The CGIAR centres* are 15 international food and environmental research organizations located around the world. The centres pursue a research agenda to improve the lives of the poor, in partnership with national agricultural research systems (NARS), the private sector and civil society. The centres are supported by the Consultative Group on International Agricultural Research (CGIAR), a strategic alliance of countries, international and regional organizations, and private foundations. In collaboration with NARS, civil society and the private sector, the CGIAR fosters sustainable agricultural growth through high-quality science aimed at benefiting the poor through stronger food security, better human nutrition and health, higher incomes and improved management of natural resources. The CGIAR is co-sponsored by the Food and Agriculture Organization of the United Nations (FAO), the International Fund for Agricultural Development (IFAD), the United Nations Development Programme (UNDP) and the World Bank. See www.cgiar.org.

The CGIAR System-wide Genetic Resources Programme (SGRP) joins the genetic resources activities of the CGIAR centres in a partnership whose goal is to maximize collaboration, particularly in five thematic areas: policy, public awareness and representation, information, knowledge and technology, and capacity building. These thematic areas relate to issues or fields of work that are critical to the success of genetic resources activities. SGRP contributes to the global effort to conserve agricultural, forestry and aquatic genetic resources, and promotes their use in ways that are consistent with the Convention on Biological Diversity (CBD). The Inter-Centre Working Group on Genetic Resources (ICWG-GR), which includes representatives from the centres and FAO, is the Steering Committee. Bioversity International is the Convening Centre for SGRP and hosts its coordinating Secretariat. See www.sgrp.cgiar.org.

Bioversity International is an independent international scientific organization that seeks to improve the well-being of present and future generations by enhancing conservation and the use of agricultural biodiversity on farms and in forests. Bioversity International is one of 15 centres supported by the CGIAR. It has its headquarters in Maccaresen, near Rome, Italy, with offices in more than 20 other countries worldwide. The organization operates through four programmes: Diversity for Livelihoods, Understanding and Managing Biodiversity, Global Partnerships, and Commodities for Livelihoods. See www.bioversityinternational.org.


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The System-wide Genetic Resources Programme (SGRP) unites all of the independent centres of the Consultative Group on International Agricultural Research (CGIAR) in a collaborative effort to sustain biodiversity for current and future generations. The diversity of plant, animal, forest and aquatic genetic resources supplies the building blocks for sustainable agriculture. SGRP harnesses the expertise and experience of the centres and their partners to put this diversity to work in fighting poverty, bringing health and food security, and protecting the environment. SGRP provides the CGIAR with a flexible means of working in the genetic resources arena, serving as an umbrella and communication mechanism to optimize, bring cohesiveness, and add value to the wide range of genetic resources activities pursued by the CGIAR centres. Through SGRP, centres share information and knowledge, conduct joint research, establish common policies and practices, stay abreast of developments in the global genetic resources sphere, and contribute to international debate.

The year 2006 was a very significant one for SGRP in a number of respects related to developments in the plant genetic resources community, and developments in funding, recognition and coordination of the Programme itself.

The International Treaty

Past SGRP annual reports have tracked progress in the negotiation of the International Treaty on Plant Genetic Resources for Food and Agriculture (the Treaty), which was adopted by the Conference of the Food and Agriculture Organization of the United Nations (FAO) in November 2001 and entered into force on 29 June 2004, 90 days after its ratification by 40 countries. This landmark event opened a new era of international cooperation in the conservation and sustainable use of plant genetic resources for food and agriculture (PGRFA).

Once adopted, the Treaty provided the context in which specific instruments could be developed and applied to operationalize its provisions. Collaborative efforts and negotiations to develop two such instruments of particular importance to the CGIAR came to fruition in 2006. The First Session of the Governing Body of the Treaty, held in Madrid, Spain in June 2006, approved draft agreements between the Governing Body and the CGIAR centres and adopted the Standard Material Transfer Agreement (SMTA). The former placed the in-trust collections held by the centres under the jurisdiction of the Treaty, superseding and formalizing similar agreements made with FAO in 1994. The latter provided the legal framework within which centres will provide PGRFA to users (see page 27). SGRP coordinated the contributions of CGIAR centres to the Treaty process, representing the centres’ interests and channelling expert inputs from centres to optimum effect.

Focus on the in-trust collections

The in-trust commitments made by the centres in their agreements with the Governing Body of the Treaty carry weighty responsibilities to conserve in-trust collections under secure conditions and to provide access to them.
For some ten years, SGRP has led centres’ efforts to analyse their genebank operations and associated costs in order to determine whether and how these commitments can be fulfilled. These studies provided the evidence to support a request to the World Bank for funds to upgrade both the centres’ genebank facilities and the collections themselves.

The ambitious upgrading programme reached a crucial stage in 2006 with the successful completion of its first phase and the securing of funds for the second phase (see page 16). Throughout, the aim has been to bring the standards of conservation of the in-trust collections and the quality of information on them to a level that fulfils the responsibilities incumbent upon the centres under the Treaty. The second phase gives attention to the sustainability of the conservation and access arrangements and to enhancing collective action among the centres, consistent with the CGIAR system’s fulfilment of a crucial role in the development of a global conservation and use system for PGRFA.

During 2006, the CGIAR emphasized the importance of the in-trust collections. The CGIAR Web site Story of the Month for July and August, The CGIAR genebanks – seeds for life, explained the contents and significance of the collections, and the efforts under way to secure them for present and future generations. The Story of the Month for November, Genebanks in the CGIAR: bolstering world food security, highlighted the collections’ contribution to fighting hunger and to the development of a global system for conserving and using crop diversity as foreseen in the Treaty.

The booklet, Safeguarding the world’s agricultural legacy, published by the CGIAR Secretariat in September 2006, provides a more detailed description of the collections and their contribution to agricultural development. It explains the role of the in-trust collections in tackling challenges as diverse as devising an affordable nutritional solution to infantile blindness in Africa, finding salt-tolerant crop varieties to grow on land degraded by the 2004 Asian tsunami, and accelerating the post-conflict recovery of agriculture in Rwanda. The CGIAR Secretariat has made this booklet available at international meetings during the year, including the CGIAR 2006 Annual General Meeting in Washington DC, USA, and events at FAO in Rome, Italy.

At the 2006 CGIAR Annual General Meeting, SGRP organized a lunchtime event on Collective Action to Sustain Biodiversity for Current and Future Generations. The event was chaired by Katharina Jenny of the Swiss Agency for Development and Cooperation (SDC, SGRP’s longest-standing donor) and sponsored by the European Commission and SDC. Emile Frison, Director General of Bioversity International and SGRP Programme Leader, introduced technical presentations by Ruaraidh Sackville Hamilton of IRRI.

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1 www.cgiar.org/monthlystory/july2006.html
2 www.cgiar.org/monthlystory/november2006.html
the then Chair of the SGRP Steering Committee (the Inter-Centre Working Group on Genetic Resources, ICWG-GR) and Mike Gale of the Science Council. The event provided the opportunity to showcase SGRP’s achievements, particularly the genebank upgrading exercise noted above and described in detail elsewhere in this report (see page 16). For the event, SGRP produced a leaflet on *Upgrading the CGIAR genebanks – securing global public goods for today and tomorrow.*

### Recognition of SGRP

Throughout 2006, a number of signals confirmed SGRP’s position as a respected coordinator of collective action within the CGIAR.

First, in a performance assessment conducted by the CGIAR Secretariat, SGRP and three other system-wide programmes were ranked highest of the total of 21 programmes, and were each awarded US$300 000 from a special CGIAR System/World Bank funding allocation. This responds to a Science Council recommendation that SGRP play a stronger role in linking CGIAR research with the international processes led by FAO.

Second, the importance of the SGRP’s agenda is reflected in the prominence given to genetic resources in the CGIAR System Priorities published in 2006. Priority Area 1 addresses “Sustaining biodiversity for current and future generations”, and biodiversity is a vital raw material for the four other Priority Areas addressing different leverage points in the CGIAR’s efforts to improve poor people’s livelihoods. The Science Council requested SGRP to coordinate the development of framework plans of action for the following four system priorities in Priority Area 1:

- Priority 1A: promoting conservation and characterization of staple crops;
- Priority 1B: promoting conservation and characterization of underutilized plant genetic resources;

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4 [www.sgrp.cgiar.org/Publications/AGM_Flier_Upgrading_CGIAR_Genebanks.doc](http://www.sgrp.cgiar.org/Publications/AGM_Flier_Upgrading_CGIAR_Genebanks.doc)
Priority 1C: promoting conservation of indigenous livestock;
Priority 1D: promoting conservation of aquatic animal genetic resources.
In its commentary on SGRP’s 2007–2009 Medium-Term Plan, the Science Council commended the Programme’s efforts to respond to this request. During 2006, draft frameworks were prepared for Priority 1C and Priority 1D, as noted under Regular programme activities on page 10. A process was agreed for developing the framework plan for Priority 1A, to be addressed early in 2007.

CGIAR Partnership Award

Probably the most powerful recognition of the centres’ capacity to work together on a common agenda, which has long been SGRP’s strength, occurred when the CGIAR 2006 Annual General Meeting conferred one of its most prestigious prizes, the Science Award for Outstanding Partnership, on the “CGIAR Genebank Community”. The members of the Community, consisting of the 11 centres hosting genebanks plus IFPRI, FAO and the SGRP Secretariat, were lauded for their efforts to conserve and manage the in-trust collections as global public goods. SGRP was acknowledged for bringing coherence, effectiveness and efficiency to the genetic resources activities of the CGIAR system.

The award nomination recognized the collections as fundamental to the work of the CGIAR centres and their partners. The centres’ genebanks are repositories of not only germplasm but also information and expertise that are unique in the scientific and agricultural spheres. They are staffed by a team that forms a cohesive community of practice, despite being dispersed across the world and exposed to a wide spectrum of challenges relating to the diversity of crops, ecoregions, human and geopolitical contexts, and scales of operation. The rich learning environment of the centres’ genebanks has
allowed great strides forward in the science underpinning sound conservation and effective use of genetic resources, in the definition and application of best practices, and in policy issues complementing the science.

Kathy Sierra (CGIAR Chair) and Eija Pehu (World Bank Advisor for Agriculture and Rural Development) presented the Outstanding Partnership award to SGRP Coordinator Jane Toll on behalf of the nominees. Reflecting on the award, Jane saluted “the efforts – past and present – of the whole group of technicians, researchers, managers and everyone involved in maintaining the collections to the highest possible standards and making them available to the breeding programmes of the CGIAR centres and to the whole world.”

The nomination of the CGIAR Genebank Community for this award reflects on all who have contributed to the collective effort over the more than 30-year history of the CGIAR, delivering excellence in the system’s plant genetic resources work. It inspires SGRP members to continue working within the CGIAR and the wider genetic resources community to direct collective action towards the tremendous challenges facing the world in defeating poverty, hunger and malnutrition.

Changes at the SGRP Secretariat

SGRP’s success as an experiment in collective action owes much to the efforts of two of the SGRP Secretariat staff, Jane Toll and Layla Daoud, who have been with the Programme from its early days in the mid-1990s. At the end of 2006, Jane and Layla announced their intention of resigning from SGRP and taking up posts with the Global Crop Diversity Trust. This was to take effect during the first part of 2007, which will obviously be a year of great change for SGRP. The Programme Leader and Executive Committee speak for the whole SGRP membership in thanking Jane and Layla for their dedicated service to the programme and wishing them well in their new posts. Fortunately, with the continued collaboration between the SGRP and the Trust that is in prospect, particularly in the development of a global system for conservation of PGRFA, SGRP will have the opportunity of working with Jane and Layla well into the future.

SGRP Funding

In the period covered by this report, SGRP received funding from (in alphabetical order):

- Canada (CIDA)
- Generation Challenge Program (CIMMYT)
- Norway
- Rockefeller Foundation
- Sweden
- Switzerland (SDC)
- Unrestricted Donors to Bioversity International
- World Bank

SGRP is grateful for the support that it receives from its donors. Full details of the support are provided in the 2006 Financial report on page 33.
REGULAR PROGRAMME ACTIVITIES

Governance and coordination

SGRP’s strategies and priorities are set by the SGRP Steering Committee, the ICWG-GR, whose membership comprises representatives of all CGIAR centres and FAO. The ICWG-GR meets annually to review progress and agree on the Programme’s work plan and budget. Decision-making is by consensus. The Chair and two centre representatives are elected annually to constitute the SGRP Executive Committee, along with the Director General of Biodiversity International (as SGRP Programme Leader) and the SGRP Coordinator.

The ICWG-GR held its 2006 annual meeting in March at the International Center for Tropical Agriculture (CIAT) headquarters in Cali, Colombia. The main focus of the meeting was on plant genetic resources for food and agriculture (PGRFA), with particular attention to preparations for the first meeting of the Governing Body of the International Treaty on Plant Genetic Resources for Food and Agriculture, and to developing the proposal for the World Bank-funded inter-centre project, Collective Action for the Rehabilitation of Global Public Goods in the CGIAR Genetic Resources System: Phase 2. Both topics are covered in detail in feature articles in this Annual Report (see pages 23 and 16, respectively).

At the meeting, the ICWG-GR agreed the SGRP work plan for 2006/2007 to 2009. This includes:

- contributing to and supporting implementation of the Platform for Agricultural Biodiversity Research as the way to further the CGIAR’s contribution to cross-sectoral ecosystem-based genetic resources management (see page 10 for further information on the Platform);
- contributing to the 2010 biodiversity target of the Convention on Biological Diversity (CBD), including work to develop indicators for crops, under the coordination of Bioversity International, and for livestock, with ILRI;
- continuing work by Bioversity International, IFPRI and ILRI on the valuation of agrobiodiversity as described in the 2004/2005 SGRP Annual Report (page 30). This included development of a concept note for a project on country-based work for possible submission to the Global Environment Facility (GEF) (although changes in the GEF strategy and project submission procedures led to the decision to postpone submission of any project.
idea until the situation had become clearer);

• developing SGRP’s activities for addressing CGIAR System Priority 1B on underutilized species, building on an SGRP-funded collaboration between Bioversity International and CIAT to assess the status of relevant work among centres, and taking advantage of two pertinent international initiatives hosted by the CGIAR system: the Global Facilitation Unit for Underutilized Species (GFU) at Bioversity International, and the International Centre for Underutilized Crops (ICUC) at the International Water Management Institute (IWMI);

• continuing to coordinate the representation and contributions of the CGIAR system to international agendas, particularly those of the CBD and FAO.

SGRP Web site

The SGRP Web site is an important tool for communicating with the Programme’s partners and the wider genetic resources community. A major overhaul of the Web site occurred during 2006. The new site, at www.sgrp.cgiar.org, is comprehensive but simple, and is updated regularly.

SINGER

Recognizing that a germplasm collection without information has significantly reduced value, ever since its inception SGRP has made genebank information management a very high priority. This resulted in the creation of the System-wide Information Network for Genetic Resources (SINGER), a collaborative effort involving the 11 centres hosting genebanks and coordinated by dedicated staff based at the SGRP Secretariat hosted by Bioversity International.

SINGER unites the databases of the genebanks and allows information on these dispersed and independently managed genetic resources collections to be searched simultaneously through a single entry point on the Internet, at www.singer.cgiar.org. Researchers, plant breeders and other users can look for samples with the traits that farmers need, based on identity, origin or desirable characteristics.

SINGER is participating in the exercise to upgrade the CGIAR genebanks as described elsewhere in this Annual Report (see page 19), and in 2006 the first phase of
the upgrading of the SINGER infrastructure was successfully achieved. This covered the most pressing needs in terms of equipment, staff and essential informatics work. Throughout the year, particular attention was given to data quality, with extensive checking of passport data, including taxonomical references. During 2006, practical support was provided to centres through visits by SINGER staff, a help desk service and training, including in the management of a new firewall developed to protect network integrity.

By showing how germplasm exchange from the in-trust collections held by CGIAR centres has been carried out to the advantage of all countries, SINGER has played a critical role in strengthening and building support for the International Treaty’s Multilateral System for Access and Benefit-sharing. SINGER’s experience from operating for more than a decade, its coverage of the single largest collection of PGRFA in the world, and its principles of standardization, completeness and open access to information place SGRP in a strong strategic position to contribute to the development of a Global Information System on Plant Genetic Resources, as called for by Article 17 of the Treaty.

A key step in the development of a global information system is the partnership that SINGER has formed with GBIF, the Global Biodiversity Information Facility. GBIF was established in 2001 to take on a special set of tasks that will make it possible for policy- and decision-makers, research scientists and the general public all around the world to access the world’s supply of primary scientific data on biodiversity. In 2006, Bioversity International, on behalf of SGRP, signed a Memorandum of Understanding with GBIF for the provision of SINGER and other genebank information.

The dedicated server installed at Bioversity International for SINGER serves as a central information hub to the CGIAR collections, through which information on more than 680,000 accessions is regularly updated and made available to the GBIF data portal. SINGER is also joining with other information systems, such as the European Plant Genetic Resources Search Catalogue (EURISCO), which holds data on more than 1 million accessions, and the United States Department of Agriculture (USDA) Germplasm Resources Information Network (GRIN), which holds data on more than 450,000 accessions. Together, these information systems are able to provide access to information on more than 2 million accessions, representing almost one-third of total estimated global holdings.

Forest genetic resources

SGRP supported Bioversity International, CIFOR and the World Agroforestry Centre - ICRAF in developing a unified system-wide strategy on forest and tree genetic resources
(FTGR). Preliminary discussions and studies of CGIAR centres’ work have been undertaken since 2004, culminating in a meeting at Bioversity International in Rome, Italy in 2006. Representatives of six centres, FAO and other major organizations working in the field participated. They identified four essential elements for a CGIAR strategy:

- understanding the diversity and value of FTGR and the processes that affect them;
- conducting research to inform the conservation of FTGR;
- developing approaches to make FTGR germplasm available effectively, to improve livelihoods and benefit society;
- promoting the uptake and sustainable use of FTGR.

These elements, along with policy advocacy and capacity development as cross-cutting issues, will provide the foundation for developing integrated, complementary and collaborative actions among centres. The next step will be development of a concise strategy document outlining the major threats, challenges and opportunities, and presenting the work that centres plan to implement in future to address these issues, based on their comparative advantages. ICRAF and Bioversity International are taking the lead in developing a draft, on behalf of SGRP.

Farm animal and fish genetic resources

In October 2005, the Science Council published a report on requirements and potential future interventions by the CGIAR in the conservation of farm animal and fish genetic resources. In its commentary on the report, the Council recommended extending the CGIAR’s efforts in these areas, with a key requirement that the efforts be linked internationally and part of a global system. The Science Council cited SGRP as central to this strategy and referred to the need for a strengthened SGRP to play a coordinating role.

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Agroforestry provides nutrition to farmers such as Esther Gama in Zimbabwe. World Agroforestry Centre

role, linking CGIAR research to Bioversity International and FAO. The CGIAR system-wide programme support allocated to SGRP, as noted on page 3, was awarded in part to help strengthen the Programme in these areas.

The Science Council then convened a summit meeting to examine the strategy through which future CGIAR efforts in the area of farm animal and fish genetic resources would be implemented in concert with other existing international efforts and arrangements. The meeting was held in Rome, Italy in May 2006 and involved the Science Council, SGRP, ILRI, ICARDA, WorldFish Center, Bioversity International and FAO’s Animal Production and Health, and Fisheries Divisions. Participants reviewed existing and planned international research and policy development initiatives, and identified synergies or common areas of research for potential exploitation in the coming five years. They then defined a strategy through which framework plans and budgetary requirements for the new CGIAR Strategic Priorities in livestock and aquatic animal genetic resources would be developed in collaboration with international partners.

Immediately after the summit meeting, SGRP held a follow-up meeting, attended by ICARDA, ILRI, WorldFish Center, Bioversity International and FAO, to consider priorities on animal and fish genetic resources and, as requested by the Science Council, to start the process of developing framework plans for the CGIAR priorities on livestock and fish genetic resources. The outline plans produced were the first such plans to be drawn up for a CGIAR priority, and were considered by the Science Council and CGIAR Alliance over the rest of the year in their discussions on implementation of the priorities.

Platform for Agrobiodiversity Research

As described in the 2004/2005 Annual Report (page 5), SGRP has collaborated with Bioversity International, FAO and others to create a global Platform for Agrobiodiversity Research. The Platform aims to support the necessary knowledge generation and actions to stem the loss of biodiversity in and around areas of agricultural production, and to promote sustainable agriculture. The Platform will provide opportunities for researchers, farmers and others to strengthen collaboration on key aspects of agrobiodiversity maintenance.

The Platform’s first international stakeholder meeting, held at Bioversity...
International headquarters in May 2006, developed the Platform’s goal and objectives (see box), set guiding principles and programme priorities, and proposed operational guidelines and arrangements. The stakeholder meeting highlighted the importance of working with farmers on issues associated with intensification of production and management of agrobiodiversity, and of ensuring better recognition of the contribution that agrobiodiversity can make to key global concerns. Platform focus areas are likely to include valuation of agrobiodiversity, implementation of the ecosystem approach, and improving the resilience, stability and adaptability of production systems.

Drought-resistant Ankole cattle are valued by their keepers in East and Central Africa, but risk replacement by exotic breeds. Donald Kugonza, Makerere University/ILRI

The overall goal of the Platform for Agrobiodiversity Research is to enhance the sustainable management and use of agrobiodiversity by improving knowledge of all its different aspects. It seeks to promote research and to integrate, mobilize and share research findings on the sustainable management of agrobiodiversity. Towards this end, the Platform’s objectives are to:

- support development of an agrobiodiversity knowledge base, by collating, synthesizing and disseminating knowledge, making available tools and practices, and identifying knowledge gaps;
- identify ways that agrobiodiversity can address today’s major global challenges such as environmental degradation, poverty, climate change, water quality and scarcity and new global disease threats, by making available information and options for action;
- identify and facilitate relevant new and innovative partnerships to strengthen multidisciplinary and participatory research addressing different agroecosystem components (livestock, crops, soils, pollinators, etc.) and to build research capacity, particularly in developing regions.
The stakeholder meeting also recognized the need for the Platform to start urgent activities, proposing that priority activities for the short term should include:

- engaging the agrobiodiversity research community and seeking its involvement in developing the Platform’s programme;
- contacting existing supporters and identifying additional interested individuals and institutions;
- establishing and beginning to use the Platform’s Web site for Platform activities; initiating Web-based discussions on key issues;
- identifying areas of research that should be given priority by the Platform;
- securing and mobilizing resources to support the Platform’s work;
- participating in selected key meetings to present the Platform, such as the Triennial Conference of the Global Forum on Agricultural Research (GFAR), the CGIAR Annual General Meeting, CBD’s Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA), and the FAO Commission on Genetic Resources for Food and Agriculture (CGFRA).

Details on the conclusions of the stakeholder meeting and on the Platform’s aims and role can be found in relevant Bioversity International/SGRP publications.7, 8

**Representation at international events**

SGRP coordinates representation and technical contributions to international meetings organized by the CGIAR and other bodies, in particular the International Treaty, the CGFRA and the CBD (see box).

### International Treaty on Plant Genetic Resources for Food and Agriculture

The Treaty had a landmark year in 2006 and SGRP coordinated contributions from CGIAR centres to a number of important meetings. The First Session of the Governing Body of the International Treaty was organized in Spain in June. The CGIAR was represented by ten delegates from five centres and SGRP. At this meeting, the CGIAR organized two side-events: Options for National Implementation of Farmers’ Rights: Participatory Plant Breeding and Participatory Variety Selection; and Information Builds Trust: How Existing Information Systems can be Used Under the Multilateral System of the Treaty.

In preparation for the Governing Body meeting,
Collaboration with the Convention on Biological Diversity

Ongoing collaboration between SGRP and the CBD is through discussions on topics of common interest, and participation in meetings. In 2006, the SGRP Secretariat was involved in consultations with the CBD Secretariat on a number of areas including:

- preparations for the review of the CBD Programme of Work on Agricultural Biodiversity (to be undertaken for the Ninth Meeting of the Conference of the Parties to the Convention on Biological Diversity, COP9, in 2008);
- inputs to support preparations for the review of implementation of the Global Strategy for Plant Conservation (to be undertaken for COP9 in 2008);
- participation in the United Nations Environment Programme (UNEP)/GEF Biodiversity Indicators Partnership project to refine the headline indicator for Trends in Genetic Diversity of Domesticated Animals, Cultivated Plants and Fish Species of Major Socio-economic Importance, and contribution to an Indicator Development Plan for cultivated plants, focusing on one sub-indicator for ex situ crop collections.

The major CBD event in 2006 was COP8, held in March in Curitiba, Brazil. At COP8, 4000 delegates from around the world agreed on a road map to reduce significantly the rate of biodiversity loss by 2010, in line with the agreement reached by 110 Heads of State and Government at the World Summit on Sustainable Development held in Johannesburg in 2002. Ten delegates representing four centres and SGRP participated, and the CGIAR had a highly visible presence, with a CGIAR centres booth on the theme of biodiversity in dry and subhumid lands and a Bioversity International booth on the theme of nutrition. In addition, three side-events were organized:

- The centres hosted an event on Biological Diversity in Dry and Sub-humid Lands for Human Well-being, with ICARDA providing a key speaker.
- Bioversity International, with Brazil and FAO, organized an event on Biological Diversity and Nutrition.
- SGRP co-sponsored an event with FAO and the Centre for Genetic Resources the Netherlands (CGN) on Policies in Animal Genetic Resources Management. This event provided the opportunity to present the outcome of an SGRP meeting held in 2005 and reported in the SGRP 2004/2005 Annual Report (page 26).

SGRP coordinated CGIAR centres’ participation in a number of other meetings organized by the CBD, including:

- Coordination Meeting on Biosafety Capacity Building Initiatives, held in Tromso, Norway in January;
- Fourth Meeting of the CBD’s Ad Hoc Open-ended Working Group on Access and Benefit-sharing, held in Granada, Spain in January/February;
- Second Meeting of the Open-ended Ad Hoc Working Group on Liability and Redress in the Context of the Biosafety Protocol, held in Montreal, Canada in February;
- Third Meeting of the Conference of the Parties serving as the Meeting of the Parties to the Cartagena Protocol on Biosafety, held in Curitiba, Brazil in March;
- Ad Hoc Liaison Group Meeting of the CBD on the Global Strategy for Plant Conservation and Global Partnership on Plant Conservation, held in Dublin, Ireland in October;
- African Regional Workshop on Sustainable Use of Biodiversity, held in Nairobi, Kenya in December as one of a series of workshops organized by the CBD Secretariat to explore implementation of the Addis Ababa Principles and Guidelines for the Sustainable Use of Biodiversity (www.cites.org/eng/res/13/addis-gdl-en.pdf).
Contributions were made to two meetings devoted to the development of the Standard Material Transfer Agreement (SMTA). In addition, the signing ceremony for the agreements between the 11 CGIAR centres hosting genebanks and the Governing Body of the Treaty took place on 16 October 2006 at FAO headquarters in Rome, Italy. Further information on the outcomes of Treaty meetings and their significance for the CGIAR centres is provided in the feature article beginning on page 23.

**FAO Commission on Genetic Resources for Food and Agriculture**

In 2006, livestock genetic resources was a key item on the agenda of CGRFA, as it prepared for the International Technical Conference on Animal Genetic Resources for Food and Agriculture, to be held in Interlaken, Switzerland in September 2007. At this important conference, the international community was to make strategic choices on the future management of animal genetic resources; reach agreement on how best to address priorities for their sustainable use, development and conservation; and raise awareness of their significance.

The CGIAR centres contributed to the strategic planning process through representation by ILRI, ICARDA and the SGRP Secretariat at the Fourth Session of the Intergovernmental Technical Working Group on Animal Genetic Resources (ITWG/AnGR) held at FAO headquarters in Rome, Italy in December. This meeting reviewed drafts of the report on the *State of the World’s Animal Genetic Resources for Food and Agriculture* and a report on strategies and priorities, in preparation for submission to the CGRFA in June 2007 and presentation at the International Technical Conference.
The CGIAR centres hold the world’s largest collection of agrobiodiversity, with over 600,000 accessions of some 3000 staple crop, forage and agroforestry species essential to human food security and nutrition. Analysis of the capacity of centre genebanks to meet international standards of security and accessibility revealed a critical situation, but the urgent action needed was beyond the centres’ financial resources. Fortunately, the World Bank stepped in to provide the necessary injection of funds for an ambitious rehabilitation exercise. The first phase came to a successful conclusion at the end of 2006, coinciding with confirmation of funds for a second phase to begin in 2007. The vision of the project is that, on its completion, the CGIAR in-trust collections will have a financial and technical basis for long-term, sustainable and accessible stewardship of the valuable public goods that they represent, with the CGIAR exercising leadership in a collective effort with other international organizations and NARS to build an effective global system for the conservation and use of crop diversity.

**Laying the groundwork**

Aware of the critical importance yet vulnerability of the collections, one of the first actions taken by SGRP shortly after its inauguration in 1994 was to commission an external review of the CGIAR genebank operations. Reporting in 1995, the review provided a baseline understanding of standards of management of the in-trust collections, and identified ways in which operations could and should be improved. The crucial limitation in implementing the review’s recommendations was funding, confirmed by an external review of SGRP in 1998. The latter review called for the development of an investment plan to tackle the twin targets of upgrading genebank facilities and upgrading genebank management operations.

Over the following two years, SGRP developed an upgrading plan, informed by a detailed costing study commissioned by SGRP and carried out by IFPRI in collaboration with CGIAR genebank managers. The plan called for funding of US$21 million over and above the centres’ own investments from existing donor sources, to bring the CGIAR genebanks and their operations up to international standards. A priority-setting exercise by the centres identified the most urgent and fundamental tasks, costed at US$13.6 million, for which support was offered by the World Bank as part of its global public goods initiative.

**Phase 1 achievements**

Global Public Goods Rehabilitation Phase 1: Upgrading the Genebanks of the CGIAR was initiated in 2003 and ran until the end of 2006. The project addressed an ambitious set of aims to raise the standards of the genebank facilities and put them to work to enhance operations. The achievements of Phase 1 (see box) illustrate
the broad scope of the project and the great steps forward that it has made in securing the in-trust collections.

Looking in more detail at the upgrading of the genebanks per se: new and improved facilities have been installed at all centres for managing seed and clonal material, in the field or in vitro. All upgrading targets were met; the selection in the box below illustrates the range, scale and impact of the exercise.

The second component of the project involved managing germplasm to international standards. The upgrading of facilities and a significant boosting of technical support (project funding allowed the employment of some 400 temporary staff) enabled centres to make a massive impact on backlogs in accession management tasks that were threatening the sustainability of CGIAR genebank operations. The graphic on page 19 illustrates the results for each germplasm management task, comparing targets set with actual achievements. By the formal closure of the project at the end of 2006, a great majority of the targets had been met. Discounting distortion from the data where centres were able to process more germplasm than expected, the overall

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**THE END OF PHASE 1 SAW:**

- improved storage facilities at all centres;
- safety duplication agreements negotiated between genebanks within and outside the CGIAR;
- safety duplication of more than 190,000 accessions from all centres;
- improved seed processing facilities at six centres;
- reduced processing backlogs at all centres, down by more than 400,000 accessions;
- improved regeneration facilities at nine centres;
- reduced regeneration backlogs at all centres, down by almost 200,000 accessions;
- improved plant health facilities at four centres;
- reduced plant health backlogs at eight centres, down by a total of more than 170,000 accessions;
- new molecular identification facilities at two centres;
- a total of more than 80,000 accessions characterized at six centres;
- hardware and software upgrades at all centres;
- barcoding equipment installed at seven centres;
- enhanced SINGER functionality and improved data quality at eight centres.
level of achievement was 90%, with the remaining 10% scheduled for completion in 2007. This represents a huge step forward in ensuring the security of the collections. Less obvious than the management data, but equally significant, were the lessons learned by the centres through conducting Phase 1. These pointed to opportunities for increased sharing of experiences and expertise among centres; for streamlining management processes to increase efficiency; for handling interspecific differences in response of genotypes; up.
Achievement of Phase 1 accession management targets showing targets (light bars) and actual numbers processed (dark bars), including the percentage attainment for each management task. The extent to which supply data exceed targets reflects the centres’ capacity to respond to demand beyond foreseen levels.

<table>
<thead>
<tr>
<th>Management Task</th>
<th>Target Percentage</th>
<th>Actual Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processing</td>
<td>121%</td>
<td></td>
</tr>
<tr>
<td>Storage</td>
<td>102%</td>
<td></td>
</tr>
<tr>
<td>Regeneration</td>
<td>115%</td>
<td></td>
</tr>
<tr>
<td>Safety backup</td>
<td>80%</td>
<td></td>
</tr>
<tr>
<td>Characterization</td>
<td>118%</td>
<td></td>
</tr>
<tr>
<td>Health testing</td>
<td>96%</td>
<td></td>
</tr>
<tr>
<td>Supply</td>
<td>210%</td>
<td></td>
</tr>
</tbody>
</table>

Number of accessions (x1000)

and for managing risks and constraints. The experience of building and maintaining capacity and skills in circumstances ranging from the mundanity of staff turnover to the drama of war has been unique.

Accessibility, a key part of the in-trust commitments under the International Treaty, requires that accessions be characterized and their qualities documented in a form that is comprehensive and readily available to users. SINGER was established under the auspices of SGRP in 1994 to help centres meet these responsibilities, linking the collections held in the centres’ genebanks and allowing cross-searching of all centres’ databases from a single entry point.

As part of Phase 1, SINGER was upgraded, along with information operations in the participating centres. New Web and database servers installed at the SINGER network operating centre hosted by Bioversity International allow more rapid replication of data from individual centres to SINGER and increased data storage capacity, and provide improved facilities for the SINGER team to test and validate its development work. Centres have been supported through a help desk service and on-site visits, assistance with database design, Web services, genebank information system analysis, and staff training. A new SINGER database with enhanced data quality and completeness has been created, and a new Web site put on line. (See page 7 for further information on SINGER developments.)

As noted in the 2004–2005 SGRP Annual Report, Phase 1 underwent a mid-term review by an external panel of experts in 2005. The panel’s report, submitted in 2006, provided reassuring confirmation that the project was on track, and recommended undertaking a second phase (see box overleaf). The reviewers considered that under-resourcing of the centres’ genebanks would have a negative impact on a very important component of global agrobiodiversity. Accordingly, they made a
series of recommendations focusing particularly on the sustainability of the achievements of Phase 1 and the planning of follow-up work through the Collective Action for the Rehabilitation of Global Public Goods in the CGIAR Genetic Resources System: Phase 2 project.

**Phase 2: An agenda for consolidation, research and leadership**

Preparation of the Phase 2 proposal was coordinated by SGRP, with contributions and detailed input from centres. It was submitted to the World Bank for funding in 2006, and support of US$10.46 million was approved. The scope of Phase 2 differs from that of Phase 1 in that, as well as including further upgrading in centres to achieve a sustainable steady state for the in-trust collections, there is also a significant emphasis on collective action and collaboration among centres to address critical issues facing crop germplasm conservation and use in the future. The aim is to increase the security, efficiency and effectiveness of the centres’ conservation efforts, and make important strategic inputs to the development of a global system for crop germplasm conservation, as called for in the International Treaty, cited in the CGIAR System Priorities and promoted by the Global Crop Diversity Trust.\(^\text{10}\)

Six Outputs have been defined for Phase 2 (see box opposite), covering secure conservation, effective management and facilitated access to the in-trust collections, CGIAR centres’ involvement with wider biodiversity, and development of a global system.

Phase 2 will add significantly to the balance of accessions maintained according to the highest international standards; it will see more than:

- 200 000 accessions processed for storage;

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**EXTRACTS FROM THE REPORT OF THE EXTERNAL REVIEW PANEL FOR PHASE 1**

“Plant genetic resources managed by the CGIAR Centres and other institutions at regional and national levels are absolutely critical for meeting the Millennium Development Goals for improving a sustaining global well-being of an expanding population. The CGIAR System genebanks manage a very important component of the global agrobiodiversity.”

“[Phase 1] was well conceived and successfully implemented. Its continuation and strengthening in a second phase … is recognized as a need among CGIAR genebanks. [Phase 1] was organized to recognize the commonalities of issues for global management but preserved the flexibility to meet needs of a disparate constellation of crops and crop relatives. Despite the fact that few activities addressed inter-Centre collaboration, after the completion of [Phase 1], Centres will be in a much better position to engage in System-wide collaboration in a more synergistic way and based on comparative advantages among the Centres.”

\(^{10}\) [www.croptrust.org/main/]
The CIAT genebank holds more than 40 000 accessions of beans, including cultivated Lima bean (illustrated), common bean and their wild relatives.

CIAT

- 150 000 accessions safety duplicated;
- 70 000 accessions regenerated;
- 64 000 accessions health tested;
- 50 000 accessions characterized;
- 140 000 accessions documented.

Particular attention will be given to rationalizing the management of crop collections held at more than one centre, to increase the efficiency and security of their conservation. Strategies and tools will be developed for enhancing knowledge on the diversity held in the in-trust collections, identifying ecogeographic gaps and assessing loss of diversity in conserved material over time. The quality of and access to information on the collections will be improved, and the accessibility of germplasm through SINGER streamlined, offering users the possibility of single-entry-point ordering.

The collective experience of the centre genebanks will be applied

Phase 2 Outputs

- Uniform risk management procedures developed and implemented in all CGIAR genebanks.
- Best practices for genebank management developed and implemented in CGIAR centres and made available to partners.
- Unified protocols for locating and delivering germplasm and for sharing information on common crops in place at all CGIAR genebanks.
- Strategies and tools for enhancing knowledge on the diversity held in the in-trust collections.
- Recommendations for the wider involvement of the CGIAR genebanks in addressing genetic and genomic stocks, associated biodiversity and underutilized species.
- Mechanisms for improved collective action among the CGIAR genebanks in the delivery of global public goods and promotion of international collaboration on conservation.
to developing and applying risk assessment, safety back-up, plant health and performance measurement procedures to enhance genebank management, as well as to improving conservation techniques for clonal materials. These best practices will be made available to partners; they will serve as key instruments in raising genebanking standards worldwide and in achieving secure conservation in a global system.

Centres wholeheartedly wish to see a durable result from the investment in rehabilitating the collections, so that they can meet their in-trust commitments into the future. To this end, SGRP will coordinate the development of a Sustainability Plan as a key component, for which CGIAR centre directors have undertaken to provide the genebanks with adequate resources to maintain quality and security in the long term.

Phase 2 will include strategic planning for training national programme partners and enhancing the CGIAR’s capacity for genetic resources research. To optimize the CGIAR centres’ contribution to work on the breadth of agrobiodiversity, scoping studies will be carried out on genetic and genomic collections, microbial, fungal, insect and nematode collections, and underutilized plant species. Finally, the project will analyse the elements and functions of an integrated global system for crop genetic resources conservation and use. It will promote such a system, with the CGIAR centre genebanks at the core, providing leadership, vision and skills to realize that vision.

The power of team-work

Phase 1 was a highly successful global exercise in conservation technology research and management, generating valuable results on a number of fronts, and raising CGIAR genebank operations to a new level. The spirit of collaboration—which has always been a positive feature of the activities of SGRP member centres—grew in the course of the project. Centres gained valuable experience in working to a common agenda, developing and applying common standards, sharing knowledge, and supporting each other’s operations to overcome constraints and reduce risks. A greater understanding was gained of the realities of managing large and complex operations in a climate of financial stringency, when there is need to achieve economies and streamlining without sacrificing quality. Phase 2 will see the spirit of collaboration redoubled as its crucial challenges are addressed.
**Fulfilling Commitments to the International Treaty**

“The Treaty is critically important for the [CGIAR] Centres because it provides a basis for building trust and goodwill among those actors who must work in harmony for the world to be able to make full use of PGRFA to increase food security and reduce poverty, to boost the nutritional value of the diets of the poor and to reduce the vulnerability of poor people in rural areas to external shocks.”

“[Placing the in-trust collections under the Treaty] really is an investment in food security. The genetic diversity created in the past by farmers and researchers is the foundation of improvements to meet the challenges of the future. Unless we can meet those challenges, there will be no food security.”

—Emile Frison, SGRP Programme Leader, addressing, respectively, the First Session of the Governing Body of the International Treaty, and the signing ceremony for the agreements between centres and the Governing Body, both held in 2006.

The International Treaty on Plant Genetic Resources for Food and Agriculture\(^{11}\) was adopted by the FAO Conference in November 2001 and entered into force on 29 June 2004, 90 days after its ratification by 40 countries. By the end of 2006, 110 countries and the European Community were Contracting Parties to the Treaty.\(^ {12}\) The First Session of its Governing Body, held in Spain in June 2006, took important steps forward in developing mechanisms to operationalize the Treaty.

The adoption of the Treaty marked a critical milestone in the long journey of the plant genetic resources community to achieve a comprehensive framework for the conservation and sustainable use of all PGRFA and a mechanism to ensure the flow of the PGRFA that are most critical to the world’s food security and for which countries are most interdependent.

Through SGRP representation, the CGIAR centres have been active partners throughout that journey, following the Treaty negotiations closely and providing timely and relevant technical inputs on subjects that include crop taxonomies, international flows of PGRFA, and global information systems. The benefits to the centres of continuing SGRP participation in Treaty negotiations, as in other international fora such as CGRFA and CBD, are representation of individual centres’ interests, even in their absence, cost-effectiveness and the credibility that comes from a consistent, politically neutral and reliable presence presenting a common position with a single voice. SGRP has also enabled centres to provide capacity building, training and awareness raising support to partners, to facilitate their active and informed participation in Treaty negotiations and implementation.

**Centre agreements with the Governing Body of the Treaty**

The year 2006 saw the culmination of years of dedicated work on the part of the CGIAR centres, represented by SGRP,
and their counterparts in FAO and the CGRFA to build a common understanding on the contribution that the collections held by the centres can make to world food security and to put mechanisms in place to ensure that that contribution continues into the future.

The CGIAR first expressed a commitment to conserving its collections in trust for humanity in 1989. Over the ensuing years, attention turned to formalizing the collections’ status and, in 1994, the centres signed agreements with FAO making legally binding long-term commitments as trustees of the collections. Since then, the centres have worked together to give substance to the in-trust agreements regarding legal obligations and technical standards for safeguarding the material in their care.

The 1994 agreements were interim, pending negotiation of the International Treaty, the coming-into-force of which in 2004 paved the way for signature of new definitive in-trust agreements between the 11 centres holding germplasm and the Governing Body of the Treaty. These agreements, committing the centres to supporting and implementing the Treaty and placing their in-trust collections under its jurisdiction, were signed at a ceremony at FAO in Rome, Italy in October 2006. The ceremony, marking the conclusion of four years’ collaborative work on developing the agreements, coincided with World Food Day, which had the particularly apt theme of Investing in Agriculture for Food Security. In signing the agreements, the centres committed themselves to supporting and implementing the Treaty, and in particular to working with the international community to build a strong and effective global system for conservation and use of PGRFA. In a joint statement by the centres, this pledge was affirmed and the centres’ common understanding of the provisions of the agreements was presented. In order to meet the needs of their wide constituency of partners, centres will continue to provide PGRFA directly to farmers and others for cultivation. It is implicit to the centres’ undertaking to make PGRFA available to users that requests will be reasonable. As under the previous agreements with FAO, the centres’ undertaking will not extend to the fulfilment of unreasonable requests, in order to protect the security and sustainability of the in-trust collections in the common good.

Why PGRFA need the Treaty

It took more than seven years to negotiate the Treaty within the framework of CGRFA. It is in harmony with the CBD, which came into force in 1993 and made great steps forward in protecting the world’s biodiversity and ensuring equitable regimes of access and benefit sharing. On its own, however, the CBD was not able to respond fully to the particular situation of PGRFA, not least because it does not cover ex situ collections, such as those held by the CGIAR centres, that were acquired before it came into force.

The new Treaty responds to the special needs of PGRFA.

Fulfilling commitments to the international treaty in a number of ways. Firstly, PGRFA of cultivated crops on which humans depend for food and survival are a product of human activity that, for the most part, cannot exist without continued human intervention. As domestication, breeding and selection by farmers have incorporated new traits into crops, such as higher yields and disease resistance, natural traits that allow survival in the wild, such as seed dormancy, have been bred out.

Secondly, the free and wide exchange of PGRFA across the world’s continents that has taken place over the ages has resulted in an overwhelming majority of countries being dependent for calorie intake on crops that originate elsewhere. No country is self-sufficient; for example, sub-Saharan Africa draws 73 percent of its food energy supplies from crops that originate elsewhere. No country is self-sufficient; for example, sub-Saharan Africa draws 73 percent of its food energy supplies from crops originating in other regions, and corresponding figures for countries in South America range from 81 to 95 percent.

Finally, access to PGRFA is essential to the world’s continued food security. Farmers and breeders depend on PGRFA as building blocks for the improvement of their crops to sustain production in the face of threats. This frequently involves going back to the centres of origin and diversity of crops in order to find natural resistance to disease or solutions for other environmental challenges. PGRFA are important as both an immediate resource and an insurance against unknown future needs. Screening large numbers of accessions from genebanks could identify the critical traits that save a crop from a new threat, thereby staving off hunger for dependent communities.

Exchange of PGRFA between countries has supported crop improvement activities and the continued heath of agricultural economies worldwide for generations. At least that was the case until the end of the 20th century, which saw an increasing tendency towards negotiating access to genetic resources on a case-by-case bilateral basis. The consequent high transaction costs threatened to stifle continued exchange, with inevitable consequences for agricultural development.

The potential scale of the problem can be seen by taking the example of a calculation made in 2001 to illustrate what would happen if bilateral arrangements were made to exchange the germplasm in the in-trust rice collection held by IRRI. If each of the 111 countries represented in the collection were required to make individual contractual arrangements to gain access to the breadth of material in the collection, a minimum of

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**The ICRISAT genebank holds vast diversity of sorghum germplasm, with more than 37,900 accessions from 92 countries.**

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26

12,210 agreements would have to be negotiated for this one crop alone. Such a scenario would fail to do justice to the needs of people throughout the world.

The Treaty is a reaction to the rising tide of measures that extend private and public rights over genetic resources, which have tended to ‘lock up’ these resources, thus preventing an agile response to threats to food security. In essence, the Treaty provides an opportunity for states to exercise their sovereignty by participating in a multilateral system created through pooling resources.

Access and benefit sharing

The Treaty addresses the crucial issue of continued availability of the building blocks for crop improvement by establishing a ‘plant genetic resources commons’, the Multilateral System of Access and Benefit-sharing, within which members agree to share their resources for the purposes of research, breeding, conservation and training. It provides a special solution for PGRFA that responds to the needs of farmers, breeders and sustainable agriculture in general.

The sharing of monetary and other benefits is on a multilateral basis and includes the payment of an equitable share of the benefits arising from commercialization of products incorporating material received from the Multilateral System. Such payments will be mandatory where restrictions are placed on the availability of the products to others for further research and breeding, as may be the case for some types of patent. Where the product continues to be available without such a restriction, the payment will be encouraged, but voluntary. Proceeds will be paid into a multilateral fund or other mechanism and will flow directly and indirectly to farmers, especially those in developing countries and countries with economies in transition that conserve and sustainably utilize PGRFA.

The Treaty negotiations gave particular attention to defining the coverage of the Multilateral System, citing interdependence and importance to food security as key criteria. The Multilateral System applies to PGRFA of the 35 crop and 29 forage genera listed in Annex I to the Treaty.16

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The entry into force of the Treaty alone was not sufficient to make the Multilateral System of Access and Benefit-sharing operational. A mechanism for the transfer of PGRFA covered by the Treaty was required. The Parties to the Treaty thus continued their negotiations to develop a Standard Material Transfer Agreement (SMTA) with significant inputs from SGRP, building on decades of experience in supplying germplasm to users and a considerable breadth of knowledge on relevant legal and policy issues.

In 2006, the Secretary of CGRFA formally acknowledged the excellent support and crucial inputs received to the Treaty negotiations, particularly to development of the SMTA, through SGRP contributions to meetings of the SMTA Expert Working Group and Contact Group over the preceding two years. Further details on the intensive period of consultation and negotiation leading up to implementation of the Treaty and the SMTA can be found in the SGRP Annual Report for 2004/2005.

The SMTA was adopted by the Governing Body of the Treaty at its first meeting in June 2006, providing a definition of the legal conditions applying to suppliers and recipients, and establishing procedures for dispute resolution. Equipped with experience in implementing an interim Material Transfer Agreement (MTA) since 2003, centres took steps during 2006 to ready themselves for the start-up of the SMTA, scheduled for 1 January 2007. The preparatory work involved completion of documentation of in-trust holdings, including identification of those accessions falling under Annex 1; identification of accessions that have been classified as PGRFA Under Development such as breeding lines, for which additional conditions could be applied at centre discretion; and identification of accessions to which other special restrictions might apply.

These preparations were coordinated by Bioversity International on behalf of SGRP, working through its steering committee (the ICWG-GR), the CGIAR Genetic Resources Policy Committee and the CGIAR Alliance Executive. In support of this effort, SGRP, with significant inputs from Bioversity International, IRRI, CIMMYT and CIAT, developed a Guide for the CGIAR Centres’ Use of the Standard Material Transfer Agreement.17 This is a working document that will evolve over time in response to ongoing centre experiences in administering the in-trust collections in the post-Treaty environment. It provides centres with detailed advice on transfer of Annex 1 PGRFA under the Multilateral System, explaining how and when to use the SMTA, the obligations of donor and recipient parties, and enforcement of the SMTA’s provisions. Transfers of non-Annex 1 material (as covered by Treaty Article 15.1b) continue to be handled according to the MTA currently in use by the centres under the 1994 in-trust agreements with FAO. This MTA is expected to be amended by the Governing Body of the Treaty no later than at its Second Session, scheduled for November 2007, to bring it into accordance with the Treaty. The System-wide Policy on Products of Centres’ Research was considered by

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The SMTA foresees the ‘click-wrap’ option through which recipients ordering germplasm on the Internet can accept the terms and conditions of the agreement by a click of the mouse.

F. Di Paolo/Bioversity International

the CGIAR Genetic Resources Policy Committee at meetings in February and August 2006, and will continue to receive attention in 2007, to bring it into line with the SMTA’s provisions on PGRFA Under Development.

Centres will have significant monitoring and reporting duties, which will require modifications to existing databases and the development of a solid system for tracking orders. The guide advises centres to develop a system for on-line ordering of PGRFA consistent with the requirements of the Treaty regarding, for example, the purposes for which the PGRFA requested will be used.

Parties requesting PGRFA will be required to accept an information access agreement defining centre rights over database information on the PGRFA, and to accept the conditions of the SMTA/MTA if applicable, or enter into discussion with the centre regarding specific conditions where they are not applicable (e.g., if the proposed use falls outside the provisions of the Treaty). Development of a centralized on-line ordering system is under way in the context of the SGRP’s World Bank-funded effort to upgrade the management of PGRFA in the CGIAR system detailed on page 21.
Looking to the future

Through responding to the Treaty’s call to place the collections they hold in trust within the Multilateral System, the CGIAR centres have given substance to that system, thereby benefiting agricultural development. It is hoped that other important collections will follow the CGIAR’s lead. To date, CATIE and two of the host institutes of the international genebanks of the International Coconut Genetic Resources Network (COGENT) have placed their collections under the Treaty.

The CGIAR centres will be key players in the day-to-day operation of the Multilateral System, in view of their commitment to provide facilitated access to the in-trust collections and of the importance of those collections in which a significant proportion of material falls within the Multilateral System. The centres will also be among those in the world community hoping to see a broadening of the scope of the Treaty’s Multilateral System through extension and diversification of the Annex 1 list of crops to cover more broadly those of importance for food security in tropical and subtropical regions. In the meantime, the Treaty’s Governing Body is committed to encouraging Contracting Parties to provide CGIAR centres with access, on mutually agreed terms, to PGRFA not listed in Annex 1 that are important to centre programmes and activities, such as the wild relatives of a number of major crops that are sources of disease and pest resistance, and many tropical forage species that support livestock production in developing countries.

The centres’ future contributions to the achievement of the Treaty’s goals will not end there. The development of the basic rules for the Multilateral System and agreement on the SMTA will permit the Treaty’s Governing Body to turn its attention to wider conservation and use issues. The Treaty cites the Global Plan of Action for the Conservation and Sustainable Utilization of PGRFA and the Global Information System on PGRFA as essential to achievement of its objectives. Given the CGIAR’s stated commitment to implementation of both of these key supporting elements to the Treaty, there will be rich opportunities for collaboration between the Governing Body and the centres well into the future.

Last but far from least, mention should be made of the crucial role that the Global Crop Diversity Trust will play in realizing the aims of the Treaty. A Relationship Agreement between the Treaty and the Trust was signed at the First Session of the Governing Body of the Treaty, recognizing the Trust as an essential element of the Treaty’s funding strategy in relation to the *ex situ* conservation and availability of PGRFA.
<table>
<thead>
<tr>
<th>Members of the ICWG-GR IN 2006</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dr Ines Sanchez</strong> Head, Genetic Resources Unit (Africa Rice Centre – WARDA)</td>
</tr>
<tr>
<td><strong>Dr Laura Snook</strong> Director, Understanding and Managing Biodiversity Programme (Bioversity International)</td>
</tr>
<tr>
<td><strong>Dr Daniel Debouck</strong> Head, Genetic Resources Unit (CIAT)</td>
</tr>
<tr>
<td><strong>Dr Doris Capistrano (acting)</strong> Director of Forests and Governance (CIFOR)</td>
</tr>
<tr>
<td><strong>Dr Thomas Payne</strong> Interim Director and Head, International Wheat Improvement Network (CIMMYT)</td>
</tr>
<tr>
<td><strong>Dr Suketoshi Taba</strong> Head, Maize Germplasm Bank (CIMMYT)</td>
</tr>
<tr>
<td><strong>Dr William Roca</strong> Plant Cell Physiologist, Crop Improvement and Genetic Resources Department (CIP)</td>
</tr>
<tr>
<td><strong>Dr Jan Valkoun</strong> Head, Genetic Resources Unit (ICARDA)</td>
</tr>
<tr>
<td><strong>Dr Luis Iñiguez</strong> Senior Small Ruminant Scientist (ICARDA)</td>
</tr>
<tr>
<td><strong>Dr CLL Gowda</strong> Global Theme Leader – Crop Management and Utilization (ICRISAT)</td>
</tr>
<tr>
<td><strong>Dr Melinda Smale</strong> Research Fellow, Environment and Production Technology (IFPRI)</td>
</tr>
<tr>
<td><strong>Dr Dominique Dumet</strong> Genebank Conservation Consultant (IITA)</td>
</tr>
<tr>
<td><strong>Dr Jean Hanson</strong> Project Coordinator, Forage Genetic Resources (ILRI)</td>
</tr>
<tr>
<td><strong>Dr Olivier Hanotte</strong> Project Leader, Animal Genetic Resources (ILRI)</td>
</tr>
<tr>
<td><strong>Dr Ruaraidh Sackville Hamilton</strong> (Chair) Head, Genetic Resources Center (IRRI)</td>
</tr>
<tr>
<td><strong>Dr Tony Simons</strong> Programme Leader, Domestication of Agroforestry Trees Programme (World Agroforestry Centre – ICRAF)</td>
</tr>
<tr>
<td><strong>Dr Alphis Ponniah (to April 2006)</strong> Leader, Biodiversity and Genetic Resources Research Program (WorldFish Center)</td>
</tr>
<tr>
<td><strong>Dr Malcolm Beveridge (from June 2006)</strong> Discipline Director for Aquaculture and Genetics (WorldFish Center)</td>
</tr>
</tbody>
</table>
Ex Officio Members

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SGRP Programme Leader  
Director General  
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* For updated contacts see www.sgrp.cgiar.org/Contacts.htm


SGRP. 2006. Annotated bibliography: Addressing the international pedigrees and flows of plant genetic resources for food and agriculture. IPGRI, Rome, Italy.


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This report presents income and expenditures for SGRP for the period 1 January 2006 through to 31 December 2006.

### 2006 Income

<table>
<thead>
<tr>
<th>Source</th>
<th>US$</th>
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<tr>
<td>Canada (CIDA)</td>
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<tr>
<td>Generation Challenge Program (CIMMYT)</td>
<td>309,026 *</td>
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<tr>
<td>Norway</td>
<td>78,828</td>
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<td>Rockefeller Foundation</td>
<td>15,254</td>
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<td>Sweden</td>
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<tr>
<td>Switzerland (SDC)</td>
<td>270,130 **</td>
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<tr>
<td>World Bank Rehabilitation of CGIAR Global Public Goods Assets</td>
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<td>World Bank System-Wide and Ecoregional Programs (SWEPs)</td>
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<tr>
<td>Unrestricted Donors to Bioversity International</td>
<td>196,156 ****</td>
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**Total income**: 1,428,245

### 2006 Expenditures

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<tr>
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<th>US$</th>
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<tr>
<td>ICWG-GR meeting</td>
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<td>SINGER activities</td>
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<td>Technical and capacity building activities</td>
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<td>Public awareness and representation</td>
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<tr>
<td>Genetic resources policy representation and activities</td>
<td>295,369</td>
</tr>
<tr>
<td>Administrative costs</td>
<td>164,677</td>
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</tbody>
</table>

**Total expenditure**: 1,428,245

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* Funds for SGRP and SINGER-related activities in the Generation Challenge Program.

** Part of the 2006 contribution from Switzerland was carried forward to 2007.

*** Funds for SGRP monitoring and reporting of genebank upgrading at centres and for upgrading SINGER.

**** Unrestricted funding contribution to Bioversity International, utilized for supporting SGRP activities in 2006.
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>CATIE</td>
<td>Tropical Agricultural Research and Higher Education Center (Centro Agronomico Tropical de Investigacion y Ensenanza)</td>
</tr>
<tr>
<td>CBD</td>
<td>Convention on Biological Diversity</td>
</tr>
<tr>
<td>CGIAR</td>
<td>Consultative Group on International Agricultural Research</td>
</tr>
<tr>
<td>CGN</td>
<td>Centre for Genetic Resources, the Netherlands</td>
</tr>
<tr>
<td>CGRFA</td>
<td>Commission on Genetic Resources for Food and Agriculture (FAO)</td>
</tr>
<tr>
<td>CIAT</td>
<td>International Center for Tropical Agriculture (Centro Internacional de Agricultura Tropical)</td>
</tr>
<tr>
<td>CIDA</td>
<td>Canadian International Development Agency</td>
</tr>
<tr>
<td>CIFOR</td>
<td>Center for International Forestry Research</td>
</tr>
<tr>
<td>CIMMYT</td>
<td>International Wheat and Maize Improvement Center (Centro Internacional de Mejoramiento de Maiz y Trigo)</td>
</tr>
<tr>
<td>CIP</td>
<td>International Potato Center (Centro Internacional de la Papa)</td>
</tr>
<tr>
<td>COGENT</td>
<td>International Coconut Genetic Resources Network</td>
</tr>
<tr>
<td>COP</td>
<td>Conference of the Parties to the Convention on Biological Diversity</td>
</tr>
<tr>
<td>EURISCO</td>
<td>European Plant Genetic Resources Search Catalogue</td>
</tr>
<tr>
<td>FAO</td>
<td>Food and Agriculture Organization of the United Nations</td>
</tr>
<tr>
<td>FTGR</td>
<td>forest and tree genetic resources</td>
</tr>
<tr>
<td>GBIF</td>
<td>Global Biodiversity Information Facility</td>
</tr>
<tr>
<td>GEF</td>
<td>Global Environment Facility</td>
</tr>
<tr>
<td>GFAR</td>
<td>Global Forum on Agricultural Research</td>
</tr>
<tr>
<td>GFU</td>
<td>Global Facilitation Unit for Underutilized Species</td>
</tr>
<tr>
<td>GRIN</td>
<td>Germplasm Resources Information Network (USDA)</td>
</tr>
<tr>
<td>ICARDA</td>
<td>International Center for Agricultural Research in the Dry Areas</td>
</tr>
<tr>
<td>ICRAF</td>
<td>World Agroforestry Centre</td>
</tr>
<tr>
<td>ICRISAT</td>
<td>International Crops Research Institute for the Semi-Arid Tropics</td>
</tr>
<tr>
<td>ICUC</td>
<td>International Centre for Underutilized Crops</td>
</tr>
<tr>
<td>ICWG-GR</td>
<td>Inter-Centre Working Group on Genetic Resources</td>
</tr>
<tr>
<td>IFAD</td>
<td>International Fund for Agricultural Development</td>
</tr>
<tr>
<td>IFPRI</td>
<td>International Food Policy Research Institute</td>
</tr>
<tr>
<td>IITA</td>
<td>International Institute of Tropical Agriculture</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Full Form</td>
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<tr>
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</tr>
<tr>
<td>ILRI</td>
<td>International Livestock Research Institute</td>
</tr>
<tr>
<td>IPGRI</td>
<td>International Plant Genetic Resources Institute (now Bioversity International)</td>
</tr>
<tr>
<td>IRRI</td>
<td>International Rice Research Institute</td>
</tr>
<tr>
<td>ITWG/AnGR</td>
<td>Intergovernmental Technical Working Group on Animal Genetic Resources (FAO)</td>
</tr>
<tr>
<td>IWMI</td>
<td>International Water Management Institute</td>
</tr>
<tr>
<td>MTA</td>
<td>Material Transfer Agreement</td>
</tr>
<tr>
<td>NARS</td>
<td>national agricultural research system(s)</td>
</tr>
<tr>
<td>PGRFA</td>
<td>plant genetic resources for food and agriculture</td>
</tr>
<tr>
<td>SBSTTA</td>
<td>Subsidiary Body on Scientific, Technical and Technological Advice (CBD)</td>
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<tr>
<td>SDC</td>
<td>Swiss Agency for Development and Cooperation</td>
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<tr>
<td>SGRP</td>
<td>System-wide Genetic Resources Programme (CGIAR)</td>
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<tr>
<td>SINGER</td>
<td>System-wide Information Network for Genetic Resources (CGIAR)</td>
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<tr>
<td>SMTA</td>
<td>Standard Material Transfer Agreement</td>
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<tr>
<td>UNDP</td>
<td>United Nations Development Programme</td>
</tr>
<tr>
<td>UNEP/GEF</td>
<td>United Nations Environment Programme Global Environment Facility</td>
</tr>
<tr>
<td>USDA</td>
<td>United States Department of Agriculture</td>
</tr>
<tr>
<td>WARDA</td>
<td>Africa Rice Center</td>
</tr>
<tr>
<td>Centre Name</td>
<td>Address</td>
</tr>
<tr>
<td>-------------</td>
<td>---------</td>
</tr>
<tr>
<td>Centro Internacional de la Papa (CIP)</td>
<td>Apartado Postal 1558 Lima 12 Peru</td>
</tr>
<tr>
<td>International Center for Agricultural Research in the Dry Areas (ICARDA)</td>
<td>PO Box 5466 Aleppo Syrian Arab Republic</td>
</tr>
<tr>
<td>International Crops Research Institute for the Semi-Arid Tropics (ICRISAT)</td>
<td>Patancheru 502324 Andhra Pradesh India</td>
</tr>
<tr>
<td>International Food Policy Research Institute (IFPRI)</td>
<td>2033 K Street NW Washington, DC 20006-1002 USA</td>
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<tr>
<td>International Institute of Tropical Agriculture (IITA)</td>
<td>PMB 5320 Ibadan Nigeria</td>
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<tr>
<td>International Livestock Research Institute (ILRI)</td>
<td>PO Box 30709 Nairobi Kenya</td>
</tr>
<tr>
<td>Africa Rice Center - WARDA</td>
<td>01 BP 2031 Cotonou Benin</td>
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<tr>
<td>Bioversity International</td>
<td>Via dei Tre Denari 472/a 00057 Maccarese Rome Italy</td>
</tr>
<tr>
<td>Centro Internacional de Agricultura Tropical (CIAT)</td>
<td>Apartado Aéreo 6713 Cali Colombia</td>
</tr>
<tr>
<td>Center for International Forestry Research (CIFOR)</td>
<td>PO Box 6596 JKWPB Jakarta 10065 Indonesia</td>
</tr>
<tr>
<td>Centro Internacional de Mejoramiento de Maiz y Trigo (CIMMYT)</td>
<td>Apartado Postal 6-641 06600 Mexico, DF Mexico</td>
</tr>
<tr>
<td>International Rice Research Institute (IRRI)</td>
<td>DAPO Box 7777 Metro Manila Philippines</td>
</tr>
<tr>
<td>International Water Management Institute (IWMI)</td>
<td>PO Box 2075 Colombo Sri Lanka</td>
</tr>
<tr>
<td>World Agroforestry Centre - ICRAF</td>
<td>PO Box 30677 00100 Nairobi Kenya</td>
</tr>
<tr>
<td>WorldFish Center</td>
<td>PO Box 500 GPO 10670 Penang Malaysia</td>
</tr>
</tbody>
</table>