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Item 6.3 of the provisional agenda *

CAPACITY-BUILDING FOR IMPLEMENTATION OF THE CARTAGENA PROTOCOL ON BIOSAFETY (ARTICLE 22, ARTICLE 28)

Indicators for monitoring implementation of the Action Plan

Note by the Executive Secretary

I. INTRODUCTION

1. The Intergovernmental Committee for the Cartagena Protocol (ICCP) adopted, at its second meeting, an Action Plan for Building Capacities for the Effective Implementation of the Cartagena Protocol on Biosafety. A number of key processes/steps were included in the Action Plan to facilitate its effective implementation. One of the processes proposed was the development of indicators for evaluating capacity-building measures. The Action Plan states that "indicators should be developed for evaluating capacity-building measures (such as projects, programmes or other types of initiatives)". In order to assist the ICCP in consideration of this issue, the Executive Secretary developed a preliminary set of indicators for monitoring implementation of the Action Plan, which were contained in the note by the Executive Secretary on capacity-building prepared for the third meeting of ICCP (UNEP/CBD/ICCP/3/6).

2. At its third meeting, ICCP took note of the preliminary set of indicators prepared by the Secretariat and invited Parties, Governments, and relevant organizations to submit their views and comments to the Executive Secretary prior to the first meeting of the Conference of the Parties serving as the meeting of the Parties to the Cartagena Protocol (COP-MOP). ICCP also requested the Executive Secretary to prepare, on the basis of those submissions, a revised set of indicators for consideration by the Conference of the Parties serving as the meeting of the Parties to the Cartagena Protocol.

3. By 30 September 2003 the following Governments and organizations had made submissions: Australia, Global Industry Coalition (GIC) and WWF International. A compilation of the different

* UNEP/CBD/BS/COP-MOP/1/1.

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submissions is available as an information document (UNEP/CBD/BS/COP-MOP/INF/2). The Liaison Group on Capacity-building for Biosafety, which met from 11 to12 November 2002, also provided input.

4. This note presents a revised set of indicators, developed on the basis of the submissions received and the comments made by the Liaison Group on Capacity-building for Biosafety. It also describes a conceptual framework that could be used to develop case-specific indicators, the role of indicators, and some guidelines on how Governments and relevant organizations may use the set of indicators in monitoring the status, performance and achievement of their respective biosafety capacity-building initiatives. A detailed set of indicators is contained in the annex to this note.

II. INDICATORS OF CAPACITY-BUILDING FOR BIOSAFETY: A CONCEPTUAL FRAMEWORK

5. Indicators are principal tools in the monitoring and evaluation of projects and programmes to ensure successful efforts in building the necessary capacities for the effective implementation of the Protocol. It is important to know what capacity-building actions are being taken, how well they are being implemented, what needs to be improved, what progress is being made towards building the required capacities and how successful it is. To facilitate this, it is important to develop criteria and indicators, which could be used under different situations, to assess and monitor the quality, effectiveness and impact of capacity-building initiatives. 1/ Experience gained through a wide range of capacity-building initiatives suggests that performance needs to be assessed in both qualitative and quantitative terms relating to the overall goals and objectives of such initiatives.

6. The term "indicators" has different meanings to different people. Literally, an "indicator" could be referred to as a pointer to the status or position of an entity; a yardstick for measuring change; a gauge for showing trends or a signal for providing early-warning. 2/ It can also be described as a statistic or variable used to characterize the status of a given entity; measure performance and achievement and demonstrate the overall progress towards realizing the desired goals or outcomes. 3/ The World Wide Fund for Nature (WWF) describes indicators as tools used to measure and communicate success. 4/ Most indicators are expressed in terms of absolute numbers or relative terms (percentages, ratios, averages, proportions or rates) or categorical variables (such as existence or absence of something). Indicators do not seek to measure the respective characteristic directly but rather to provide an indication of the status or trend of that characteristic measured.

7. In the context of monitoring the implementation of the capacity-building Action Plan, indicators can be used to assess the performance, achievement and impact of capacity-building initiatives against set benchmarks and in assessing whether they are succeeding in producing the intended results or not. In other words, they provide a means of determining the extent to which the desired goals and outcomes are being achieved and how well (effectively and efficiently) initiatives are implemented to produce intended outputs/results and the extent to which specific outputs are contributing to the overall desired objective/outcome.

1/ See Virgin I. and Fredrick, R.J., 1996. Biosafety Capacity Building: Evaluation Criteria Development, Biotechnology Advisory Commission of the Stockholm Environment Institute.

2/ See: http://www.inece.org/forumsindicators_introduction.html#back.

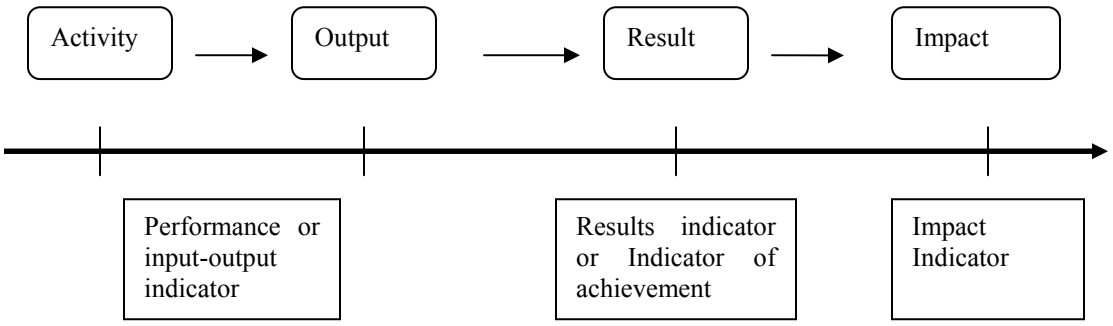
3/ See: http://www.bnia.org/indicators_main.html.

4/ WWF, 1997. *Signals of Success*, Worldwide Fund for Nature (WWF) and New Economics Foundation, 27pp.

8. The use of indicators for monitoring capacity-building activities is fairly less developed compared to other fields. Meaningful indicators that measure institutional and human resources capacity qualitatively are hard to find and to design. In recent years, however, efforts have been made to develop tools and discrete indicators for measuring institutional and capacity-building programme performance, management effectiveness and impact. 5/

9. Indicators can be developed at multiple levels along a spectrum of performance measures (see figure 1 below). The lowest level of indicators would include those used to measure or evaluate the performance of particular actions of a project or programme (i.e. at the "inputs-output level"). For example, an indicator used to evaluate a training course might be based on the number of people that received training. These types of indicators help evaluate whether specific actions are effectively or efficiently implemented. However, these low-level indicators are very specific to the particular actions of a given capacity-building project or programme, and would not be very useful for monitoring implementation of the Action Plan at a high level (national, regional or global level). It is important to decide the most appropriate level on which to focus, depending on the goals, scope and duration of the capacity-building activity. 6/ The indicators proposed in this note focus at the level of results of capacity-building measures, i.e. monitoring the status and progress in terms of the broad desired building-capacity results or outcomes, along the lines of the key elements of the Action Plan.

Fig. 1: The spectrum of performance measures and indicators

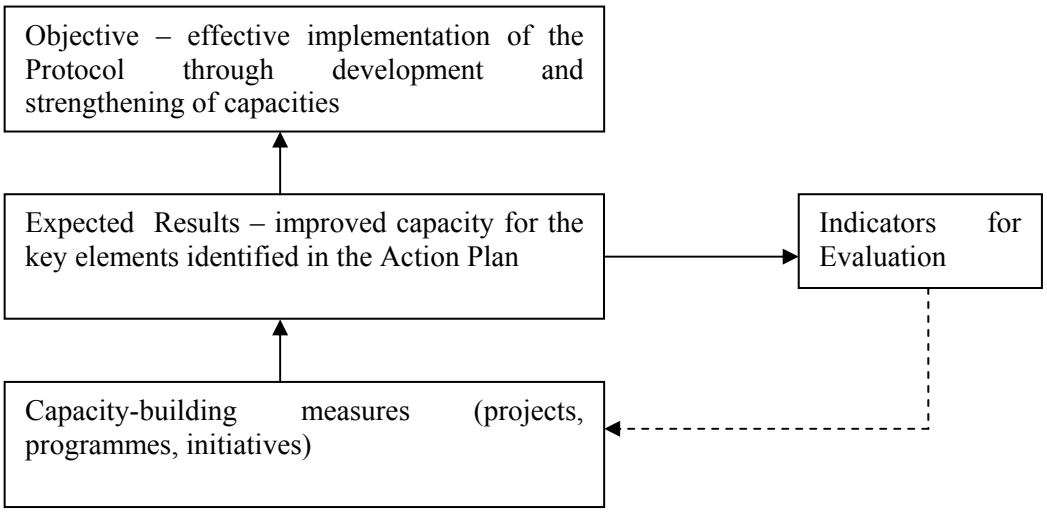


10. To maximize their value, indicators must be developed and used in the context of the broader policy development or strategic planning process encompassing: needs identification and assessment, situational analysis, planning, goal setting, implementation, and monitoring and evaluation. In the case of the biosafety capacity-building effort, indicators must be closely linked with the objective, elements and envisaged results/ outcomes of the capacity-building Action Plan. The linkages can be presented simplistically as shown in figure 2 below.

Figure 2: Linkages between the objectives, results and indicators of the capacity-building Action Plan

5/ Government of Western Australia, 1997. Preparing Performance Indicators – A Practical Guide. See: http://www.audit.wa.gov.au/reports/performanceindicators.html.

6/ Connolly, P. and York, P., 2002. "Evaluating Capacity-Building Efforts for Non-profit Organizations", In: OD Practitioner, Vol. 34, No. 4.



11. It is recognized that indicators cannot be universal for all cases and for all purposes. They are often site or context-specific and their comprehensibility and usefulness depends on the specific needs, objectives and priorities of each country and the prevailing circumstances. An indicator suitable in one situation or country may not appropriate in another, and what might be considered a good measure of success for one purpose may not be useful for another. 7/ It is therefore evident that development of a single set of indicators would not be feasible or broadly useful. Hence, it is only feasible to develop a broad framework of indicators that can be adapted and used under different situations.

12. The set of indicators for capacity-building presented in this document is designed to assist Parties and relevant organizations to think through different aspects that are critical for the effective implementation of the capacity-building Action Plan (see the note by the Executive Secretary on capacity-building (UNEP/CBD/BS/COP-MOP/1/6)) and to provide a basis for developing case-specific indicators for monitoring progress and impact of different initiatives at various levels. The set of indicators contained in the annex is not intended to be prescriptive but rather to provide a sample that could be used, as appropriate, to monitor the overall implementation of the Action Plan at various levels. It is also intended to provide a frame of reference for countries and relevant organizations to identify questions, methodologies and data sources for monitoring their respective capacity-building activities.

13. For ease of reference, the set of indicators is presented along the lines of the main elements of the Action Plan, including the expected outcomes in implementing different elements of the Action Plan and the corresponding indicators for demonstrating the status or measuring the progress towards the achievement of the respective outcomes.

7/ Duffy, R. 1998. "Measuring the Success of Compliance and Enforcement Programs", In Proceedings of Fourth International Conference on Environmental Compliance and Enforcement. See: http://www.inece.org/4thvol1/duffy2.pdf

III. THE ROLE OF INDICATORS IN THE ACTION PLAN IMPLEMENTATION

14. Indicators are important tools for facilitating effective implementation of the capacity-building Action Plan. They are useful at various stages of the policy, project or programme cycle including: appraisal, design, implementation, monitoring, evaluation and reporting. Principally, they are used in monitoring and evaluation of initiatives. In the context of the Action Plan, the primary objective of the set of indicators presented in the annex to this note is to assist Parties, Governments and relevant organizations in monitoring and assessing the status and progress in its implementation. In addition, indicators also serve other important purposes, as outlined below:

(a) *Monitoring progress/success*: Indicators provide benchmarks and yardsticks for measuring and tracking the progress/ level of success in realizing the set objectives and outcomes. In other words, they assist in determining the achievements (results) and impact of specific capacity-building programmes (i.e. the extent to which specific outputs are contributing to building the necessary capacities or addressing specific identified capacity needs);

(b) *Monitoring performance*: Indicators help in assessing and reviewing how well specific capacity-building measures are being implemented (i.e. their performance in terms of timeliness, quality, efficiency, cost effectiveness, adaptiveness and effectiveness in producing results) and in identifying and promoting best practices that lead to improved performance (benchmarking); 8/

(c) *Keeping activities on track*: Indicators provide milestones or reference points to keep initiatives on track towards the desired objectives/ outcomes and help to focus efforts on the identified critical needs and gaps. In this regard, they help to foster a more focused and adaptive approach to capacity-building and provide concrete measures of effectiveness; 9/

(d) *Setting clear goals and targets in the planning and policy development processes*: Indicators can be useful in setting clear and coherent capacity-building goals and objectives and in developing strategic actions to achieve those goals and specific targets. In this regard, they can guide improvements in the design and implementation of capacity-building programmes and strategies and in focusing the funding strategies for those programmes. As part of the policy, strategy and action plan development process, indicators provide baseline and target measures against which to gauge the success;

(e) *Evaluation and reporting:* Indicators can assist Parties and relevant organizations in assessing and reporting on their efforts in implementing the Action Plan at various levels, to fulfill reporting requirements under the Protocol or for donors and others. Likewise, they can be used to facilitate evaluation and reporting of performance and achievements of capacity-building initiatives in order;

(f) *Promoting accountability*: Indicators are important tools in results-based accountability systems. They provide objective standards and means of communicating the achievements and success of capacity-building initiatives to the relevant authorities, the public, donors and other interested parties in an unambiguous and transparent manner;

8/ Efficiency refers to relationship between the total inputs (time, financial, human and physical resources) invested and the outputs produced. This input/output relationship focuses on the results achieved with the inputs, rather than on the processes by which those results are achieved. See: http://www.audit.wa.gov.au/reports/performanceindicators.html.

9/ Morgan, P., 1999. An Update on the Performance Monitoring of Capacity-Building Development Programmes – What are we learning? A paper prepared for the Canadian International Development Agency (CIDA), Ottawa, Canada.

(g) *Flagging success*: Indicators provide a means to recognize and consolidate achievements and celebrate success. This plays a big role in motivating the players involved and stimulating public interest and donor's support for capacity-building initiatives. In this regard, the indicators can also be helpful in the identification and replication of success stories;

(h) *Acting as "red flags*": Indicators can assist identifying major deficiencies, gaps and weaknesses and help relevant players to make timely interventions and/or to adjust the measures being undertaken and to learn from failures. In this way, indicators provide a basis to evaluate and improve performance i.e. facilitate identification of possible ways to improve the performance of capacity-building initiatives;

(i) *Facilitating in-depth assessment of capacity needs*: Indicators can also be part of the organizational learning process, for example in promoting awareness and a common understanding of the biosafety capacity-building needs and measures that need to be undertaken. They can help relevant players to think through the "cause-effect" relationships, reflect on appropriate interventions and make informed decisions and systematic action plans, focusing on the critical needs and gaps identified and fostering a more adaptive and focused approach to capacity-building;

(j) *Promoting self-assessments*: Indicators provide a means of facilitating self-assessments, review and feedback in the implementation of capacity-building initiatives. They assist actors involved in implementation of projects to ensure that their activities are relevant and implemented in a focused, efficient and results-oriented manner.

15. In light of the declining resources and competing demands for the limited available resources, many decision makers and donors require projects to clearly demonstrate their short-term and long-term impacts. In this regard, indicators play a vital role as a means for measuring and tracking progress and for communicating success to policymakers, taxpayers, donors and other stakeholder information on what is happening, the progress made and the results of capacity-building efforts.

IV. GUIDELINES FOR USING THE SET OF INDICATORS

16. Capacity-building indicators can be developed and used at various levels – project, national, regional or global levels – and at both strategic and operational levels. Despite the differences in their use at different, the process of developing and using indicators involves common basic principles and procedures. Parties and relevant organizations, in using the set of indicators described in this document to develop regional, national or project-level indicators for monitoring and evaluating their activities in support of the Action Plan implementation, need to take these into account.

17. Experience gained from various monitoring and evaluation programmes over a number of years shows that good indicators must have certain characteristics and that important principles must be applied in their development and use. Examples of key principles, which countries need to take into account are outlined below:

(a) Indicators should be developed in relation to the overall objective and envisioned results of capacity-building initiatives. They should measure progress towards the overall goal, desired outcomes and specific outputs;

(b) Indicators should be relatively simple, unambiguous, easy to understand and easy to measure. They should not require extremely high levels of skill to discern and to use in monitoring capacity-building activities and in gauging the prevailing status;

(c) Indicators should be able to convey meaningful and relevant information about the status, progress and achievement of capacity-building activities and to facilitate identification of gaps and productive dialogue about future actions to address those gaps;

(d) Indicators should be developed and used at appropriate scales and should provide information at a level appropriate for policy decision making and communication to the general public;

(e) Good indicators should provide some form of an "early warning" mechanism to alert relevant players about gaps, weaknesses or negative trends that would need intervention;

(f) Indicators should be reliable and credible. They should use reliable sources of data, collected over time.

18. There are a number of important steps that need to be taken in developing national-level indicators for capacity-building in biosafety.

(a) First, it is important at the outset to assess the status of capacity development in order to develop a clear understanding of the baseline situation. This includes a description of existing capacities resources - human, financial, technological, and organizational – and a review of the ongoing capacity-building activities, their current level of performance and the main actors involved.

(b) Secondly, it is essential to undertake systematic analysis of the major gaps/ weaknesses and the factors behind the gaps in capacity and poor performance of ongoing initiatives.

(c) Thirdly, key stakeholders should be mobilized to review the assessment of existing capacities and develop a common understanding of the issues.

(d) Furthermore, it is important to define the overall desired future status (i.e. the long-term goals and objectives) and the specific desired results (i.e. the specific capacities required) and what needs to be done to achieve those results (i.e. what measures, actions/ inputs are needed to build those capacities).

(e) On the basis of the above information, precise criteria and indicators can then be developed relating to the specific identified capacity needs. Those indicators provide a more defined way of determining, over time, if the required capacities (results) are being built, whether the planned actions are producing the intended outputs and the extent to which those outputs are collectively contributing to building the necessary capacities. The criteria and set of indicators proposed in this document could provide a useful reference in this process.

19. Indicators can be developed and used by different actors involved in the planning, implementation, monitoring or reporting on biosafety capacity-building activities being undertaken in support of the Action Plan. As an integral part of the indicator development process, it is essential to identify those who will be responsible for undertaking the monitoring process, describe how the reporting of results would be done and indicate how the reports would be used. Actors that could be responsible for monitoring the implementation of the Action Plan at the national level include: the national biosafety committees and institutional biosafety committees or equivalent bodies and the competent national authorities.

20. In the process of developing national-level indicators for capacity-building, often it is difficult to delineate clear-cut (quantitative and objective) indicators, because of the qualitative nature of most

capacity-building activities. In view of this limitation, it may be advisable to employ a mixture of qualitative and quantitative indicators in order to obtain a balanced assessment of the success of such activities. Qualitative judgments for example on the relevance, effectiveness, adaptability or sustainability of capacity-building initiatives are equally vital as numeric measurements.

21. In developing indicators for capacity-building in biosafety at the national and regional levels, relevant indicator initiatives undertaken by different international processes and organizations should take account, including those under the Convention on Biological Diversity and the Commission on Sustainable Development. Every effort should be made to avoid duplication of effort in the development and application of indicators.

V. CONCLUSION

22. Indicators provide a vital means for systematically monitoring the status, progress, impact and effectiveness of capacity-building measures being undertaken in support of the Action Plan. This note has described the conceptual framework for developing capacity-building indicators and outlined their importance in facilitating implementation of the Action Plan. The set of indicators for monitoring implementation of the Action Plan is by no means exhaustive and the indicators are not intended to measure specific individual capacity-building initiatives but rather to monitor and evaluate the overall progress in implementing Action Plan at the global level. They could also provide a basis for Governments and relevant organizations to develop case-specific indicators for monitoring progress and impact of different initiatives at various levels.

VI. DRAFT DECISION

The Conference of the Parties to the Convention on Biological Diversity serving as the meeting of the Parties to the Cartagena Protocol on Biosafety may wish to consider adopting a decision along the following lines:

The Conference of the Parties serving as the meeting of the Parties to the Protocol,

1. *Takes note* of the set of indicators for monitoring implementation of the Action Plan, contained in the annex to this decision;

2. *Invites* Parties, other Governments, and relevant organizations to use, as appropriate, the indicators referred to in paragraph 1 above to monitor their biosafety capacity-building initiatives being implemented in support of the Action Plan;

3. *Invites* Parties, other Governments, and relevant organizations to submit to the Executive Secretary, and to share through the Biosafety Clearing-House and national reports, their experience in using the set of indicators;

4. *Requests* the Executive Secretary to prepare, for consideration at its third meeting, a report on the operational experience in using the indicators and proposals for their further development and refinement, on the basis of submissions by Parties, other Governments, and relevant organizations.

Annex

SET OF INDICATORS FOR MONITORING IMPLEMENTATION OF THE ACTION PLAN FOR BUILDING CAPACITIES FOR THE EFFECTIVE IMPLEMENTATION OF THE PROTOCOL

1. The set of indicators presented below is intended for use in tracking the overall progress in implementing the Action Plan, encompassing the overall cumulative contribution of different capacity-building projects and other activities. The indicators are not intended for use in measuring the results of specific individual capacity-building projects. Such indicators would need to be developed on a case-specific basis.

2. In the set of indicators outlined below, four main types can be identified, namely: "indicators of existence", "indicators of status", "indicators of change" and "indicators of progress towards an endpoint". The first type includes indicators that show whether something exists or not (i.e. yes/no), e.g. existence of laws and regulations. Status indicators include actual values/ levels of a given parameter, either quantitatively (e.g. number of people, percentage of people) or qualitatively (e.g., low/medium/high). The "indicators of change" show variation in the level of a given parameter, either increase/decrease or positive/negative. Indicators of change are measured in comparison to a starting point in time or in terms of progress towards and endpoint. In some cases, the measurement may be quantitative (e.g. change in number of staff), and in other cases it may be qualitative (e.g. change in level of satisfaction). They may also show overall trends or pattern of change.

Desired outcome (based on Action Plan elements)	*Criteria and indicators*
A. Improved institutional capacity	
(i) Effective legislative and policy frameworks in place	a) Existence of biosafety frameworks (e.g. policies, laws and regulations) b) Change in level of harmonization of national biosafety frameworks with other national frameworks and programmes c) Level of consistency of national biosafety frameworks with the Protocol d) Level of stakeholder satisfaction with the national biosafety frameworks
(ii) Appropriate administrative frameworks in place	a) Existence of clearly defined institutional mechanisms for administering biosafety, including designation of competent national authorities and responsibilities among agencies b) Change in the quantity and quality of staffing in national institutions dealing with biosafety c) Percentage of notifications handled and decisions taken within the timeframes specified in the Protocol d) Existence of systems for managing biosafety records and for maintaining institutional memory e) Existence of mechanisms for inter-institutional coordination (e.g. steering committees or intranets), and change in the level of activity of such mechanisms

Desired outcome (based on Action Plan elements)	*Criteria and indicators*
(iii) Improved technical, scientific, and telecommunications infrastructures	a) Change in the quantity and reliability of office equipment and facilities in institutions dealing with biosafety b) Number and variety of facilities (e.g. laboratories) available for biosafety research work c) Change in the level of reliability of telecommunication infrastructure
(iv) Enhanced funding and resource management	a) Amount of funding for biosafety activities received or provided b) Percentage of funding for biosafety coming from national budgetary allocation c) Rate at which resources earmarked for biosafety are used for the intended activities and in a cost-effective manner
(v) Enhanced mechanisms for follow-up, monitoring and assessment	a) Existence of national mechanisms for monitoring and reporting of implementation of the Protocol
B. Improved human resources capacity development and training	a) Number of local experts trained in diverse specialized biosafety-related fields b) Frequency at which local experts are used in undertaking or reviewing risk assessments and other activities relating to the implementation of the Protocol c) Frequency at which expertise from the roster of experts is accessible whenever required by countries
C. Improved capacity for risk assessment and other scientific and technical expertise	a) Amount of biosafety research and proportion of risk assessments carried out locally b) Frequency at which local expertise is used in undertaking or reviewing risk assessments
D. Improved capacity in risk management	a) Existence of risk management strategies for LMOs with identified risks b) Rate at which risk management strategies and measures developed to prevent or mitigate identified risks are actually implemented
E. Improved public awareness, participation and education in biosafety at all levels	a) Change in level of public awareness of the Protocol b) Change in the number, scope and variety of measures taken to promote awareness of the biosafety and the Protocol c) Rate of involvement of relevant stakeholders in decision-making and in the development and implementation of national biodiversity frameworks d) Change in frequency of public access to relevant biosafety information, including through the Biosafety Clearing-House

F. Improved information exchange and data management including full participation in the Biosafety Clearing-House	a) Change in level of exchange of relevant biosafety data and information b) Extent to which information required under the Protocol is provided to the Biosafety Clearing-House c) Existence of national systems for data management and information exchange d) Existence of appropriate national infrastructure and capability to access the Biosafety Clearing-House e) Degree to which the Biosafety Clearing-House responds to the information needs of different stakeholders f) Level of stakeholder satisfaction with the Biosafety Clearing-House (including its accessibility, user-friendliness and content) g) Change in number, frequency and regional distribution of Governments and organizations accessing and retrieving information from the Biosafety Clearing-House h) Change in number and regional distribution of Governments and organizations contributing information to the Biosafety Clearing-House
G. Increased scientific, technical and institutional collaboration at sub regional, regional and international levels	a) Existence of various mechanisms for regional and international collaboration in biosafety b) Change in number of bilateral and multilateral collaborative initiatives in biosafety underway c) Change in level of participation in regional and international collaborative mechanisms and initiatives d) Existence of, and level of participation in, regional/ sub-regional advisory mechanisms and centers of excellence e) Existence of regional and sub-regional websites and databases f) Existence of mechanisms for regional and sub-regional coordination and harmonization of biosafety regulatory frameworks g) Existence of, and level of participation in, mechanisms for promoting south-south cooperation in biosafety issues h) Change in amount and availability of international technical guidance for implementation of the Protocol i) Existence of mechanisms for promoting common approaches
H. Improved access to and transfer of technology and know-how	a) Existence of enabling frameworks for technology transfer b) Change in number of relevant technologies transferred
I. Improved identification of LMO shipments as required by the Protocol	a) Existence of national measures for identification of LMO shipments b) Change in level of use of modern LMO identification techniques c) Change in level of effectiveness of identification systems and measures in ensuring safe handling, transport and packaging of LMOs

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