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Item 7 of the Draft Provisional Agenda

COMMISSION ON GENETIC RESOURCES FOR FOOD AND AGRICULTURE

Ninth Regular Session

Rome, 14-18 October 2002

POTENTIAL IMPACTS OF GENETIC USE RESTRICTION TECHNOLOGIES (GURTs) ON AGRICULTURAL BIODIVERSITY AND AGRICULTURAL PRODUCTION SYSTEMS: FOLLOW-UP TO THE FIRST SESSION OF THE INTER-GOVERNMENTAL TECHNICAL WORKING GROUP ON PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE, AND THE SIXTH CONFERENCE OF THE PARTIES TO THE CONVENTION ON BIOLOGICAL DIVERSITY

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NB: The technical study on GURTs referred to in the present document is contained in document CGRFA-9/02/17.

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1. INTRODUCTION

1. In 1999, the Fifteenth Session of the FAO Committee on Agriculture noted that biotechnology in general offered considerable potential and opportunity, also presented risks, and was an area where there was a growing gap between developing and developed countries. The Committee recommended that FAO develop a strategic approach to biotechnology and a coordinated cross-sectorial programme. It also recommended that FAO undertake activities in the various areas of its mandate — including information exchange, capacity building and policy advice to Members — which were important in helping developing countries realize the potential benefits of biotechnology, while managing risks. In this context, it reported to the Hundred and Sixteenth Session of the FAO Council that "the 'terminator technology'[1] was mentioned as an example of a biotechnology that may have wide implications for agriculture, and that needed careful attention. The Committee stressed FAO's role in providing a forum for countries to monitor food and agriculture biotechnologies".[2]

2. The independent Panel of Eminent Experts on Ethics in Food and Agriculture, established by the Director-General to advise the Organization and raise public awareness of ethical considerations, discussed GURTs at its first session in September 2000, and unanimously stated that "'terminator seeds' are generally unethical as it is deemed unacceptable to market seeds whose offspring a farmer cannot use again because the seeds do not germinate". It added that "there are situations were the assessment can be different, however. Where the concern is with possible outcrossing of crops, for example, genetically modified organisms that could damage wild plant populations, GURTs might be justified". [3]

3. The potential impacts of these technologies and related policy issues have also been discussed elsewhere, including in the Conference of Parties to the Convention on Biological Diversity (CBD). At the request of the Conference of the Parties, a study on GURTs was prepared, with inputs from FAO.[4] This was reviewed by the Convention's Subsidiary Body on Scientific, Technical and Technological Advice in 1999. At its Fifth Meeting, in 2000, in decision V/5, the Conference of the Parties recommended that, in the current absence of reliable data on GURTs, without which there was an inadequate basis on which to assess potential risks, "products incorporating such technologies should not be approved by Parties for field testing until appropriate scientific data can justify such testing, and for commercial use until appropriate, authorised and strictly controlled scientific assessments with regard to, *inter alia*, their ecological

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1 During the consideration by the Inter-governmental Technical Working Group of the technical study on GURTs now in document CGRFA-9/02/17 Annex, it was requested that it be noted that "terminator technology" should be considered a commercial term, that the inventors term it "Technology Protection System", and that "GURT" is an acceptable synonym.

2 CL 116/9 para. 44 to 53.

3 Report of the Panel of Eminent Experts on Ethics in Food and Agriculture, FAO, Rome, 2001.

4 Jefferson, R.A., Byth, D., Correa, C., Otero, G., & Qualset, C. *Genetic Use Restriction Technologies, Technical Assessment of the Set of New Technologies which Sterilize or Reduce the Agronomic Value of Second Generation Seed, as Exemplified by US Patent No 5,723,765* in UNEP/CBD/SBSTTA/4/9/Rev.1.

and socio-economic impacts and any adverse effects for biological diversity, food security and human health have been carried out in a transparent manner and the conditions for their safe and beneficial use validated". [5]

4. The Conference of the Parties, "being cognizant of the work being undertaken and the expertise available in different forums, in particular, the Food and Agriculture Organization of the United Nations and its Commission on Genetic Resources for Food and Agriculture, invites the Food and Agriculture Organization of the United Nations, in close collaboration with the United Nations Educational, Scientific and Cultural Organization, the United Nations Environment Programme and other member organizations of the Ecosystem Conservation Group, and other competent organizations and research bodies, to further study the potential implications of genetic use restriction technologies for the conservation and sustainable use of agricultural biological diversity and the range of agricultural production systems in different countries, and identify relevant policy questions and socio-economic issues that may need to be addressed"; and "invites the Food and Agriculture Organization of the United Nations and its Commission on Genetic Resources for Food and Agriculture and other competent organizations to inform the Conference of the Parties at its sixth meeting of their initiatives in this area". [6]

5. The technical study in document CGRFA-9/02/17 Annex responds to this request. An outline was made available to the second meeting of the Convention's Liaison Group on Agricultural Biodiversity, in January 2001, and comments made are reflected in the final outline. A first draft was submitted in April 2001 to peer review by independent experts in relevant disciplines, including members of the Ecosystem Conservation Group, and a revised draft was sent to a wide range of stakeholders in May 2001. The document takes into account the comments received.[7]

6. GURTs technology has been most studied in the context of crops. Document CGRFA-9/02/17 Annex therefore focuses on GURTs within cropping systems, with reference to aquatic ecosystems, trees and livestock where possible. It should be noted that, whereas qualitative predictions on impacts can sometimes be made, data for a more quantitative analysis are often lacking.

7. Document CGRFA-9/02/17 Annex discusses various technical aspects of GURTs, the potential impacts of these technologies on agricultural biodiversity, biosecurity[8] implications, impacts at farming system level (especially seed systems) as well as economic implications, and identifies policy issues, which governments may wish to consider.

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5 UNEP/CBD/COP/5/23 - Decision V/5, page 88, para. 20 to 21.para. 23, available on the CBD webpage at http://www.biodiv.org/decisions/

6 UNEP/CBD/COP/5/23 - Decision V/5, page 88, para. 20 to 21, available on the CBD webpage at http://www.biodiv.org/decisions/.

7 FAO prepared this document based on a background study undertaken by Plant Research International, on a consultancy basis. It also consulted all the members of the Ecosystem Conservation Group (IUCN, UNDP, UNEP, UNESCO, the World Bank, WWF and WRI); experts who undertook a peer review; and invited comments from stakeholders (Cambia, CBD Secretariat, Centro Internazionale Crocevia, Eubios Ethics Institute, FIS/ASSINSEL, GFAR, GRAIN, IFAP, International Agri-Food Network, IATP, IPGRI, ITDG, NGO CGIAR Committee, NGO SAFS Caucus Quaker UN Office, RAFI, Solagral, SIDA, UPOV, WIPO), not all of whom commented.

8 During consideration by the Working Group, one Member requested that the term, "biosecurity", be deleted wherever it occurred, noting that, in its national usage, the term referred to the "proper management of toxic or otherwise dangerous reagents, microbial cultures, *etc*". Within FAO, the term originated from the FAO Strategic Framework, which emphasized multi-disciplinary approaches by the Organization. In 2001, the FAO Committee on Agriculture considered document COAG/01/8, *Biosecurity in food and agriculture.* Again in 2001, biosecurity was identifies as one of 16 Priority Areas for Inter-disciplinary Action (PAIAs), and the Biosecurity PAIA was included in FAO's Medium Term Plan 2002-2007, to address Corporate Strategy B, which aims at *Promoting, developing and reinforcing policy and regulatory frameworks for food, agriculture, fisheries and forestry*. (A report on the activities of the Biosecurity PAIA is available to the Commission in document CGRFA-9/02/14.3.) The term is therefore retained in document CGRFA-9/02/17 Annex without prejudice to any possible future decisions regarding its continued use.

2. CONSIDERATION OF THE STUDY ON GURTs BY THE INTER-GOVERNMENTAL TECHNICAL WORKING GROUP, AND DISCUSSIONS REGARDING GURTs AT THE SIXTH CONFERENCE OF THE PARTIES TO THE CONVENTION ON BIOLOGICAL DIVERSITY

8. The technical study in document CGRFA-9/02/17 was reviewed by the Commission's Inter-governmental Technical Working Group at its First Session, in July 2001. The Working Group:

> acknowledged the overall accuracy of the technical section of the report on GURTs and that the analysis of potential impacts needs to be well balanced. Detailed comments on the document, stressing both the potential advantages and disadvantages of GURTs were provided by many delegates with the aim of improving the report's balance. Discussion was held on the flow of material in further breeding and of seed-saving practices used by farmers in traditional low-seed replacement systems and the consequences of this for the diffusion of improved varieties by farmers. Some members highlighted the potential for encouraging innovation and increased investment by the private sector. The Working Group noted that food security aspects should also be introduced in the document. The Working Group also noted that the report should make it clear that definitive analyses and conclusions on possible impacts required more information and such information might become available if and when products incorporating GURTs are submitted to regulatory bodies prior to commercialization.
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> Some members of the Working Group supported the step-by-step and case-by-case approach, which was consistent with the regulatory frameworks in place in many countries. The need for capacity-building on biosafety at national level was highlighted by countries, as essential in following this approach. Some also suggested that this approach be complemented by a more strategic assessment, taking into account the precautionary approach, in view of potential cumulative effects. Some members were of the opinion that the use of GURTs was not justified, whereas some others highlighted scenarios where the use of GURTs might be advantageous.[9]

9. The Working Group therefore agreed that the study should be modified by FAO and submitted for the consideration of the Commission at its Ninth Regular Session. (The technical study in document CGRFA-9/02/17 Annex has accordingly been modified in the light of the comments made during the session of the Working Group, some of which were subsequently submitted in writing).[10] The results of the Commission's consideration would then be submitted to the Convention on Biological Diversity. In the event, the Ninth Regular Session of the Commission was not held in 2001as planned, due to the priority that the Commission had given to completing the negotiations that led to the adoption of the International Treaty on Plant Genetic Resources for Food and Agriculture by the Thirty-first Session of the FAO, on 3 November 2001.

10. A report was accordingly sent to the Sixth Meeting of the Conference of the Parties to the Convention on Biological Diversity (The Hague, The Netherlands, 7-19 April 2002), stating that the Commission would not consider the question of GURTs until this, its Ninth Regular Session.[11] The Conference of the Parties continued its own consideration of GURTs, and, by decision VI/5, *Agricultural biological diversity,* established an *ad hoc* technical expert group on GURTs, to further analyse their potential impacts on smallholder farmers, indigenous and local

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[9] CGRFA-9/02/5, Report of the First Session of the Intergovernmental Technical Working Group on Plant Genetic Resources for Food and Agriculture, para. 34-37.

[10] It must, however, be noted, as the report of the Working Group reflects, that there was a wide and often conflicting range rang of opinions. Moreover, Members commented on the document in very varying degrees of detail, which the modifications to the technical study in document CGRFA-9/02/17 Annex reflect.

[11] UNEP/CBD/COP/6/Inf. 1/Rev.1.

communities and on Farmers' Rights. This group would report to both to the *Ad Hoc* Open-ended Working Group on Article 8(j) and Related Provisions and the Subsidiary Body on Scientific, Technical and Technological Advice prior to the seventh meeting of the Conference of the Parties. The decision:

> Also invites the Food and Agriculture Organization of the United Nations to study the potential impacts of the applications of genetic use restriction technologies in the framework of the International Treaty on Plant Genetic Resources for Food and Agriculture, and to consider genetic use restriction technologies in the further development of the *Code of Conduct on Biotechnology as it Relates to Genetic Resources for Food and Agriculture*.

It requests the Executive Secretary of the Convention on Biological Diversity:

> To invite the Food and Agriculture Organization of the United Nations, in collaboration with other organizations to investigate the potential impacts of the applications of genetic use restriction technologies in forestry, livestock, aquatic and other ecosystems, and to take into account the findings of the these organisations in the development of the relevant programmes of work.

3. GUIDANCE REQUESTED FROM THE COMMISSION

11. The Commission is invited to provide guidance as to:

(i) how to transmit the technical study contained in document CGRFA-9/02/17 Annex to the Conference of the Parties of the Convention on Biological Diversity, in response to the invitation of its Fifth Meeting (see para. 4);

(ii) how to respond to the new invitations from the Conference of the Parties at its Sixth Meeting (see para. 10);

(iii) what further work it might wish FAO to undertake on GURTs, and their possible effects on food and agriculture, and food security.