

## PARTNERSHIP INITIATIVES INFORMATION SHEET

### Name of the Partnership/Initiative

Sustainable Biotechnology and Agriculture in Africa

**Expected date of initiation:** 2003

**Expected date of completion:** 2006

### Partners Involved:

Governments: Italy (DGCS), Algeria, Cameroon, Congo, Côte d'Ivoire, Democratic Republic of the Congo, Egypt, Ghana, Kenya, Mauritania, Morocco, Nigeria, Senegal, South Africa, Sudan, Tanzania and Tunisia (Ministry of Agriculture, Ministry of Environment, Ministry of Science and Technology, Ministry of Foreign Affairs)

Intergovernmental organizations: ICGEB, UNEP, FAO, UNIDO, CBD Secretariat, CGIAR, OECD

### Major groups:

- Institut des Sciences de la Nature, University of Constantine, Algeria;
- African Agency on Biotechnology, Algiers, Algeria;
- University of Buea, Buea, Cameroon;
- Egyptian Academy of Scientific Research, Cairo, Egypt;
- Agricultural Genetic Engineering Research Institute (AGERI), Giza, Egypt;
- Biotechnology and Nuclear Agriculture Research Institute (BNARI), Accra, Ghana;
- Kenya Agricultural Research Institute (KARI), Nairobi, Kenya;
- Institut National de la Recherche Agronomique (INRA), Marrakech, Morocco;
- National Centre for Genetic Resources and Biotechnology (NACGRAB), Ibadan, Nigeria;
- Institut Sénégalais de Recherches Agricoles (ISRA), Dakar, Senegal;
- South African Agricultural Research Council, Cape Town, South Africa;
- Commission for Biotechnology and Genetic Engineering, Khartoum, Sudan;
- Tanzania Commission for Science and Technology (COST), Dar es Salaam, United Republic of Tanzania;
- Centre of Biotechnology, University of Sfax, Sfax, Tunisia.

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### **Main objectives of the Partnership/Initiative**

The sustainable use of biotechnology in agriculture may prove of the greatest relevance for developing countries in general and for African countries in particular. This has been also identified at the recent World Food Summit, organised in June 2002 by the Food and Agriculture Organisation of the United Nations (FAO), which has called on the FAO, in conjunction with the CGIAR and other international research institutes, to advance agricultural research and research into new technologies, including biotechnology. The Summit also indicated that the introduction of tried and tested new technologies including biotechnology should be accomplished in a safe manner and adapted to local conditions to help improve agricultural productivity in developing countries.

Since 1987, the International Centre for Genetic Engineering and Biotechnology (ICGEB), an autonomous intergovernmental organisation that has been originally established by UNIDO, operates in close contact with the UN Common System as a centre of excellence for research and training in genetic engineering and biotechnology, with special attention to the needs of the developing countries. The Instruments of Action of the Centre include research programmes, implemented in its two laboratories of Trieste, Italy, and New Delhi, India, training programmes, collaborative research with its Affiliated Centres located in Member States, as well as scientific and institutional assistance on themes of major impact related to biotechnology.

Among its research activities, many are focused on crop improvement by the use of molecular biology approaches targeted, *inter alia*, to:

- stress resistance (salinity, drought, ect);
- insect resistance;
- improvement of the nutritional value of crop products;
- development of new techniques for genetic transformation;
- high level expression of proteins useful in agriculture and industry.

As the development of these new technologies and their application to agriculture arise several concerns, since 1997 the ICGEB operates a “Biosafety Unit”, aimed at providing its Member States with specific activities of their interest in the filed of biosafety, with special emphasis on the dissemination of information, the development of training programmes and international cooperation. ICGEB has developed two major informatic tools, accessible on line thorough Internet: a scientific, bibliographic, searchable database on biosafety studies<sup>1</sup>, updated on a monthly basis and presently containing more than 3,000 scientific articles (full references and

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<sup>1</sup> <http://www.icgeb.org/biosafety/bsfdata1.htm>

abstracts), that have been published in international, peer-reviewed, scientific journals since 1990; the Risk Assessment Searching Mechanism (“RASM”)<sup>2</sup>, a searchable index elaborated in response to the recommendations made by the Intergovernmental Committee for the Cartagena Protocol for the set-up of mechanisms to access the necessary information to facilitate decision-making, in accordance with article 10 of the Cartagena Protocol. RASM intends to provide access to all the available official documents on risk assessment related to genetically modified crops in different countries and is complementary to, and inter-linked with, other existing databases.

In addition to the informatic tools mentioned above and to its training activities (see below), the ICGEB Biosafety Unit will soon be in a position to provide a new facility for training and research in risk assessment and management of the environmental release of GMOs, through the development of research programmes aimed at the investigation of those grey areas in scientific knowledge related to the safe use of agricultural products derived from biotechnology.

The initiative therefore aims at ensuring a thorough involvement of African countries, through their competent ministries, offices and research institutions, in the activities implemented by the Biosafety Unit, on a basis similar to the one that has allowed the implementation of a series of activities that are being already successfully implemented with the Italian Ministry for the Environment. The objectives mentioned below will be reached through the implementation of programmes that will have to be complementary to the projects being implemented by other intergovernmental organisations, and in particular those mentioned above which are part, together with the ICGEB, of the Inter-Agency Network for Biosafety (IANB).

The initiative is also in line with the “Cape Town Declaration” and the “Cape Town Initiative”, endorsed by the Governments of South Africa and Italy, in March 2002, during the State Visit to South Africa of the President of the Italian Republic, which identifies the essential role of science and technology for sustainable development.

The initiative will therefore pursue the following objectives:

- protection and exploitation of genetic resources;
- technical cooperation in the framework of the Convention on Biological Diversity;
- identification of research priorities (definition of the priority traits for viable crops: improvement of the nutritional value, resistance to insects, pesticides, high salinity, other stresses);
- testing facilities and field trials (containment, availability of land);
- genetically modified organisms: procedures for risk assessment and management, national legislation(s) and public information;
- international instruments: the Cartagena Protocol, the Biosafety Clearing House, Risk Assessment Searching Mechanism.

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<sup>2</sup> <http://www.icgeb.org/biosafety/rasm.html>

**Please also provide a brief description of the relationship of the Partnership/Initiative with the objectives of Agenda 21 as well as relevant goals and objectives of the United Nation Millennium Declaration:**

The initiative meets several of the objectives set by Chapter 15 of Agenda 21 “Conservation of Biological Diversity”, through activities aimed at improving the conservation of biological diversity and the sustainable use of biological resources, as well as to support the Convention on Biological Diversity. The initiative is also in full compliance of Chapter 16 of Agenda 21 “Environmentally Sound Management of Biotechnology” and represents a concrete implementation of its five Programme Areas, namely:

- a) increasing the availability of food, feed and renewable raw materials;
- b) improving human health;
- c) enhancing protection of the environment;
- d) enhancing safety and developing international mechanisms for co-operation;
- e) establishing enabling mechanisms for the development of biotechnology and for the environmentally sound applications.

The initiative contributes to the achievement of the Millennium Goals:

- to halve, by the year 2015, the proportion of the world’s people who suffer from hunger;
- to press the full implementation of the Convention on Biological diversity
- to take special measures to ensure poverty eradication in Africa, including (...), as well as transfers of technology.

**Expected results**

*Please provide a brief description:*

By the end of the initiative, the following achievements are expected:

- the feasibility study for the establishment of an African Resource and Training Regional Centre for Biosafety and the Protection of Biodiversity;
- the elaboration, for the countries involved, of a strategic plan for the development of environmentally sustainable biotechnologies and their subsequent application to agriculture;
- the identification of new crop varieties that could meet specific requirements (in terms of yield, stress resistance and/or nutritional values) of the countries of the Region
- the strengthening of research institutes located in the countries involved through long-term training programmes and research in collaboration with the ICGEB laboratories;
- a direct participation by the countries involved into the Risk Assessment Searching Mechanism developed by ICGEB, in particular for those countries (i.e. South Africa) that have already scientific data related to the environmental release of genetically modified organisms;
- through the interaction with the UNEP/GEF enabling activities (if and when possible), the full abidance by the countries involved into the Cartagena Protocol on Biosafety.

**Specific targets of the Partnership/Initiative and timeframe for their achievement:**

Tentative timetable:

<u>Activity</u>	<u>Timing (months)</u>
Preparatory phase	current
Identification of national counterparts	1 – 3
First Meeting of the Steering Committee	4
Preparation of work-plans at national/regional levels	5 – 6
Implementation of research and training programmes	7 – 24
Participation in the RASM	7 – 30
First Regional Training Course on Risk Assessment and Management and Conservation of Biological Diversity	12
Development of criteria for full participation in the Cartagena Protocol (in conjunction with GEF/UNEP)	12 – 24
Second Meeting of the Steering Committee	18
Elaboration of National Strategic Plans for the development of Biotechnologies and their Sustainable use in Agriculture	18 – 30
Second Regional Training Course on Risk Assessment and Management And Conservation of Biological Diversity	24
Elaboration of a feasibility study for the establishment of an African Centre for the Protection of Biodiversity	24 – 36
Third Regional Training Course on Risk Assessment and Management and Conservation of Biological Diversity	36
Final Meeting of the Steering Committee:	
Adoption of guidelines and future Strategies	36

**Coordination and Implementation mechanism**

*Please provide a brief description of expected coordination/implementation mechanism of the Partnership/Initiative:*

A Steering Committee, composed by representatives of the countries involved, will be responsible for the overall management of the initiative. The ICGEB Biosafety Officer will be the secretary of the Steering Committee and will co—ordinate the meetings and relevant decisions. The Director, Administration and External relations of ICGEB will be in charge of the implementation of the project and will have the responsibility of the financial transactions performed to that end.

**Arrangements for funding**

*Please describe available and/or expected sources of funding for the implementation of the Partnership/Initiative (e.g. donor government(s); international organization(s)/financial institution(s); foundation(s); private sector; other major groups, etc.):*

Italy (DGCS) will contribute with a specific grant of Euro 1.000.000 (expected) for the implementation of this Partnership initiative. Governments of the involved countries will participate through local expenditures and “in kind” contributions. Additional funds (also for a possible extension of the modular training programmes as well as to provide similar activities to other African countries) are also sought from other Governments, international organizations, funding agencies, etc.

**Arrangements for capacity building and technology transfer**

*Please include information if the Partnership/Initiative provides for training, informational support, institutional strengthening and/or other capacity building measures:*

Training and technology transfer in biotechnology are among the main objectives of the ICGEB: since 1991, it organises annual biosafety workshops, addressed to scientists, officers of governmental agencies and/or designated experts working in risk assessment of GMOs at the official level (governments, scientific institutions, private sector, etc.). ICGEB is also actively participating in the Steering Committee of the UNEP/GEF project aimed at building capacities in the developing countries to develop National Biosafety Frameworks, and is collaborating in the organisation of several regional workshops on risk assessment, thus providing the participants with an overview of the current research in biosafety and different risk assessment approaches used for the environmental release of GMOs.

In the implementation of the initiative, ICGEB intends to organise three Regional Training Courses on Risk Assessment and Management and Conservation of Biodiversity, while at least 9 post-doctoral fellowships will be earmarked for scientists originating from the Region, to participate in the research activities implemented either in the Plant Molecular Biology laboratory, at the New Delhi Component, or in the Biosafety Outstation of the Trieste Component.

**Please also provide here a brief description of expected arrangements for technology transfer (if applicable)**

Results of the research performed in the national institutes will be transferred, on a favourable basis, to other countries participating in the initiative. ICGEB has set-up a mechanism for the transfer of proprietary and non-proprietary technologies, which includes specific technology-related training programmes, that can be easily utilized in the present context, should the need or the occasion arise.

**Links of Partnership/Initiative with on-going sustainable development activities at the international and/or regional level (if any)**

*Please provide a brief description:*

Specific links are already in place with the GEF/UNEP project aimed at building capacities in the developing countries to develop National Biosafety Frameworks. Similar links will be necessary with other initiatives, in particular related to training, being implemented by other international organisations (especially FAO and UNIDO). Specific collaboration for research activities will have to be established with the international research centres belonging to the CGIAR.

**Monitoring Arrangements**

*Please describe expected arrangements for monitoring of progress in the implementation of Partnerships/Initiative after it will be launched at the WSSD:*

*(e.g. frequency/modalities of preparation of progress reports; electronic updates, news-letters, etc)*

On the basis of the input received from the Steering Committee, the ICGEB Secretariat will prepare a detailed work plan that will include specific performance targets and indicators of achievements. It will provide the representative of each country participating in the Steering

Committee with a general (regional) report and a specific (national) report after 12, 24 and 36 months. A dedicated web-site, containing the major outputs of the initiative could be posted in association with the ICGEB web-site, while the results of the initiative, in addition to be forwarded to the participating countries, could become the subject of a specific publication.

The feasibility study for establishment of an African Centre for the Protection of Biodiversity could become a formal document to be presented to donor Governments and agencies alike, as well as to become the starting point for the adoption of a specific international legal instrument.

**Other relevant information:**

Web-site: <http://www.icgeb.org/biosafety>

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