations and research institutions. The document was discussed at the 95th Session of the FAO Programme Committee which took place in

Rome in May 2006⁴, where the Committee expressed its satisfaction with the quality of the report and the usefulness of the recommendations. The report recommended that:

- (i) In order to enable full interaction and mutual knowledge between the CGIAR and FAO, consideration be concurrently given:
 - a) At the level of FAO, for the establishment of a Task Force of key Directors and Chiefs engaged in close collaboration with the CGIAR to guide FAO-CGIAR relations... (A recommendation that was supported by FAO Management, noting that a Task Force composed of Directors and Chiefs of the technical units covering the themes of the IARCs was established in 1994.)
 - b) At the level of the CGIAR, for the establishment of a focal point system mirroring the system already functioning in FAO.
- (ii) There was scope for institutionalizing a substantive joint FAO/CGIAR stock-taking exercise of FAO-CGIAR collaboration on a recurrent basis, for example every four to five years through the suggested Task Force. Such periodic review would allow learning, from an analysis of implementation, about the respective roles in research and in support to the countries' institutional environment for the adoption and adaptation of research results. It could be organized along regional and/or thematic lines and help set and review priorities with respect to the public goods addressed collectively by the CGIAR and FAO. This would streamline respective roles in the research and development continuum, from basic research to technology transfer through national institutions. It could also help highlight areas where further synergies could be realized (a recommendation that was supported by FAO Management).

More recently, limited resources have created a situation where some CGIAR Centres have entered into more development-oriented activities. In some cases, this has given the impression that the CGIAR Centers and FAO are competing. However, in fact, the CGIAR Centers have their domain in agricultural research for development, while FAO implements its mandate by providing advice to governments, offering technical assistance, providing information and acting as a neutral forum for governments to negotiate agreements and debate policy.

The past has proven that FAO and CGIAR Centers have clear complementarities that could be further developed through improved mechanisms for collaboration under the common goal of achieving the MDGs.

⁴ PC 95/4b) and PC 95/4b). Sup.1

Acronyms and abbreviations

ADB:	Asian Development Bank
AGA:	Animal Production and Health Division
AGRIS:	International Information System for Agricultural Science and Technology
AKIS:	Agricultural Knowledge and Information Systems
AnGR:	Animal Genetic Resources
APFORGEN:	Asia Pacific Forestry Genetic Resources Programme
ARI:	African Rice Initiative
CGIAR:	Consultative Group on International Agricultural Research
CGRFA:	Commission on Genetic Resources for Food and Agriculture
CIAT:	International Center for Tropical Agriculture
CIFOR:	Center for International Forestry Research
CIMMYT:	International Maize and Wheat Improvement Center
CIP:	International Potato Center
CIRAD:	International Cooperation Center for Research and Development
COFO:	Committee on Forestry
DANIDA:	Danish International Development Agency
EU:	European Union
EUFORGEN:	European Forest Genetic Resources Programme
FGR:	Forest Genetic Resources
GFAR:	Global Forum on Agricultural Research
GRUMEGA:	Group for Rice Population Improvement
IARC:	International Agricultural Research Center
ICARDA:	International Center for Agricultural Research in the Dry Areas
ICIPE:	International Center of Insect Physiology and Ecology
ICLARM:	WorldFish Center
ICRAF:	International Center for Research in Agroforestry
ICRISAT:	International Crop Research Institute for the Semi-Arid Tropics
ICTs:	Information and Communication Technologies
IGAD:	Intergovernmental Authority on Development
IFPRI:	International Food Policy Research Institute
IITA:	International Institute of Tropical Agriculture
ILRI:	International Livestock Research Institute
IPGRI:	International Plant Genetic Resources Institute (now Bioversity International)
IPM:	Integrated Pest Management
IPPC:	Intergovernmental Panel on Climate Change
IPTRID :	International Programme for Technology and Research in Irrigation and Drainage
IRRI:	International Rice Research Institute
ISNAR:	International Service for National Agricultural Research
IWMI :	International Water Management Institute
LADA:	Land Degradation Assessment in Drylands
NARS:	National Agricultural Research System
SADC:	Southern African Development Community
SAFORGEN:	Sub-Saharan Africa Forest Genetic Resources Programme
SGRP:	CGIAR's System-wide Genetic Resources Programme
SOFO:	State of the World's Forests
TCP:	Technical Cooperation Programme
UNDP:	United Nations Development Programme

UNEP: United Nations Environment Programme
WARDA: Africa Rice Center