

# Environmentally Sound Management of Biotechnology Commitments

## Agenda 21: Chapter 16 and UN Commission on Sustainable Development

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### 1. Stakeholders: Governments

#### 1.1 Increasing the availability of food, feed and renewable raw materials

##### 1.1.1 Finance and cost evaluation

Source	Recommendation	Target Group	Target Date	Reference
Agenda 21 Art 16.8	How much has the government contributed to the \$5 billion estimated average total annual cost of implementing the activities for this programme with \$50 million on grant or concessional terms?			
	<p>Has the government decided upon any specific strategies and/or programmes?</p> <p>1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured? 2.) If not: Why not?</p>			

#### 1.2 Improving human health

##### 1.2.1 Finance and cost evaluation

Source	Recommendation	Target Group	Target Date	Reference
Agenda 21 Art 16.17	How much has the government contributed to the \$14 billion estimated average total annual cost of implementing the activities for this programme with \$130 million on grant or concessional terms?			
	<p>Has the government decided upon any specific strategies and/or programmes?</p> <p>1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured? 2.) If not: Why not?</p>			

##### 1.2.2 Means of implementation

###### 1.2.2.1 Human resource development

Source	Recommendation	Target Group	Target Date	Reference
Agenda 21 Art 16.19	Has the government had access to and participated in, the exchange of information and expertise, particularly indigenous or traditional knowledge and related biotechnology?	Indigenous people		
	<p>Has the government created or enhanced endogenous capabilities in developing countries to enable them to participate actively in the process of biotechnology production?</p> <p>Has the training of personnel been undertaken at the following three levels:</p> <p>(a) That of scientists required for basic and product-oriented research?</p> <p>(b) That of health personnel (to be trained in the safe use of new products) and of science managers required for complex intermultidisciplinary research?</p> <p>(c) That of tertiary-level technical workers required for delivery in the field?</p>			

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	<p>1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured?</p> <p>2.) If not: Why not?</p>			
<b>1.3 Enhancing protection of the environment</b>				
<b>1.3.1 Finance and cost evaluation</b>				
<b>Source</b>	<b>Recommendation</b>	<b>Target Group</b>	<b>Target Date</b>	<b>Reference</b>
Agenda 21 Art 16.26	<p>How much has the government contributed to the \$1 billion estimated average total annual cost of implementing the activities for this programme with \$10 million on grant or concessional terms?</p> <p>Has the government decided upon any specific strategies and/or programmes?</p>			
	<p>1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured?</p> <p>2.) If not: Why not?</p>			
<b>1.3.2 Means of implementation</b>				
<b>1.3.2.1 Human resource development</b>				
<b>Source</b>	<b>Recommendation</b>	<b>Target Group</b>	<b>Target Date</b>	<b>Reference</b>
Agenda 21 Art 16.27	<p>Has the government increased support for existing training programmes, for example, at the university and technical institute level, as well as the exchange of trained personnel between countries and regions?</p> <p>Have new and additional training programmes also been developed, for example, for technical and support personnel?</p> <p>Has the government improved the level of understanding of biological principles and their policy implications among decision makers in government, financial and other institutions?</p>	<p>Universities and technical schools</p> <p>Decision makers</p>		
	<p>1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured?</p> <p>2.) If not: Why not?</p>			
<b>1.4 Enhancing safety and developing international mechanisms for cooperation</b>				
<b>1.4.1 Finance and cost evaluation</b>				
<b>Source</b>	<b>Recommendation</b>	<b>Target Group</b>	<b>Target Date</b>	<b>Reference</b>
Agenda 21 Art 16.35	<p>How much has the government contributed to the \$2 million (grant and concessional terms) estimated average total annual cost of implementing the activities for this programme?</p> <p>Has the government decided upon any specific strategies and/or programmes?</p>			
	<p>1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured?</p> <p>2.) If not: Why not?</p>			
<b>1.5 Establishing enabling mechanisms for the development and the environmentally sound application of biotechnology</b>				
<b>1.5.1 Finance and cost evaluation</b>				

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Source	Recommendation	Target Group	Target Date	Reference
Agenda 21 Art 16.43	How much has the government contributed to the \$5 million (grant and concessional terms) estimated average total annual cost of implementing the activities for this programme?  Has the government decided upon any specific strategies and/or programmes?			
	<b>1.) If yes: a.) How and When?</b> <b>b.) What was the impact?</b> <b>c.) How was it measured?</b> <b>2.) If not: Why not?</b>			
<b>1.5.2 Means of implementation</b>				
<b>1.5.2.1 Scientific and technological means</b>				
Source	Recommendation	Target Group	Target Date	Reference
Agenda 21 Art 16.44	Has the government organized workshops, symposia, seminars and other exchanges among the scientific community at the regional and global levels, on specific priority themes, making full use of the existing scientific and technological manpower in each country for bringing about such exchanges?	Scientific community		
	<b>1.) If yes: a.) How and When?</b> <b>b.) What was the impact?</b> <b>c.) How was it measured?</b> <b>2.) If not: Why not?</b>			
<b>1.5.2.2 Human resource development</b>				
Source	Recommendation	Target Group	Target Date	Reference
Agenda 21 Art 16.45	Has the government identified personnel development needs and developed additional training programmes at the national, regional and global levels, especially in developing countries?  Have these been supported by increased training at all levels, graduate, postgraduate and post-doctoral, as well as by the training of technicians and support staff, with particular reference to the generation of trained manpower in consultant services, design, engineering and market research? Have training programmes for lecturers training scientists and technologists in advanced research institutions in different countries, throughout the world been developed and have systems giving appropriate rewards been instituted?  Have conditions of service been improved at the national level in developing countries to encourage and nurture trained manpower with a view to retaining that manpower locally?  Has society been informed of the social and cultural impact of the development and application of biotechnology?	Developing countries		
	<b>1.) If yes: a.) How and When?</b> <b>b.) What was the impact?</b> <b>c.) How was it measured?</b> <b>2.) If not: Why not?</b>			
<b>1.5.2.3 Capacity-building</b>				
Source	Recommendation	Target Group	Target Date	Reference
Agenda 21 Art 16.46	Has the government made efforts to ensure that the necessary infrastructure facilities for research, extension, and technology activities are available on a decentralized basis?  Have global and regional collaboration for basic and applied research and development been further advanced and has every effort been made to ensure that existing national facilities are fully utilized?  Have universities, technical schools and local research institutions for the development of biotechnologies and extension services been strengthened, especially in developing countries?	Universities, technical schools, local research institutions  Developing countries		

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	1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured? 2.) If not: Why not?			
<b>1.6 Cooperation of the relevant United Nations bodies and regional, intergovernmental and non-governmental organizations, the private sector and financial institutions, and taking into consideration indigenous people and their communities, as well as social and economic factors</b>				
<b>1.6.1 Benefits-sharing</b>				
<b>Source</b>	<b>Recommendation</b>			
Agenda 21 Art 15.4	Has the government taken appropriate measures for the fair and equitable sharing of benefits derived from research and development and use of biological and genetic resources, including biotechnology, between the sources of those resources and those who use them?			
	1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured? 2.) If not: Why not?			
<b>1.7 Enhancing the potential contribution of the private sector, financial, academic and research institutions, non-governmental organizations and other major groups and implementing the objectives of chapter 16</b>				
<b>1.7.1 Activities</b>				
<b>Source</b>	<b>Recommendation</b>	<b>Target Group</b>	<b>Target Date</b>	<b>Reference</b>
CSD III 157 (a) i.	Has the government increased where appropriate the involvement of business and industry, and financial, academic and research institutions, non-governmental organizations and other major groups in national, regional and international consultations on biotechnology development trends and on impact assessments?	Business and industry, and financial, academic and research institutions, non-governmental organizations and other major groups		
	1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured? 2.) If not: Why not?			
<b>Source</b>	<b>Recommendation</b>	<b>Target Group</b>	<b>Target Date</b>	<b>Reference</b>
CSD III 157 (a) ii.	Has the government encouraged the conducting of case-studies on "best practice" in the environmentally sound and safe development, application and management of biotechnology, and to make the results available, especially to developing countries at national and regional levels?	Developing countries		
	1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured? 2.) If not: Why not?			
<b>Source</b>	<b>Recommendation</b>	<b>Target Group</b>	<b>Target Date</b>	<b>Reference</b>
CSD III 157 (a) iii.	Has the government supported as appropriate the establishment of biotechnology associations, particularly in developing countries, with a view to facilitating the safe commercialisation and application of biotechnology products and processes, in accordance with the provisions of articles 16 and 19 of the Convention on Biological Diversity?	Biotechnology associations		
	1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured? 2.) If not: Why not?			

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Source	Recommendation	Target Group	Target Date	Reference
CSD III 157 (a) iv.	Has the government supported as appropriate the establishment and strengthening of research facilities in universities, research institutes and governments in connection with scientific aspects of biosafety and risk management and assessments?	Universities, research institutes and governments		
	<b>1.) If yes: a.) How and When?</b> <b>b.) What was the impact?</b> <b>c.) How was it measured?</b> <b>2.) If not: Why not?</b>			
Source	Recommendation	Target Group	Target Date	Reference
CSD III 157 (a) v.	Has the government mobilized financial resources from both the public and the private sector for biotechnology research, development and work on safety and for its sustainable use and management, especially in developing countries?	Developing countries		
	<b>1.) If yes: a.) How and When?</b> <b>b.) What was the impact?</b> <b>c.) How was it measured?</b> <b>2.) If not: Why not?</b>			

## **2. Stakeholders: Governments at the appropriate level, with the assistance of international and regional organizations and with the support of non-governmental organizations, the private sector, academic and scientific institutions**

### **2.1 Increasing the availability of food, feed, and renewable raw material**

#### **2.1.1 Activities**

##### **2.1.1.1 Improving decision-making processes (Management-related activities)**

Source	Recommendation	Target Group	Target Date	Reference
Agenda 21 Art 16.4	Has the government (at the appropriate level, with the assistance of international and regional organizations and with the support of non-governmental organizations, the private sector and academic and scientific institutions) improved both plant and animal breeding and micro-organisms through the use of traditional and modern biotechnologies, to enhance sustainable agriculture output to achieve food security, particularly in developing countries, with due regard to the prior identification of desired characteristics before modification, taking into account the needs of farmers, the socio-economic, cultural and environmental impacts of modifications and the need to promote sustainable social and economic development, paying particular attention to how the use of biotechnology will impact on the maintenance of environmental integrity?	Developing countries		
	<b>1.) If yes: a.) How and When?</b> <b>b.) What was the impact?</b> <b>c.) How was it measured?</b> <b>2.) If not: Why not?</b>			
Source	Recommendation	Target Group	Target Date	Reference
Agenda 21 Art 16.5 (a)	Has the government (at the appropriate level, with the assistance of international and regional organizations and with the support of non-governmental organizations, the private sector and academic and scientific institutions) improved productivity, nutritional quality and shelf-life of food and animal feed products, with efforts including work on pre- and post-harvest losses?			
	<b>1.) If yes: a.) How and When?</b> <b>b.) What was the impact?</b> <b>c.) How was it measured?</b> <b>2.) If not: Why not?</b>			
Source	Recommendation	Target Group	Target Date	Reference
Agenda 21 Art 16.5 (b)	Has the government (at the appropriate level, with the assistance of international and regional organizations and with the support of non-governmental organizations, the private sector and academic and scientific institutions) further developed resistance to diseases and pests?			

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	<p>1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured?</p> <p>2.) If not: Why not?</p>			
<b>Source</b>	<b>Recommendation</b>	<b>Target Group</b>	<b>Target Date</b>	<b>Reference</b>
Agenda 21 Art 16.5 (c)	Has the government (at the appropriate level, with the assistance of international and regional organizations and with the support of non-governmental organizations, the private sector and academic and scientific institutions) developed plant cultivars tolerant and/or resistant to stress from factors such as pests and diseases and from abiotic causes?			
	<p>1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured?</p> <p>2.) If not: Why not?</p>			
<b>Source</b>	<b>Recommendation</b>	<b>Target Group</b>	<b>Target Date</b>	<b>Reference</b>
Agenda 21 Art 16.5 (d)	Has the government (at the appropriate level, with the assistance of international and regional organizations and with the support of non-governmental organizations, the private sector and academic and scientific institutions) promoted the use of underutilized crops of possible future importance for human nutrition and industrial supply of raw materials?			
	<p>1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured?</p> <p>2.) If not: Why not?</p>			
<b>Source</b>	<b>Recommendation</b>	<b>Target Group</b>	<b>Target Date</b>	<b>Reference</b>
Agenda 21 Art 16.5 (e)	Has the government (at the appropriate level, with the assistance of international and regional organizations and with the support of non-governmental organizations, the private sector and academic and scientific institutions) increased the efficiency of symbiotic processes that assist sustainable agricultural production?			
	<p>1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured?</p> <p>2.) If not: Why not?</p>			
<b>Source</b>	<b>Recommendation</b>	<b>Target Group</b>	<b>Target Date</b>	<b>Reference</b>
Agenda 21 Art 16.5 (f)	Has the government (at the appropriate level, with the assistance of international and regional organizations and with the support of non-governmental organizations, the private sector and academic and scientific institutions) facilitated the conservation and safe exchange of plant, animal and microbial germ plasm by applying risk assessment and management procedures, including improved diagnostic techniques for detection of pests and diseases by better methods of rapid propagation?			
	<p>1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured?</p> <p>2.) If not: Why not?</p>			
<b>Source</b>	<b>Recommendation</b>	<b>Target Group</b>	<b>Target Date</b>	<b>Reference</b>
Agenda 21 Art 16.5 (g)	Has the government (at the appropriate level, with the assistance of international and regional organizations and with the support of non-governmental organizations, the private sector and academic and scientific institutions) developed improved diagnostic techniques and vaccines for the prevention and spread of diseases and for rapid assessment of toxins or infectious organisms in products for human use or livestock feed?			
	<p>1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured?</p> <p>2.) If not: Why not?</p>			
<b>Source</b>	<b>Recommendation</b>	<b>Target Group</b>	<b>Target Date</b>	<b>Reference</b>

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Agenda 21 Art 16.5 (h)	Has the government (at the appropriate level, with the assistance of international and regional organizations and with the support of non-governmental organizations, the private sector and academic and scientific institutions), identified more productive strains of fast-growing trees, especially for fuel wood, and developed rapid propagation methods to aid their wider dissemination and use?			
	<b>1.) If yes: a.) How and When?</b> <b>b.) What was the impact?</b> <b>c.) How was it measured?</b> <b>2.) If not: Why not?</b>			
<b>Source</b>	<b>Recommendation</b>	<b>Target Group</b>	<b>Target Date</b>	<b>Reference</b>
Agenda 21 Art 16.5 (i)	Has the government (at the appropriate level, with the assistance of international and regional organizations and with the support of non-governmental organizations, the private sector and academic and scientific institutions) evaluated the use of various biotechnology techniques to improve the yields of fish, algal and other aquatic species?			
	<b>1.) If yes: a.) How and When?</b> <b>b.) What was the impact?</b> <b>c.) How was it measured?</b> <b>2.) If not: Why not?</b>			
<b>Source</b>	<b>Recommendation</b>	<b>Target Group</b>	<b>Target Date</b>	<b>Reference</b>
Agenda 21 Art 16.5 (j)	Has the government (at the appropriate level, with the assistance of international and regional organizations and with the support of non-governmental organizations, the private sector and academic and scientific institutions) promoted sustainable agricultural output by strengthening and broadcasting the capacity and scope of existing research centres to achieve the necessary critical mass through encouragement and monitoring of research into the development of biological products and processes of productive and environmental value that economically and socially feasible, while taking safety considerations into account?			
	<b>1.) If yes: a.) How and When?</b> <b>b.) What was the impact?</b> <b>c.) How was it measured?</b> <b>2.) If not: Why not?</b>			
<b>Source</b>	<b>Recommendation</b>	<b>Target Group</b>	<b>Target Date</b>	<b>Reference</b>
Agenda 21 Art 16.5 (k)	Has the government (at the appropriate level, with the assistance of international and regional organizations and with the support of non-governmental organizations, the private sector and academic and scientific institutions) promoted the integration of appropriate and traditional biotechnologies for the purposes of cultivating genetically modified plants, rearing healthy animals and protecting forest genetic resources?			
	<b>1.) If yes: a.) How and When?</b> <b>b.) What was the impact?</b> <b>c.) How was it measured?</b> <b>2.) If not: Why not?</b>			
<b>Source</b>	<b>Recommendation</b>	<b>Target Group</b>	<b>Target Date</b>	<b>Reference</b>
Agenda 21 Art 16.5 (l)	Has the government (at the appropriate level, with the assistance of international and regional organizations and with the support of non-governmental organizations, the private sector and academic and scientific institutions) developed processes to increase the availability of materials derived from biotechnology for use in food, feed, and renewable raw materials production?			
	<b>1.) If yes: a.) How and When?</b> <b>b.) What was the impact?</b> <b>c.) How was it measured?</b> <b>2.) If not: Why not?</b>			
<b>2.1.1.2 Data and information</b>				
<b>Source</b>	<b>Recommendation</b>	<b>Target Group</b>	<b>Target Date</b>	<b>Reference</b>
Agenda 21 Art 16.6 (a)	Has the government (at the appropriate level, with the assistance of international and regional organizations and with the support of non-governmental organizations, the private sector and academic and scientific institutions) considered the comparative assessments of the potential of the different technologies for food production, together with a system for assessing the possible effects of biotechnologies on international trade in agricultural products?			

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	<p>1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured?</p> <p>2.) If not: Why not?</p>			
<b>Source</b>	<b>Recommendation</b>	<b>Target Group</b>	<b>Target Date</b>	<b>Reference</b>
Agenda 21 Art 16.6 (b)	Has the government (at the appropriate level, with the assistance of international and regional organizations and with the support of non-governmental organizations, the private sector and academic and scientific institutions) examined the implications of the withdrawal of subsidies and the possible use of other economic instruments to reflect the environmental costs associated with the unsustainable use of agrochemicals?			
	<p>1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured?</p> <p>2.) If not: Why not?</p>			
<b>Source</b>	<b>Recommendation</b>	<b>Target Group</b>	<b>Target Date</b>	<b>Reference</b>
Agenda 21 Art. 16.6 (c)	Has the government (at the appropriate level, with the assistance of international and regional organizations and with the support of non-governmental organizations, the private sector and academic and scientific institutions) maintained and developed data banks of information on environmental costs associated with the unsustainable use of agrochemicals?			
	<p>1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured?</p> <p>2.) If not: Why not?</p>			
<b>Source</b>	<b>Recommendation</b>	<b>Target Group</b>	<b>Target Date</b>	<b>Reference</b>
Agenda 21 Art 16.6 (d)	Has the government (at the appropriate level, with the assistance of international and regional organizations and with the support of non-governmental organizations, the private sector and academic and scientific institutions) accelerated technology acquisition, transferred and adapted by developing countries to support national activities that promote food security?			
	<p>1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured?</p> <p>2.) If not: Why not?</p>			
<b>2.2 Enhancing protection of the environment</b>				
<b>2.2.1 Activities</b>				
<b>2.2.1.1 Management-related activities</b>				
<b>Source</b>	<b>Recommendation</b>	<b>Target Group</b>	<b>Target Date</b>	<b>Reference</b>
Agenda 21 Art 16.23 (a)	Has the government (at the appropriate level, with the support of relevant international and regional organizations, the private-sector, non-governmental organizations and academic and scientific institutions) developed environmentally sound alternatives and improvements for environmentally damaging production processes?			
	<p>1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured?</p> <p>2.) If not: Why not?</p>			
<b>Source</b>	<b>Recommendation</b>	<b>Target Group</b>	<b>Target Date</b>	<b>Reference</b>
Agenda 21 Art 16.23 (b)	Has the government (at the appropriate level, with the support of relevant international and regional organizations, the private-sector, non-governmental organizations and academic and scientific institutions) developed applications to minimize the requirement for unsustainable synthetic chemical input and to maximize the use of environmentally appropriate products, including natural products?			

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Source	Recommendation	Target Group	Target Date	Reference
Agenda 21 Art 16.23 (c)	Has the government (at the appropriate level, with the support of relevant international and regional organizations, the private-sector, non-governmental organizations and academic and scientific institutions) developed processes to reduce waste generation, treat waste before disposal and make use of biodegradable materials?			
	<p>1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured?</p> <p>2.) If not: Why not?</p>			
Source	Recommendation	Target Group	Target Date	Reference
Agenda 21 Art 16.23 (d)	Has the government (at the appropriate level, with the support of relevant international and regional organizations, the private-sector, non-governmental organizations and academic and scientific institutions) developed processes to recover energy and provide renewable energy sources, animal feed and raw materials from recycling organic waste and biomass?			
	<p>1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured?</p> <p>2.) If not: Why not?</p>			
Source	Recommendation	Target Group	Target Date	Reference
Agenda 21 Art 16.23 (e)	Has the government (at the appropriate level, with the support of relevant international and regional organizations, the private-sector, non-governmental organizations and academic and scientific institutions) developed processes to remove pollutants from the environment, including accidental oil spills, where conventional techniques are not available or are expensive, inefficient or inadequate?			
	<p>1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured?</p> <p>2.) If not: Why not?</p>			
Source	Recommendation	Target Group	Target Date	Reference
Agenda 21 Art. 16.23 (f)	Has the government (at the appropriate level, with the support of relevant international and regional organizations, the private-sector, non-governmental organizations and academic and scientific institutions) developed processes to increase the availability of planting materials, particularly indigenous varieties, for use in afforestation and reforestation and to improve sustainable yields from forests?			
	<p>1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured?</p> <p>2.) If not: Why not?</p>			
Source	Recommendation	Target Group	Target Date	Reference
Agenda 21 Art 16.23 (g)	Has the government (at the appropriate level, with the support of relevant international and regional organizations, the private-sector, non-governmental organizations and academic and scientific institutions) developed applications to increase the availability of stress-tolerant planting material for land rehabilitation and soil conservation?			
	<p>1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured?</p> <p>2.) If not: Why not?</p>			
Source	Recommendation	Target Group	Target Date	Reference
Agenda 21 Art 16.23 (h)	Has the government (at the appropriate level, with the support of relevant international and regional organizations, the private-sector, non-governmental organizations and academic and scientific institutions) promoted the use of integrated pest management based on the judicious use of bio-control agents?			

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Source	Recommendation	Target Group	Target Date	Reference
1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured? 2.) If not: Why not?				
Agenda 21 Art 16.23 (i)	Has the government (at the appropriate level, with the support of relevant international and regional organizations, the private-sector, non-governmental organizations and academic and scientific institutions) promoted the appropriate use of bio-fertilizers within national fertilizer programmes?			
1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured? 2.) If not: Why not?				
Source	Recommendation	Target Group	Target Date	Reference
Agenda 21 Art 16.23 (j)	Has the government (at the appropriate level, with the support of relevant international and regional organizations, the private-sector, non-governmental organizations and academic and scientific institutions) promoted the use of biotechnologies relevant to conservation and scientific study of biological diversity and the sustainable use of biological resources?			
1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured? 2.) If not: Why not?				
Source	Recommendation	Target Group	Target Date	Reference
Agenda 21 Art 16.23 (k)	Has the government (at the appropriate level, with the support of relevant international and regional organizations, the private-sector, non-governmental organizations and academic and scientific institutions) developed easily applicable technologies for the treatment of sewage and organic waste?			
1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured? 2.) If not: Why not?				
Source	Recommendation	Target Group	Target Date	Reference
Agenda 21 Art 16.23 (l)	Has the government (at the appropriate level, with the support of relevant international and regional organizations, the private-sector, non-governmental organizations and academic and scientific institutions) developed new technologies for rapid screening of organisms for useful biological properties?			
1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured? 2.) If not: Why not?				
Source	Recommendation	Target Group	Target Date	Reference
Agenda 21 Art 16.23 (m)	Has the government (at the appropriate level, with the support of relevant international and regional organizations, the private-sector, non-governmental organizations and academic and scientific institutions) promoted new biotechnologies for tapping mineral resources in an environmentally sustainable manner?			
1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured? 2.) If not: Why not?				
<b>2.2.2.1 Data and information</b>				

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Source	Recommendation	Target Group	Target Date	Reference
Agenda 21 Art 16.24	Has the government (at the appropriate level, with the support of relevant international and regional organizations, the private-sector, non-governmental organizations and academic and scientific institutions) taken steps to increase access both to existing information about biotechnology and to facilities based on global databases?	Whole population		
	<b>1.) If yes: a.) How and When?</b> <b>b.) What was the impact?</b> <b>c.) How was it measured?</b> <b>2.) If not: Why not?</b>			
<b>2.3 Enhancing safety and developing international mechanisms for cooperation</b>				
<b>2.3.1 Activities</b>				
<b>2.3.1.1 Management-related activities</b>				
Source	Recommendation	Target Group	Target Date	Reference
Agenda 21 Art 16.32 (a)	Has the government (at the appropriate level, with the support of relevant international and regional organizations, the private-sector, non-governmental organizations and academic and scientific institutions) made the existing safety procedures widely available by collecting the existing information and adapting it to the specific needs of different countries and regions?			
	<b>1.) If yes: a.) How and When?</b> <b>b.) What was the impact?</b> <b>c.) How was it measured?</b> <b>2.) If not: Why not?</b>			
Source	Recommendation	Target Group	Target Date	Reference
Agenda 21 Art 16.32 (b)	Has the government (at the appropriate level, with the support of relevant international and regional organizations, the private-sector, non-governmental organizations and academic and scientific institutions) further developed, as necessary, the existing safety procedures to promote scientific development and categorization in the areas of risk assessment and risk management [information requirements; databases; procedures for assessing risks and conditions of release; establishment of safety conditions; monitoring and inspections, taking account of ongoing national, regional and international initiatives and avoiding duplication wherever possible]?			
	<b>1.) If yes: a.) How and When?</b> <b>b.) What was the impact?</b> <b>c.) How was it measured?</b> <b>2.) If not: Why not?</b>			
Source	Recommendation	Target Group	Target Date	Reference
Agenda 21 Art 16.32 (c)	Has the government (at the appropriate level, with the support of relevant international and regional organizations, the private-sector, non-governmental organizations and academic and scientific institutions) compiled, updated and developed compatible safety procedures into a framework of internationally agreed principles as a basis for guidelines to be applied on safety in biotechnology, including consideration of the need for and feasibility of an international agreement, and promote information exchange as a basis for further development, drawing on the work already undertaken by international or other export bodies?			
	<b>1.) If yes: a.) How and When?</b> <b>b.) What was the impact?</b> <b>c.) How was it measured?</b> <b>2.) If not: Why not?</b>			
Source	Recommendation	Target Group	Target Date	Reference
Agenda 21 Art 16.32 (d)	Has the government (at the appropriate level, with the support of relevant international and regional organizations, the private-sector, non-governmental organizations and academic and scientific institutions) undertaken training programmes at the national and regional levels on the application of the proposed technical guidelines?			

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	<p>1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured?</p> <p>2.) If not: Why not?</p>			
Source	Recommendation	Target Group	Target Date	Reference
Agenda 21 Art 16.32 (e)	Has the government (at the appropriate level, with the support of relevant international and regional organizations, the private-sector, non-governmental organizations and academic and scientific institutions) assisted in exchanging information about the procedures required for safe handling and risk management and about the conditions of release of the products of biotechnology, and cooperated in providing immediate assistance in cases of emergencies that may arise in conjunction with the use of biotechnology products?			
	<p>1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured?</p> <p>2.) If not: Why not?</p>			
2.3.2.1 Data and information				
Source	Recommendation	Target Group	Target Date	Reference
Agenda 21 Chapter 16	See paragraphs 16.32 and 16.33			
	<p>1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured?</p> <p>2.) If not: Why not?</p>			
2.4 Means of Implementation				
2.4.1 Scientific and technological means				
Source	Recommendation	Target Group	Target Date	Reference
Agenda 21 Chapter 16	See paragraph 16.32			
	<p>1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured?</p> <p>2.) If not: Why not?</p>			
2.4.2 Human resource development				
Source	Recommendation	Target Group	Target Date	Reference
Agenda 21 Chapter 16	See paragraph 16.32			
	<p>1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured?</p> <p>2.) If not: Why not?</p>			
2.4.3 Capacity-building				
Source	Recommendation	Target Group	Target Date	Reference
Agenda 21 Art 16.36	Has the government (at the appropriate level, with the support of relevant international and regional organizations, the private-sector, non-governmental organizations and academic and scientific institutions) provided adequate international technical and financial assistance and technical cooperation to developing countries in order to build up technical, managerial, planning and administrative capacities at the national level to support the activities in this programme area (see also programme area E)?			

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	<p>1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured?</p> <p>2.) If not: Why not?</p>			
<b>2.5 Establishing enabling mechanisms for the development and the environmentally sound application of biotechnology</b>				
<b>2.5.1 Activities</b>				
<b>2.5.1.1 Management-related activities</b>				
<b>Source</b>	<b>Recommendation</b>	<b>Target Group</b>	<b>Target Date</b>	<b>Reference</b>
Agenda 21 Art 16.40 (a)	Has the government (at the appropriate level, with the support of relevant international and regional organizations, the private-sector, non-governmental organizations and academic and scientific institutions) developed policies and mobilized additional resources to facilitate greater access to new biotechnologies, particularly by and among developing countries?	Developing countries		
	<p>1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured?</p> <p>2.) If not: Why not?</p>			
<b>Source</b>	<b>Recommendation</b>	<b>Target Group</b>	<b>Target Date</b>	<b>Reference</b>
Agenda 21 Art 16.40 (b)	Has the government (at the appropriate level, with the support of relevant international and regional organizations, the private-sector, non-governmental organizations and academic and scientific institutions) implemented programmes to create greater awareness of the potential and relative benefits and risks of the environmentally sound application of biotechnology among the public and key decision makers?	Whole population		
	<p>1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured?</p> <p>2.) If not: Why not?</p>			
<b>Source</b>	<b>Recommendation</b>	<b>Target Group</b>	<b>Target Date</b>	<b>Reference</b>
Agenda 21 Art 16.40 (c)	Has the government (at the appropriate level, with the support of relevant international and regional organizations, the private-sector, non-governmental organizations and academic and scientific institutions) undertaken an urgent review of existing and enabling mechanisms, programmes and activities at the national, regional and global levels to identify strengths, weaknesses and gaps, and to assess the priority needs of developing countries?	Developing countries		
	<p>1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured?</p> <p>2.) If not: Why not?</p>			
<b>Source</b>	<b>Recommendation</b>	<b>Target Group</b>	<b>Target Date</b>	<b>Reference</b>
Agenda 21 Art 16.40 (d)	Has the government (at the appropriate level, with the support of relevant international and regional organizations, the private-sector, non-governmental organizations and academic and scientific institutions) undertaken an urgent follow-up and critical review to identify ways and means of strengthening endogenous capacities within and among developing countries for the environmentally sound application of biotechnology, including, as a first step, ways to improve existing mechanisms, particularly at the regional level and, as a subsequent step, the consideration of possible new international mechanisms, such as regional biotechnology centres?	Whole population		
	<p>1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured?</p> <p>2.) If not: Why not?</p>			
<b>Source</b>	<b>Recommendation</b>	<b>Target Group</b>	<b>Target Date</b>	<b>Reference</b>
Agenda 21 Art 16.40 (e)	Has the government (at the appropriate level, with the support of relevant international and regional organizations, the private-sector, non-governmental organizations and academic and scientific institutions) developed strategic plans for overcoming targeted constraints by means of appropriate research, product development and marketing?	Whole population		

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	<p>1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured? 2.) If not: Why not?</p>			
Source	Recommendation	Target Group	Target Date	Reference
Agenda 21 Art 16.40 (f)	Has the government (at the appropriate level, with the support of relevant international and regional organizations, the private-sector, non-governmental organizations and academic and scientific institutions) established additional quality-assurance standards for biotechnology applications and products, where necessary?	Whole population		
	<p>1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured? 2.) If not: Why not?</p>			
2.5.2 Data and information				
Source	Recommendation	Target Group	Target Date	Reference
Agenda 21 Art. 16.41	Has the government (at the appropriate level, with the support of relevant international and regional organizations, the private-sector, non-governmental organizations and academic and scientific institutions) undertaken the facilitation of access to existing information dissemination systems, especially among developing countries?	Whole population		
	<p>1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured? 2.) If not: Why not?</p>			

### 3. Stakeholders: Governments and international organizations

#### 3.1 Activities

Source	Recommendation	Target Group	Target Date	Reference
CSD III 157 (b) i.	Has the government and international organizations enhanced the contribution of business and industry, local authorities, scientific and technological communities, non-governmental organizations and other major groups to the identification of problems [and appropriate solutions] related to the environmentally sound use and management of biotechnology?	Business and industry, local authorities, scientific and technological communities, non-governmental organizations and other major groups		
	<p>1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured? 2.) If not: Why not?</p>			
Source	Recommendation	Target Group	Target Date	Reference
CSD III 157 (b) ii.	Has the government and international organizations promoted a balanced and accurate understanding of biotechnology issues as they impinge upon sustainable development including those related to biosafety and progressive trends in biotechnology development, through, for example, training at national and regional levels?			
	<p>1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured? 2.) If not: Why not?</p>			

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Source	Recommendation	Target Group	Target Date	Reference
CSD III 157 (b) iii.	Has the government and international organizations established national databases on information related to biosafety where these do not currently exist and promote the exchange of information concerning biosafety in biotechnology?			
	<b>1.) If yes: a.) How and When?</b> <b>b.) What was the impact?</b> <b>c.) How was it measured?</b> <b>2.) If not: Why not?</b>			
Source	Recommendation	Target Group	Target Date	Reference
CSD III 157 (b) iv.	Has the government and international organizations encouraged the national and local scientific and technological communities to exercise ethical responsibility, through safe laboratory practices and effective and transparent interaction with the public at large?	Local scientific and technological communities		
	<b>1.) If yes: a.) How and When?</b> <b>b.) What was the impact?</b> <b>c.) How was it measured?</b> <b>2.) If not: Why not?</b>			
Source	Recommendation	Target Group	Target Date	Reference
CSD III 157 (b) v.	Has the government and international organizations assessed the need for advice and assistance in promoting the development or re-enforcement of biotechnology and biosafety regulations, norms and standards, especially in the fields of agricultural, human and animal health, with a view to designing effective programmes for the environmentally sound management of biotechnology, building whenever possible upon existing activities and capacities?			
	<b>1.) If yes: a.) How and When?</b> <b>b.) What was the impact?</b> <b>c.) How was it measured?</b> <b>2.) If not: Why not?</b>			
Source	Recommendation	Target Group	Target Date	Reference
CSD III 157 (b) vi.	Has the government and international organizations enhanced efforts aimed at human resource development, transfer and development of technology and capacity-building in developing countries to regulate, manage and control risks associated with the use and release of living modified organisms resulting from biotechnology?	Developing countries		
	<b>1.) If yes: a.) How and When?</b> <b>b.) What was the impact?</b> <b>c.) How was it measured?</b> <b>2.) If not: Why not?</b>			

#### **4. Stakeholders: Governments at the appropriate level, with the support of relevant international and regional organizations**

##### **4.1 Increasing the availability of food, feed, and renewable raw material**

###### **4.1.1 Activities**

###### **4.1.1.1 International and regional cooperation and coordination**

Source	Recommendation	Target Group	Target Date	Reference
Agenda 21 Art 16.7 (a)	Has the government (at the appropriate level, with the support of relevant international and regional organizations) cooperated on issues related to conservation of, access to and exchange of germplasm; rights associated with intellectual property and informal innovations, including farmers' and breeders' rights; access to the benefits of biotechnology; and bio-safety?			

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	<p>1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured?</p> <p>2.) If not: Why not?</p>			
<b>Source</b>	<b>Recommendation</b>	<b>Target Group</b>	<b>Target Date</b>	<b>Reference</b>
Agenda 21 Art 16.7 (b)	Has the government (at the appropriate level, with the support of relevant international and regional organizations) promoted collaborative research programmes, especially in developing countries, to support activities outlined in this programme area, with particular reference to cooperation with local and indigenous people and their communities in the conservation of biological diversity and sustainable use of biological resources, as well as the fostering of traditional methods and knowledge of such groups in connection with these activities?	Developing countries		
	<p>1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured?</p> <p>2.) If not: Why not?</p>			
<b>Source</b>	<b>Recommendation</b>	<b>Target Group</b>	<b>Target Date</b>	<b>Reference</b>
Agenda 21 Art 16.7 (c)	Has the government (at the appropriate level, with the support of relevant international and regional organizations) accelerated technology acquisition, transfer and adaptation by developing countries to support national activities that promote food security, through the development of systems for substantial and sustainable productivity increases that do not damage or endanger local ecosystems?	Developing countries		
	<p>1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured?</p> <p>2.) If not: Why not?</p>			
<b>4.2 Improving human health</b>				
<b>4.2.1 Activities</b>				
<b>4.2.1.1 International and regional cooperation and coordination</b>				
<b>Source</b>	<b>Recommendation</b>	<b>Target Group</b>	<b>Target Date</b>	<b>Reference</b>
Agenda 21 Art 16.15 (a)	Has the government (at the appropriate level, with the support of relevant international and regional organizations) developed and strengthened appropriate safety procedures based on programme area D, taking into account ethical considerations?			
	<p>1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured?</p> <p>2.) If not: Why not?</p>			
<b>Source</b>	<b>Recommendation</b>	<b>Target Group</b>	<b>Target Date</b>	<b>Reference</b>
Agenda 21 Art 16.15 (b)	Has the government (at the appropriate level, with the support of relevant international and regional organizations) supported the development of national programmes, particularly in developing countries, for improvements in general health, especially protection from major communicable diseases, common diseases of children and disease-transmitting factors?			
	<p>1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured?</p> <p>2.) If not: Why not?</p>			
<b>4.3 Enhancing protection of the environment</b>				
<b>4.3.1 Activities</b>				
<b>4.3.1.1 International and regional cooperation and coordination</b>				
<b>Source</b>	<b>Recommendation</b>	<b>Target Group</b>	<b>Target Date</b>	<b>Reference</b>

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Agenda 21 Art 16.25 (a)	Has the government (at the appropriate level, with the support of relevant international and regional organizations) strengthened research, training and development capabilities, particularly in developing countries, to support the activities outlined in this programme area??			
	<b>1.) If yes: a.) How and When?</b> <b>b.) What was the impact?</b> <b>c.) How was it measured?</b> <b>2.) If not: Why not?</b>			
<b>Source</b>	<b>Recommendation</b>	<b>Target Group</b>	<b>Target Date</b>	<b>Reference</b>
Agenda 21 Art 16.25 (b)	Has the government (at the appropriate level, with the support of relevant international and regional organizations) developed mechanisms for scaling up and disseminating environmentally sound biotechnologies of high environmental importance, especially in the short term, even though those biotechnologies may have limited commercial potential?			
	<b>1.) If yes: a.) How and When?</b> <b>b.) What was the impact?</b> <b>c.) How was it measured?</b> <b>2.) If not: Why not?</b>			
<b>Source</b>	<b>Recommendation</b>	<b>Target Group</b>	<b>Target Date</b>	<b>Reference</b>
Agenda 21 Art 16.25 (c)	Has the government (at the appropriate level, with the support of relevant international and regional organizations) enhanced cooperation, including transfer of biotechnology, between participating countries for capacity-building?			
	<b>1.) If yes: a.) How and When?</b> <b>b.) What was the impact?</b> <b>c.) How was it measured?</b> <b>2.) If not: Why not?</b>			
<b>Source</b>	<b>Recommendation</b>	<b>Target Group</b>	<b>Target Date</b>	<b>Reference</b>
Agenda 21 Art 16.25 (d)	Has the government (at the appropriate level, with the support of relevant international and regional organizations) developed appropriate safety procedures based on programme area D, taking account of ethical considerations?			
	<b>1.) If yes: a.) How and When?</b> <b>b.) What was the impact?</b> <b>c.) How was it measured?</b> <b>2.) If not: Why not?</b>			
<b>4.3.2 Means of Implementation</b>				
<b>4.3.3 Scientific and technological means</b>				
<b>Source</b>	<b>Recommendation</b>	<b>Target Group</b>	<b>Target Date</b>	<b>Reference</b>
Agenda 21 Chapter 16	See paragraphs 16.23 and 16.25 above			
	<b>1.) If yes: a.) How and When?</b> <b>b.) What was the impact?</b> <b>c.) How was it measured?</b> <b>2.) If not: Why not?</b>			
<b>4.4 Enhancing safety and developing international mechanisms for cooperation</b>				
<b>4.4.1 Activities</b>				
<b>4.4.1.1 International and regional cooperation and coordination</b>				
<b>Source</b>	<b>Recommendation</b>	<b>Target Group</b>	<b>Target Date</b>	<b>Reference</b>

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Agenda 21 Art 16.33 (a)	Has the government (at the appropriate level, with the support of relevant international and regional organizations) organized one or more meetings between countries to identify further practical steps to facilitate international cooperation in bio-safety?			
	<b>1.) If yes: a.) How and When?</b> <b>b.) What was the impact?</b> <b>c.) How was it measured?</b> <b>2.) If not: Why not?</b>			
<b>Source</b>	<b>Recommendation</b>	<b>Target Group</b>	<b>Target Date</b>	<b>Reference</b>
Agenda 21 Art. 16.33 (b)	Has the government (at the appropriate level, with the support of relevant international and regional organizations) established an international network incorporating national, regional and global contact points?			
	<b>1.) If yes: a.) How and When?</b> <b>b.) What was the impact?</b> <b>c.) How was it measured?</b> <b>2.) If not: Why not?</b>			
<b>Source</b>	<b>Recommendation</b>	<b>Target Group</b>	<b>Target Date</b>	<b>Reference</b>
Agenda 21 Art 16.33 (c)	Has the government (at the appropriate level, with the support of relevant international and regional organizations) provided direct assistance upon request through the international network, using information networks, databases and information procedures?			
	<b>1.) If yes: a.) How and When?</b> <b>b.) What was the impact?</b> <b>c.) How was it measured?</b> <b>2.) If not: Why not?</b>			
<b>Source</b>	<b>Recommendation</b>	<b>Target Group</b>	<b>Target Date</b>	<b>Reference</b>
Agenda 21 Art 16.33 (d)	Has the government (at the appropriate level, with the support of relevant international and regional organizations) considered the need for and feasibility of internationally agreed guidelines on safety in biotechnology releases, including risk assessment and risk management, and considered studying the feasibility guidelines which could facilitate national legislation on liability and compensation?			
	<b>1.) If yes: a.) How and When?</b> <b>b.) What was the impact?</b> <b>c.) How was it measured?</b> <b>2.) If not: Why not?</b>			
Agenda 21 Art 16.42	Has the government (at the appropriate level, with the support of relevant international and regional organizations) developed appropriate new initiatives to identify priority areas for research based on specific problems and facilitate access to new biotechnologies, particularly by and among developing countries, among relevant undertakings within those countries, in order to strengthen endogenous capacities and to support the building of research and institutional capacity in those countries?			
	<b>1.) If yes: a.) How and When?</b> <b>b.) What was the impact?</b> <b>c.) How was it measured?</b> <b>2.) If not: Why not?</b>			

#### **5. Stakeholders: Governments at the appropriate level, with the assistance of international and regional organizations, academic and scientific institutions, and the pharmaceutical industry**

##### **5.1 Improving human health**

###### **5.1.1 Activities**

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<b>5.1.1.1 Management-related activities</b>				
<b>Source</b>	<b>Recommendation</b>	<b>Target Group</b>	<b>Target Date</b>	<b>Reference</b>
Agenda 21 Art 16.13 (a)	Has the government (at the appropriate level, with the assistance of international and regional organizations, academic and scientific institutions, and the pharmaceutical industry) developed national and international programmes for identifying and targeting those populations of the world most in need of improvement in general health and protection from diseases?  1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured? 2.) If not: Why not?	Undeveloped/ Developing countries		
Agenda 21 Art 16.13 (b)	Has the government (at the appropriate level, with the assistance of international and regional organizations, academic and scientific institutions, and the pharmaceutical industry) developed criteria for evaluating the effectiveness and the benefits and risks of the proposed activities?  1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured? 2.) If not: Why not?			
Agenda 21 Art 16.13 (c)	Has the government (at the appropriate level, with the assistance of international and regional organizations, academic and scientific institutions, and the pharmaceutical industry) established and enforced screening, systematic sampling and evaluation procedures for drugs and medical technologies, with a view to barring the use of those, that are unsafe and effective and take account of ethical considerations?  1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured? 2.) If not: Why not?			
Agenda 21 Art 16.13 (d)	Has the government (at the appropriate level, with the assistance of international and regional organizations, academic and scientific institutions, and the pharmaceutical industry) improved, systematically sampled and evaluated drinking-water quality by introducing appropriate specific measures, including diagnosis of water-borne pathogens and pollutants?  1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured? 2.) If not: Why not?			
Agenda 21 Art 16.13 (e)	Has the government (at the appropriate level, with the assistance of international and regional organizations, academic and scientific institutions, and the pharmaceutical industry) developed and made widely available new and improved vaccines against major communicable diseases that are efficient and safe and offer protection with a minimum number of doses, including intensifying efforts directed at the vaccines needed to combat common diseases of children?  1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured? 2.) If not: Why not?			
Agenda 21 Art 16.13 (f)	Has the government (at the appropriate level, with the assistance of international and regional organizations, academic and scientific institutions, and the pharmaceutical industry) developed biodegradable delivery systems for vaccines that eliminate the need for present multiple-dose schedules, facilitate better coverage of the population and reduce the costs of immunization?			

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	<p>1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured?</p> <p>2.) If not: Why not?</p>			
<b>Source</b>	<b>Recommendation</b>	<b>Target Group</b>	<b>Target Date</b>	<b>Reference</b>
Agenda 21 Art 16.13 (g)	Has the government (at the appropriate level, with the assistance of international and regional organizations, academic and scientific institutions, and the pharmaceutical industry) developed effective biological control agents against disease-transmitting vectors, such as mosquitoes and resistant variants, taking account of environmental protection considerations?			
	<p>1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured?</p> <p>2.) If not: Why not?</p>			
<b>Source</b>	<b>Recommendation</b>	<b>Target Group</b>	<b>Target Date</b>	<b>Reference</b>
Agenda 21 Art. 16.13 (h)	Has the government (at the appropriate level, with the assistance of international and regional organizations, academic and scientific institutions, and the pharmaceutical industry) used the tools provided by modern biotechnology to develop, <i>inter alia</i> , improved diagnostics, new drugs and improved treatments and delivery systems?			
	<p>1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured?</p> <p>2.) If not: Why not?</p>			
<b>Source</b>	<b>Recommendation</b>	<b>Target Group</b>	<b>Target Date</b>	<b>Reference</b>
Agenda 21 Art 16.13 (i)	Has the government (at the appropriate level, with the assistance of international and regional organizations, academic and scientific institutions, and the pharmaceutical industry) developed the improvement and more effective utilization of medicinal plants and other related sources?			
	<p>1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured?</p> <p>2.) If not: Why not?</p>			
<b>Source</b>	<b>Recommendation</b>	<b>Target Group</b>	<b>Target Date</b>	<b>Reference</b>
Agenda 21 Art 16.13 (j)	Has the government (at the appropriate level, with the assistance of international and regional organizations, academic and scientific institutions, and the pharmaceutical industry) developed processes to increase the availability of materials derived from biotechnology, for use in improving human health?			
	<p>1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured?</p> <p>2.) If not: Why not?</p>			
<b>5.1.1.2 Data and information</b>				
<b>Source</b>	<b>Recommendation</b>	<b>Target Group</b>	<b>Target Date</b>	<b>Reference</b>
Agenda 21 Art 16.14 (a)	Has the government (at the appropriate level, with the assistance of international and regional organizations, academic and scientific institutions, and the pharmaceutical industry) researched to assess the comparative social, environmental and financial costs and benefits of different technologies for basic and reproductive health care within a framework of universal safety and ethical considerations?			
	<p>1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured?</p> <p>2.) If not: Why not?</p>			
<b>Source</b>	<b>Recommendation</b>	<b>Target Group</b>	<b>Target Date</b>	<b>Reference</b>

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Agenda 21 Art 16.14 (b)	Has the government (at the appropriate level, with the assistance of international and regional organizations, academic and scientific institutions, and the pharmaceutical industry) developed public education programmes directed at decision makers and the general public to encourage awareness and understanding of the relative benefits and risks of modern biotechnology, according to ethical and cultural considerations?	Decision makers/ general public		
	<b>1.) If yes: a.) How and When?</b> <b>b.) What was the impact?</b> <b>c.) How was it measured?</b> <b>2.) If not: Why not?</b>			

#### 6. Stakeholders: International, scientific, technical institutions

#### 6.1 Increasing the availability of food, feed, and renewable raw materials

##### 6.1.1 Means of implementation

##### 6.1.1.1 Scientific and technological means

Source	Recommendation	Target Group	Target Date	Reference
Agenda 21 Chapter 16	See paragraphs 16.6 and 16.7			
	<b>1.) If yes: a.) How and When?</b> <b>b.) What was the impact?</b> <b>c.) How was it measured?</b> <b>2.) If not: Why not?</b>			

##### 6.1.1.2 Human-resource development

Source	Recommendation	Target Group	Target Date	Reference
Agenda 21 Art 16.9	Have international, scientific and technical institutions trained competent professionals in the basic and applied sciences at all levels (including scientific personnel, technical staff and extension workers)?  Have international, scientific and technical institutions created awareness of the benefits and risks of biotechnology?  Have training programmes been developed, within the context of specific projects, to meet regional or national needs for comprehensively trained personnel capable of using advanced technology to reduce the “brain drain” from developing to developed countries?  Has emphasis been given to encouraging collaboration between and training of scientists, extension workers and users to produce integrated systems?  Have special consideration been given to execution of programmes for training and exchange of knowledge on traditional biotechnologies and for training on safety procedures?			
	<b>1.) If yes: a.) How and When?</b> <b>b.) What was the impact?</b> <b>c.) How was it measured?</b> <b>2.) If not: Why not?</b>			

##### 6.1.1.3 Capacity-building

Source	Recommendation	Target Group	Target Date	Reference
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Agenda 21 Art 16.10	<p>Has institutional upgrading or other appropriate measures been taken to build up technical, managerial, planning and administrative capacities at the national level to support the activities in this programme area?</p> <p>Have these measures been back up by international, scientific, technical and financial assistance adequate to facilitate technical cooperation and raise the capacities of the developing countries?</p>	Developing countries		
	<p>1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured?</p> <p>2.) If not: Why not?</p>			

## 7. Stakeholders: Research institutions

### 7.1 Improving human health

#### 7.1.1 Means of implementation

##### 7.1.1.1 Scientific and technological means

Source	Recommendation	Target Group	Target Date	Reference
Agenda 21 Art 16.18	<p>Have research institutions promoted well-coordinated multidisciplinary efforts involving cooperation between scientists, financial institutions and industries been required?</p> <p>At the global level, has collaboration taken place between research institutions in different countries, with funding at the intergovernmental level, and has this collaboration taken place at the national level as well?</p> <p>Has research and development support been strengthened, together with the mechanisms for providing the transfer of relevant technology?</p>	Scientists, financial institutions and industry		
	<p>1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured?</p> <p>2.) If not: Why not?</p>			

##### 7.1.1.2 Capacity-building

Source	Recommendation	Target Group	Target Date	Reference
Agenda 21 Chapter 16	See programme area E.			
	<p>1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured?</p> <p>2.) If not: Why not?</p>			

## 8. Stakeholders: Relevant biotechnology institutions

### 8.1 Enhancing the protection of the environment

#### 8.1.1 Means of implementation

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8.1.1.1 Capacity-building				
Source	Recommendation	Target Group	Target Date	Reference
Agenda 21 Art 16.28 (a)	Have relevant biotechnology institutions taken responsibility for undertaking, and the capacity (political, financial and workforce) to undertake, the above-mentioned activities and to be dynamic in response to new biotechnological developments (see programme area E)?			
	1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured? 2.) If not: Why not?			

### 9. Stakeholders: Conference of the Parties to the Convention on Biological Diversity

9.1 Activities				
Source	Recommendation	Target Group	Target Date	Reference
CSD III 157 (c)	Has the Conference of the Parties to the Convention on Biological Diversity kept the Commission informed of developments concerning the work on the need for and modalities of a protocol on biosafety, with a view to identifying areas for further cooperation on this issue. Such areas might include work on capacity-building measures, especially in developing countries?	Developing countries		
	1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured? 2.) If not: Why not?			

### 10. Stakeholders: Governments, international organizations and the Conference of the Parties to the Convention on Biological Diversity

10.1 Activities				
Source	Recommendation	Target Group	Target Date	Reference
CSD III 157 (d)	Has the government, international organizations and the Conference of the Parties to the Convention on Biological Diversity mae their experiences gained in the environmentally sound application and management of biotechnology available in order to facilitate the Commission's work in keeping this issue under review?	The CSD		
	1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured? 2.) If not: Why not?			

### 11. Stakeholders: United Nations bodies

11.1 Activities				
Source	Recommendation	Target Group	Target Date	Reference
CSD III 154	Have United Nations bodies continued to monitor and evaluate biotechnology experiments and projects?			

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	<p>1.) If yes: a.) How and When? b.) What was the impact? c.) How was it measured?</p> <p>2.) If not: Why not?</p>	
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