

Global Knowledge and Development Project

Project Report

March 5, 2003



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Global Knowledge and Development Project (GKD)

Term of Project:

January 1 – December 31, 2003

Project Objective – Enhancing International Science And Technology Cooperation

This project arose out of a widely recognized need for improved strategies and mechanisms to strengthen the endogenous scientific and technological (S&T) capacity of poor and developing countries. In spite of abundant evidence correlating economic development with the existence of effective national systems of research and innovation, the majority of least-developed countries remain marked by their continuing lack of the basic skills and infrastructure necessary for participation in the emerging knowledge-based economy. The problem continues despite considerable investments by multi and bi-lateral donors over several decades in S&T-focused initiatives.

Recently, concerns over the growing “knowledge divide” between industrialized and developing countries have contributed to renewed attention on the role of international S&T cooperation in development. In part, this is evident in the emergence of new frameworks for documenting and understanding the failure of past donor-driven S&T assistance to adequately respond to national capacity building priorities.¹ In addition, is the increasing interest by the mainstream science community in development issues, particularly in the context of the movement to mobilize science and technology for sustainable development.² Underlying these themes is the unprecedented expansion of alternative modes of North-South and South-South scientific collaboration and interactivity occurring as a general consequence of globalization, and signaling new optimism in the potential for more effective diffusion and utilization of knowledge through cooperation. Together, these elements are contributing to a revitalization of international S&T policy in a trend which, given adequate resources and the right kinds of political support, can become a powerful force for development.

In this project, the Centre for Global Studies (CFGs) at the University of Victoria, in collaboration with Foro Nacional/Internacional in Peru, has sought to contribute to the advancement of S&T cooperation through the production of two unique resources. The first of these is the an on-line listing of 270 programs engaged in the delivery of science and technology-focused assistance to developing countries. The purpose of the Inventory is two-fold: first, to provide detailed baseline data on the existing landscape of S&T cooperation programs with the aim of assisting policy

¹ See Sagasti (2002); Velho (2001); Cetto and Vessuri (2000).

² As expressed, for example, at the 1999 UNESCO/ ICSU (International Science Council) World Conference on Science, during which the international science community pledged, in a “new contract with society”, to give greater priority in its research agendas to issues of poverty reduction, social equity, and other pressing environmental and developmental challenges. See also the Harvard-based Science for Sustainability Initiative [www.sustsci.Harvard.edu/network.htm], and the 2002 report to the World Summit for Sustainable Development by international science organizations calling for greater involvement in policy debates concerning applications of science and technology for sustainable economic growth (ICSU, February 2002).

makers – and the donor community in particular – with designing more effective and coordinated S&T investments; and second, to serve as a centralized information resource for researchers and practitioners in developing countries. Since there have been only limited attempts to date to compile such a resource³, the Inventory represents the first effort of its kind to profile the disbursement of S&T assistance in terms of wherm

from among thousands of development activities with a potential stake in S&T outcomes, those programs for which S&T is the primary focus rather than an indirect focus of services provided.

As such, faced with the choice approximately halfway through the project of proceeding to an evaluative stage with a small sample of programs, or seeking to maximize the quantity of cooperation activities represented in the Inventory, the latter was deemed to be most feasible, and most consistent with the objective of producing a comprehensive landscape of the field. It was also decided that casting the widest net possible in terms of the number of progra

would enable a more accessible and cost-effective presentation of the information, with the added benefits of supporting search functionality, and the ability to perform unlimited updates to the data on a continuing basis. The database is currently housed with a web hosting company in Victoria, BC, and can be located directly at <http://139.142.245.96/index.asp> or through the CFGS Website at <http://www.globalcentres.org/html/project1.html>. The site design includes two components: a client site with multiple search functionality and a web-form enabling users to submit new programs or updates; and a password protected Administrator site, which allows the administrator to screen and edit any additions received from the client end.

The Inventory Website includes a glossary of the key terminology within the site. With regard to project's broader themes and concepts – for example ‘cooperation,’ ‘capacity building,’ and the meaning and application of terms like ‘knowledge,’ ‘science’ and ‘technology,’ these are fully operationalized in various models and schemas elaborated in the Foro Concept Paper.

In this iteration of the research, it was not possible to extrapolate total spending for global S&T cooperation. This is due to the lack of standardization in accounting practices of donor agencies, only some of which calculate S&T expenditures as an exclusive budget category, and which apply different criteria to the measurement of activities such as technology transfer, training, and technical assistance, etc. At the program level, Tj10.98 0 0 4re

The GKD Concept Paper: The Sisyphus Challenge: Knowledge, Innovation and the Hum

needed to advance the diffusion of endogenous S&T capacity. As such, the basic elements of an effective global S&T strategy for the 21st century would include:

™ ~~capacity~~ mobilization of a significant magnitude of new private and public financing to the sector;

™ launching of a major global communications and education -ooghliTj10.98 0 0 10.98 2789.24 7747.560.7Tm

Box 1:

Facility to Support Best Practice in the Application of Traditional and Indigenous Knowledge

A proposed direction for a Phase II initiative of the Global Knowledge and Development Project lies in exploring the creation of a new global facility to support the best use and application of traditional and indigenous knowledge. This would involve activities to enhance protection of traditional knowledge, and the application of intellectual property regimes for the benefit of indigenous populations. Such a facility could be constituted as an autonomous public-private collaboration, through affiliation with World Bank, or decentralized to the regional development banks.

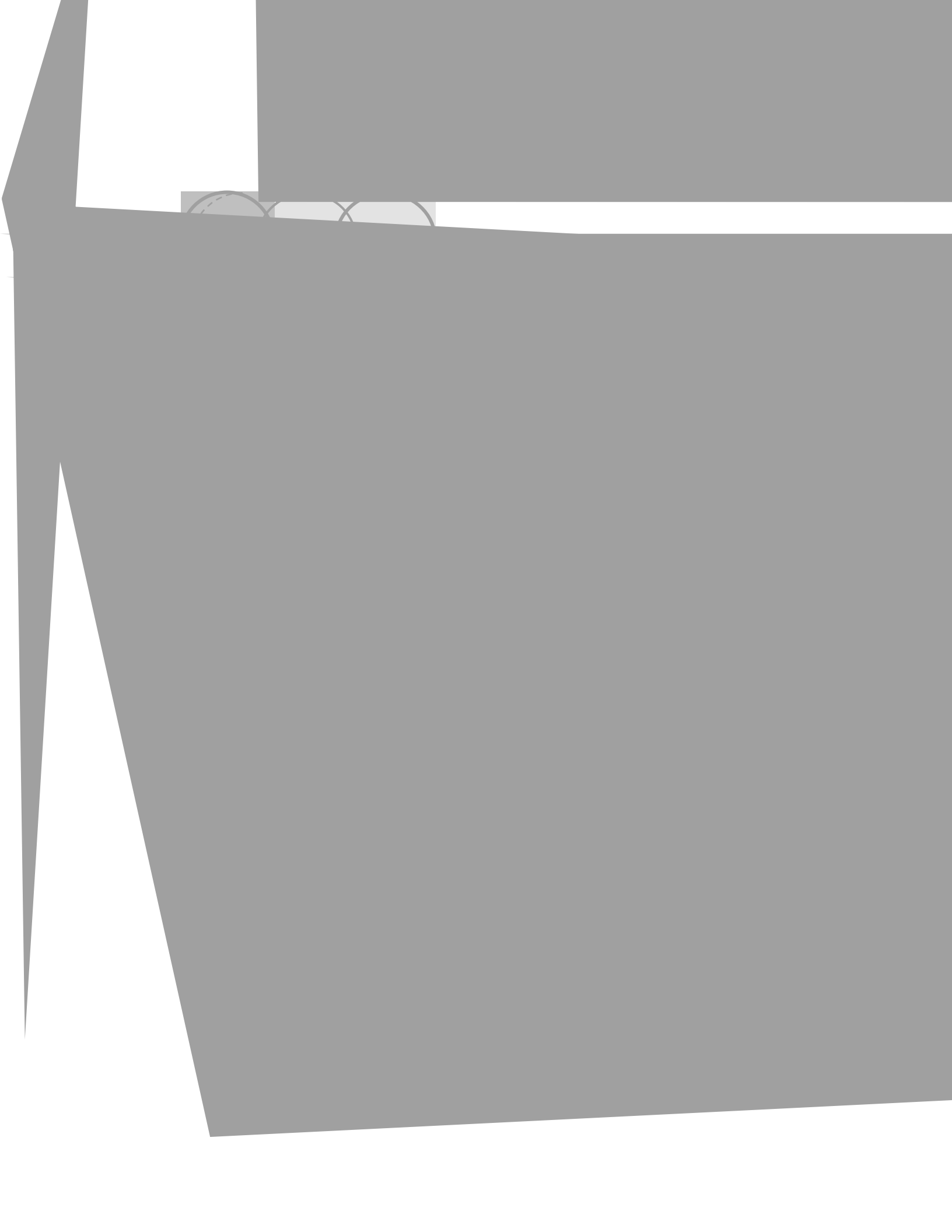
The functions of the facility could include:

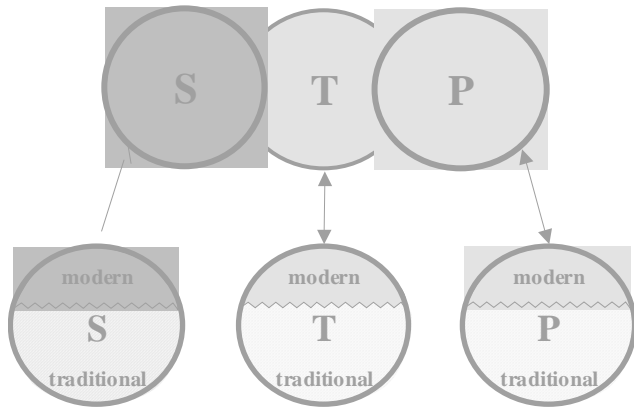
- ™ Providing greater resources (primarily financial) to developing countries for their development of national patent plans.
- ™ Creating traditional knowledge digital libraries (e.g. India's Honey Bee Database) to allow for the documentation of indigenous knowledge in developing nations. This information can be used to create national or patents or sui generis systems, and later as evidence if need be for the purposes of revoking foreign patenting of indigenous knowledge through the courts.
- ™ Creating a Community Biodiversity Registration Program, similar to a digital library in end result, but including a training component that empowers individual communities to be proactive in acquiring registration skills and techniques.
- ™ Create a consolidated database of good and bad practices of multinationals, universities, individuals and organizations in their dealings with developing countries, patenting issues and bio-piracy.
- ™ Create a contractual framework for nations or communities wishing to engage multi-nationals or other organization for the purposes of research

Cetto, Ana Maria, and Hebe Vessuri. "Latin America", in the UNESCO Science Report 2002.

Cusmano, Lucia.

. Copenhagen: Danish Research Unit for Industrial Dynamics, April 2000.





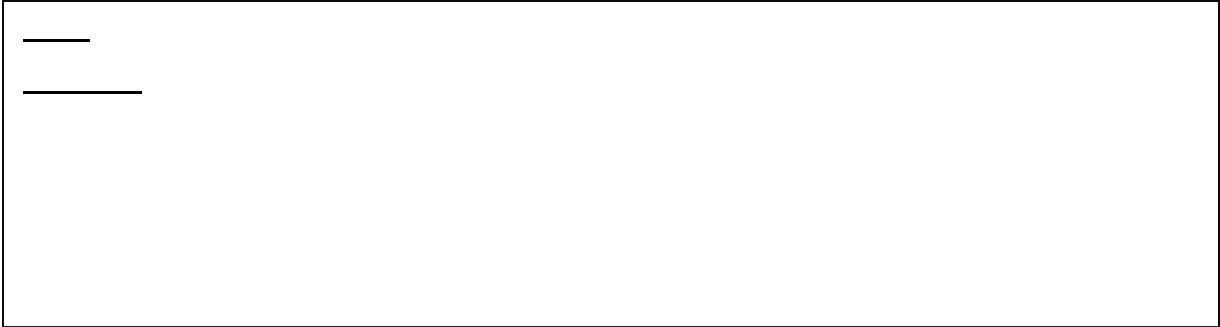
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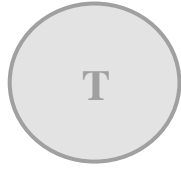
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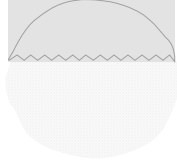
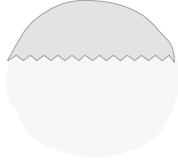
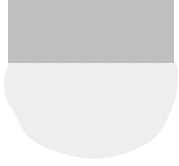
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Annex III: Program Listing – International S&T Cooperation Programs

Program Name	Region	Donor Agency
Capacity Strengthening Programme Grants	Developing Countries & LDCs	Special Programme for Research and Training in Tropical Diseases
International Hydrological Programme (IHP)	IHP Member States	United Nations Educational, Scientific and Cultural Organization
Scholarships abroad		Coordenação de aperfeiçoamento de pessoal de nível superior
Abdou-Salam Ouédraogo Fellowship Programme	Africa	United Nations Educational, Scientific and Cultural Organization
Abdou-Salam Ouédraogo Fellowship	Africa	International Plant Genetic Resources Institute

Program Name	Region	Donor Agency
Beca-Credito Nacional y al Extranjero Beginning of Career for Young Scientists	Country Specific	Consejo Nacional de Ciencia y Tecnología Fundacion Andes
Biodiversidad de Aysén, Manejo Sustentable de las Áreas Silves	Country Specific	European Commission

Program Name	Region	Donor Agency
Chemical Research and Environmental Needs (CREN)	Commonwealth Countries	Commonwealth Science Council
Children's Participation in Integrated Production and Pest Management (IPPM)	Asia	World Education
Climate Variability and its Impacts in the Mexican, Central American and Caribbean Regions	Latin America and Caribbean	Inter-American Institute for Global Change Research
Collaborative Research Initiative Grants	Eastern Europe	The Wellcome Trust
Collaborative Research Programme (CRP)	Developing Countries	International Centre for Genetic Engineering and Biotechnology
Collaborative Research Support Programs (CRSPs) - Bean/Cowpea	Developing Countries	United States Agency for International Development
Collaborative Research Support Programs (CRSPs) - Global Livestock	Developing Countries	United States Agency for International Development
Collaborative Research Support Programs (CRSPs) - Integrated Pest Management	Developing Countries	United States Agency for International Development
Collaborative Research Support Programs (CRSPs) - International Sorghum and Millet	Developing Countries	United States Agency for International Development
Collaborative Research Support Programs (CRSPs) - Peanut	Developing Countries	United States Agency for International Development
Collaborative Research Support Programs (CRSPs) - Pond Dynamics	Developing Countries	United States Agency for International Development
Collaborative Research Support Programs (CRSPs) - Soil Management	Developing Countries	United States Agency for International Development
Collaborative Research Support Programs (CRSPs) - Sustainable	Developing Countries	United States Agency for International Development

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Program Name	Region	Donor Agency
CSIR/TWAS Fellowship for Postdoctoral Research	Developing Countries & LDCs	Third World Academy of Sciences
CSIR/TWAS Fellowship for Postgraduate Studies	Developing Countries & LDCs	Third World Academy of Sciences
DAAD In-Country and (African) Third-Country Scholarships	Africa	International Centre of Insect Physiology and Ecology
Dam Safety Management and Risk Assessment	Asia	Canadian International Development Agency
Danish Environmental Assistance to Eastern Europe (Dancee)		Danish Environmental Protection Agency
Development Consultancy Services for	Developing Countries	

Program Name**Region****Donor Agency**


Extrabudgetary Programme on the Safety of

Asia

International Atomic Energy Agency

Program Name	Region	Donor Agency
HELP Hydrology for the Environment, Life and Policy	IHP Member States	United Nations Educational, Scientific and Cultural Organization
HRD Program for Least Developed Countries in the ASEAN Region	Asia	Asia-Oceania Network of Biological Sciences
Human Resource Development for a Scientific and Technological Capability in Insect Science in Africa	Africa	International Centre of Insect Physiology and Ecology
Huygens Pr		

Program Name	Region	Donor Agency
Integrated Management of Late Blight	Worldwide	International Potato Center/Centro Internacional de la Papa
International Collaborative Research Grants	Developing Countries	The Wellcome Trust
International Joint Research Grant Program	Worldwide	New Energy and Industrial Technology Development Organization
International Research Development Awards	Eastern Europe	The Wellcome Trust
International Senior Research Fellowships -	Africa	

Program Name	Region	Donor Agency
Library/archive support	Africa	Nile Basin Research Programme
Linking Research and Stakeholder Organizations in a Changing Context	Developing Countries	International Service for National Agricultural Research
 Livestock Production Programme (LPP)	Developing Countries	Department for International Development
Luis Donaldo Colosio Fellowship	Country	

Program Name	Region	Donor Agency
Programa @Lis		Organización de Estados Iberoamericanos para la Educación la Ciencia y la Cultura
Programa Becas		Consejo Nacional de Investigaciones Científicas y Técnicas
Programa de Apoio a Núcleos de Excelência (PRONEX)		Conselho Nacional de Desenvolvimento Científico e Tecnológico
Programa de Cooperacion Regional Programa de Fomento à Pós-Graduação (PROF)	Latin America and Caribbean	Academia de Ciencias de America Latina Coordenação de aperfeiçoamento de pessoal de nível superior
Programa de Formación de Jóvenes Investigadores		Instituto Colombiano para el desarrollo de la ciencia y la tecnología
Programa de Innovación y Desarrollo Tecnológico		Instituto Colombiano para el desarrollo de la ciencia y la tecnología

Program Name	Region	Donor Agency
Regional Networking in Science	Latin America and Caribbean	Committee on Science and Technology in Developing Countries
Regional Networks	Worldwide	Global Change System for Analysis Research and Training
Regional Research Networks		Association for Strengthening Agricultural Research in Eastern and Central Africa
Regional Support Programme		Association for Strengthening Agricultural Research in Eastern and Central Africa
Registro Conacyt de Consultores Tecnologicos (RCCT)	Developing Countries	Consejo Nacional de Ciencia y Tecnología
Research and Development	Developing Countries & LDCs	International Institute for Infrastructural Hydraulic and Environmental Engineering
Research and development (R&D)-driven capability strengthening grant (RCS-Plus)	Developing Countries & LDCs	Special Programme for Research and Training in Tropical Diseases
Research and Education grants program		Fundacion Antorchas
Research and Education strengthening in Regional Universities		Fundacion Andes
Research Development Awards in Tropical Medicine	Developing Countries	The Wellcome Trust
Research Grants Program	Africa	African Forum for Children's Literacy in Science and Technology
Research Grants Program	Latin America and Caribbean	Pan American Health Organization
Research Key phrase: Competence building on Nile-related issues	Africa	Nile Basin Research Programme
Research network for pearl millet in West and Central Africa / ROCAFREMI	Sub-Saharan Africa	International Crops Research Institute for the Semi-Arid Tropics
Research Training Networks	Developing Countries	Community Research and Development Information Service
Resource Centre on Urban Agriculture and Forestry (RUAF)	Worldwide	ETC International
Root and Tuber Improvement Project	Africa	International Fund for Agricultural Development
RTO Capability Building - Improving Technological Services to the SME Sector	Africa	World Association of Industrial and Technological Research Organizations
Ruedas de Negociacion	Country Specific	Consejo Nacional para Investigaciones Cientificas y Tecnologicas de Costa Rica
Rural Electrification Expansion Project	Asia	

Program Name**Region****Donor Agency**

Science and Technology Programmes

North Africa and Middle East

Committee on Science and Technological
CooperationScience and Technology Reform Support
Project

Latin America and Caribbean

World Bank

Science, Technology and Innovation Policy

Developing Countries

United Nations Conference on Trade and

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Program Name	Region	Donor Agency
The Fisheries Development Project in Uganda		The African Development Bank
The ITU Development Bureau (BDT)	Developing Countries	International Telecommunication Union
The Joint Financing Programme for Cooperation in Higher Education (MHO)	Developing Countries	Netherlands Organization for International Cooperation in Higher Education
The Latin America and the Caribbean Project		American Association for the Advancement of Science
The Millennium Science Initiative Project for Venezuela	Latin America and Caribbean	World Bank
The Netherlands Foundation for the Advancement of Tropical Research (WOTRO) Phd Fellowships	Developing Countries	International Livestock Research Institute
The Netherlands Periodicals Project (NPP)	Developing Countries	Netherlands Organization for International Cooperation in Higher Education
The Regional Network for Microbiology and Microbial Biotechnology in Southeast Asia	Asia	United Nations Educational, Scientific and Cultural Organization
The Rural Development Institutional Support Project in Guinea-Bissau		The African Development Bank
The Science and Technology for Development Network	Developing Countries	United Nations Conference on Trade and Development
The Transfer of Knowledge Through Expatriate Nationals programme (TOKTEN)	Developing Countries	United Nations Volunteers and United Nations Office for Project Services
TOKTEN Palestinian Programme	Country Specific	United Nations Volunteers and United Nations Office for Project Services
Training and Institution-Building	Developing Countries	Foundation for Cooperation of International Education Institutes and Wageningen University
Training and Supervision of Medical	Worldwide	Medecins sans Frontieres (D)

Program Name	Region	Donor Agency
TWAS Prizes for Young Scientists in Developing Countries	Developing Countries	Third World Academy of Sciences
TWAS Research Grants Programme	Developing Countries & LDCs	Third World Academy of Sciences
TWAS/UNESCO Associateship Scheme	Developing Countries	Third World Academy of Sciences
UNESCO/ICSU/TWAS Short-term Fellowship Programme in Basic Sciences	Developing Countries	United Nations Educational, Scientific and Cultural Organization
Unidades de Desarrollo Científico y		
