

*Annex I***FRAMEWORK AND ACTION PLAN FOR CAPACITY-BUILDING FOR THE EFFECTIVE IMPLEMENTATION OF THE CARTAGENA PROTOCOL ON BIOSAFETY****I. INTRODUCTION**

1. Article 22 of the Protocol requires Parties to cooperate in the development and/or strengthening of human resources and institutional capacities in biosafety, including biotechnology to the extent that it is required for biosafety, for the purpose of ensuring the effective implementation of the Protocol, taking fully into account the needs of developing country Parties, in particular the least developed and small island developing States among them, and Parties with economies in transition for financial resources and access to and transfer of technology and know-how.

2. At their first meeting, held in 2004, the Parties to the Cartagena Protocol on Biosafety (COP-MOP) adopted an Action Plan for Building Capacities for the Effective Implementation of the Cartagena Protocol on Biosafety. In 2006, the Parties to the Protocol adopted a revised version of the Action Plan and decided to conduct a comprehensive review every five years, based on independent evaluations. In 2010, the Parties adopted terms of reference for the comprehensive review and requested the Executive Secretary to commission the independent evaluation of the Action Plan and to also prepare a working document to facilitate the comprehensive review of the Action Plan, taking into account the information and suggestions submitted by Parties, other Governments and relevant organizations, the information provided in the second national reports, and the findings of the independent evaluation.

3. The independent evaluation of the Action Plan, which was conducted in late 2011 and early 2012, recommended the development of a new document to replace the current Action Plan, comprising two components: (i) a “framework for capacity-building”, which would serve as a reference and guidance tool; and (ii) a “results-based Action Plan” consisting of prioritized actions, specific expected results/targets and a limited set of measurable indicators. Furthermore, the independent evaluation, as well as the submissions from governments and relevant organizations, recommended that the Action Plan or its replacement be aligned with the Strategic Plan for the Protocol for the period 2011-2020.

4. The present Framework and Action Plan for Capacity-Building for the Effective Implementation of the Cartagena Protocol on Biosafety was prepared on the basis of the information provided in the second national reports on the implementation of the Protocol, the findings and recommendations of the independent evaluation of the Action Plan and the views and suggestions submitted by Parties, other Governments and relevant organizations to the Secretariat and through the online forum on capacity-building. It also takes into account recommendations of the Liaison Group on Capacity-Building for Biosafety.

II. SITUATIONAL ANALYSIS AND BASIS FOR ACTION

5. The effective implementation of the Protocol continues to be hampered by the lack of capacity in many developing country Parties, in particular the least developed and the small island developing States among them, and Parties with economies in transition. In their second national reports on the implementation of the Protocol, 114 Parties of the 143 Parties (80%) that submitted their reports by 31 December 2011 reported that they lack capacity in various areas. In particular, most Parties expressed a need for capacity-building in risk assessment, risk management, detection and identification of living modified organisms, public awareness and participation, and in measures to address unintentional and/or illegal transboundary movements of living modified organisms (LMOs). Many

Parties also expressed the need for institutional building; human resources development; scientific, technical and institutional collaboration; and information exchange and data management, including participation in the Biosafety Clearing-House.

6. A review of the status of implementation of the Protocol¹ noted that in their second national reports, many developing country Parties, in particular the least developed and the small island developing States among them and Parties with economies in transition reported that they do not have in place fully established and functioning biosafety regulatory frameworks that meet the requirements of the Protocol. Many reported that they have no practical experience as yet and lack appropriate legal, institutional and technical capacity for decision-making on LMOs for intentional introduction into the environment or for LMOs intended for direct use as food or feed, or for processing (LMOs-FFP). They do not have in place a mechanism for handling requests, have no procedures for decision-making, and have limited capacity to review applications, including capacity to undertake or review risk assessments prior to making a decision. Only 63 Parties reported that they had acquired the necessary capacity to conduct risk assessments. Many developing country Parties, in particular the least developed and the small island developing States among them, also noted a lack of legal frameworks and technical capacity to prevent, detect and/or appropriately respond to illegal and unintentional transboundary movements of LMOs where they occur. Furthermore, 42 Parties reported that they have no capacity to enforce the requirements of identification and documentation of LMOs, and 63 Parties stated that they have such capacity only to some extent.

7. According to various reports² there are major weaknesses in the current approaches to capacity-building under the Protocol. For example, in a number of countries biosafety capacity-building activities are implemented in an ad hoc and fragmented (“piecemeal”) manner and are not mainstreamed into broader national development plans and relevant sectoral policies and programmes. Furthermore, many initiatives lack rigorous appraisal at the design stage and are not based on comprehensive systematic stocktaking and needs assessments. A number of initiatives have also been designed with unrealistic and overly ambitious expectations and with insufficient inputs. Also, some initiatives are being designed in a top-down manner, with limited involvement of relevant stakeholders to ensure local ownership and commitment. Besides, a number of initiatives have a short-term to medium-term horizon (ranging from 1 to 3 years) which is often too short to ensure effective delivery and sustainable results. Moreover, many biosafety projects have not incorporated measures to ensure the sustainability of their activities and outcomes at the end of the funding period. Finally, a number of initiatives are currently poorly tracked, evaluated and reported and often there is a lack of objective baseline data upon which to assess the progress made.

8. In terms of delivery, seminars and workshops are the main mechanisms used for human resource development in the vast majority of capacity-building initiatives. There are very few formal biosafety education and training programmes leading to academic qualifications. A number of initiatives have developed standardized training packages, toolkits and guidelines on different topics. Furthermore, in spite of the efforts being made through the Coordination Mechanism for the Implementation of the Action Plan, the level of coordination and communication between different initiatives and donors remains poor, leading to incoherence in capacity-building delivery and duplication of effort in certain areas and little or no attention to others.

¹ The review of the status of implementation of the Protocol is presented in document UNEP/CBD/BS/COP-MOP/6/17/Add.1.

² These include reports of the independent evaluation of the Action Plan (UNEP/CBD/BS/COP-MOP/6/INF/2) and the “Expert Review of the Effectiveness of Various Approaches to Biosafety Capacity-Building” submitted to the fifth meeting of the Parties by the United Nations Environment Programme (UNEP/CBD/BS/COP-MOP/5/INF/9).

9. This capacity-building framework and action plan aims to advance implementation of the capacity-building components of the Strategic Plan for the Protocol and to assist Parties to address their capacity-building needs and challenges, including the shortcomings identified above. In particular, it seeks to guide and assist Parties, other Governments and relevant organizations to develop, implement and evaluate biosafety capacity-building activities in a strategic, systematic, and forward-looking manner. The framework and action plan sets the overall vision; provides basic guiding principles; proposes strategic steps and tasks that Parties, other Governments and relevant organizations could take at the national, regional and international levels; and presents a results-oriented action plan to translate the ideas in the strategic plan into concrete actions and results.

10. In the context of this framework and action plan, capacity-building is described as the process of developing, strengthening and maintaining the capabilities needed to elaborate and implement measures to ensure the safe transfer, handling and use of living modified organisms resulting from modern biotechnology.³ This encompasses development of capacities at (i) the individual level (including the knowledge, skills, and competencies of individuals); (ii) the organizational level (including the institutional structures, processes and procedures; the infrastructure (facilities, equipment and materials, inter-institutional networks and partnerships, and human resources); and (iii) the systemic level (including the enabling policy and legal frameworks, governance systems, external partnerships and externalities that affect the effectiveness and sustainability of capacity-building efforts).

III. FRAMEWORK FOR CAPACITY-BUILDING

11. This framework has been developed within the context of the Strategic Plan for the Protocol. It is designed to serve both as a strategic document and as a reference or guidance tool. As a strategic document it sets the overall vision, direction, objectives and scope of capacity-building under the Protocol, including key areas requiring urgent action. As a reference or guidance tool it provides a general conceptual and operational framework for capacity-building, including the guiding principles and approaches, strategic processes and steps that may be taken, and general guidance on key tools, good practices and lessons learned that Parties, other Governments and relevant organizations could use or apply in designing and implementing their own capacity-building interventions.

12. The framework is relevant to a wide range of individuals and organizations involved in the design, implementation and/or funding of biosafety capacity-building initiatives. It can be adapted to many situations and contexts to address specific capacity-building needs and challenges. It is a living tool that will be updated on the basis of the experiences gained and lessons learned from previous and ongoing global efforts.

3.1 *Vision*

13. By 2020 all Parties will have in place the requisite human resources and institutional capacities for ensuring an adequate level of protection in the field of the safe transfer, handling and use of living modified organisms that may have adverse effects on the conservation and sustainable use of biological diversity, taking also into account risks to human health.

³ A number of institutions use the term “capacity development” rather than “capacity-building” noting that the latter has a narrower scope and gives the impression that no capacity exists before the intervention. Nevertheless, this framework and action plan will continue with the term “capacity-building” to be consistent with the terminology used in the Protocol.

3.2 Objectives

14. Consistent with Strategic Objective 2 of the Strategic Plan for the Protocol, the objective of the capacity-building framework is to further develop and strengthen the capacity of Parties to implement the Protocol. The purpose of the framework is to guide, catalyse and facilitate the capacity-building initiatives of Parties, other Governments and relevant organizations, by providing a strategic framework aiming to:

- (a) Promote a common understanding of the key issues, priorities, guiding principles and approaches regarding capacity-building for the effective implementation of the Protocol;
- (b) Foster a strategic, focused, coherent and coordinated approach to capacity-building in biosafety, including biotechnology to the extent that it is required for biosafety;
- (c) Guide the identification and prioritization of capacity-building needs by Parties, and catalyze the development and implementation of targeted, synergistic and integrated biosafety capacity-building initiatives at the national, regional and international levels;
- (d) Facilitate the engagement of donors and the coordinated design and implementation of development assistance and technical cooperation programmes in the area of biosafety;
- (e) Facilitate the mobilization and leveraging of financial, technical and technological resources and expertise;
- (f) Promote regional and international cooperation and coordination with respect to capacity-building in biosafety to foster synergy and complementarity among various initiatives.

15. The capacity-building framework also seeks to guide the provision of financial, technical and technological support to developing countries, in particular the least developed and small island developing States among them, as well as countries with economies in transition, including countries among these that are centres of origin and centres of genetic diversity.

3.3 Guiding principles

16. In light of the operational experience and lessons learned from various capacity-building processes and programmes, capacity-building initiatives undertaken in line with this framework should, as appropriate:

- (a) Be country-driven, i.e., based on the needs and priorities identified by the recipient countries themselves;
- (b) Ensure national ownership and leadership, including the setting of priorities and the design, implementation and evaluation of the initiatives;
- (c) Ensure broad, informed and timely participation of relevant stakeholders in the design, implementation and evaluation of capacity-building interventions;
- (d) Recognize that capacity-building is a dynamic, progressive and long-term process, applying an adaptive and learning-by-doing approach;
- (e) Maximize synergy and complementarity among biosafety capacity-building initiatives;
- (f) Apply a results-oriented approach, focusing on achieving specific capacity-building results and outcomes;

(g) Promote policy dialogue with donors and organizations providing biosafety capacity-building assistance and encourage the participation of civil society and the private sector in such dialogue;

(h) Apply a holistic approach, integrating biosafety activities with relevant sectoral and national policies, strategies and programmes;

(i) Encourage the development and implementation of nationally-designed and resourced activities that address the specific needs and priorities of each country;

(j) Promote regional and subregional approaches to capacity-building;

(k) Build the political will and commitment for the implementation of the Protocol.

3.4 Focal areas for capacity-building

17. In line with Strategic Objective 2 of the Strategic Plan for the Cartagena Protocol on Biosafety, the priority focal areas for capacity-building for the period 2011-2020, in the context of this capacity-building framework and action plan, will be the following:

- (1) National biosafety frameworks;
- (2) Risk assessment and risk management;
- (3) Handling, transport, packaging and identification of living modified organisms;
- (3) Liability and redress;
- (5) Public awareness, education, and participation;
- (6) Information sharing; and
- (7) Biosafety education and training.

18. It is recognized that capacity-building needs vary from country to country. It is also noted that some of the above focal areas may not be priorities for some Parties. Therefore, the prioritization of specific capacity needs must be a country-driven process. In addition to the above focal areas, Parties may wish to determine their specific priority needs and communicate the information to the Biosafety Clearing-House.

3.5 Strategic actions

19. The activities listed here are generic strategic tasks that may be undertaken at the national, regional and international levels to facilitate effective design, implementation and evaluation of the capacity-building initiatives across the various focal areas of the Strategic Plan for the Cartagena Protocol on Biosafety. The tasks are not listed in any order of priority. The specific activities relating to the priority focal areas are outlined in the Action Plan described in section IV below.

3.5.1 National level

20. Tasks that may need to be undertaken at the national level include:

(a) Assessment of existing human resource and institutional capacity, including existing tools and mechanisms as well as completed and ongoing projects to identify the capacity needs and gaps;

- (b) Development of a national biosafety capacity-building strategy and action plan, prioritizing the capacity-building needs and defining specific objectives based on the key elements provided above, including development of timelines, outputs, and targets;
- (c) Development of a resource mobilization strategy to guide national efforts to mobilize existing capacities and ensure their effective utilization;
- (d) Establishment and/or strengthening of a national coordination mechanism in order to promote synchronized and synergistic implementation of capacity-building activities and the harmonized use of external financial and technical assistance at the national level;
- (e) Assessment of existing funding from national, bilateral and multilateral sources and assessment of short-term and long-term funding needs;
- (f) Integration of biosafety into broader national development strategies and plans, including country Poverty Reduction Strategy Papers (PRSPs), country assistance strategies and/or other similar instruments and relevant sectoral policies and programmes, including the national biodiversity strategies and action plans.

3.5.2 Subregional and regional levels

21. Tasks that may need to be undertaken at the subregional/regional level include:

- (a) Establishment of regional websites and databases;
- (b) Establishment of mechanisms for regional and subregional coordination of biosafety regulatory framework implementation, as appropriate;
- (c) Development of subregional and regional mechanisms for human-resources development and training in biosafety, including through regional courses, staff exchanges, and joint research;
- (d) Development of subregional or regional infrastructure and/or administrative mechanisms for the assessment and management of risks of living modified organisms;
- (e) Establishment of a forum for the exchange of information on public awareness, education and participation;
- (f) Promotion of regional and subregional collaborative initiatives on biosafety;
- (g) Establishment of regional and subregional advisory mechanisms;
- (h) Establishment and/or strengthening of regional centres of excellence and training.

3.5.3 International level

22. Tasks that may need to be undertaken at the international level include:

- (a) Ensuring the effective functioning of the Biosafety Clearing-House;
- (b) Enhancing the mobilization of financial resources from multilateral, bilateral and other donors to assist developing country Parties, in particular the least developed and the small island developing States among them, and Parties with economies in transition, including those that are centres of origin and centres of genetic diversity;
- (c) Identification and maximization of opportunities for collaborative initiatives and partnerships to enhance synergies, leverage resources and achieve greater impact;

- (d) Ensuring effective use of the roster of experts;
- (e) Strengthening South-South cooperation;
- (f) Development/updating of international guidance on various technical issues;
- (g) Development of indicators for evaluating capacity-building measures at different levels;
- (h) Regular review and provision of further guidance by the Parties to the Protocol.

3.6 *Strategic approaches to capacity-building*

23. In addition to the general guiding principles outlined in section 3.3 above, Parties, other Governments and relevant organizations are encouraged to adopt, as appropriate, the following strategic approaches to improve the effectiveness, impact and sustainability of their capacity-building initiatives:

- (a) Ensure that the design of capacity-building initiatives is based on systematic stocktaking and needs assessments in order to ensure that they are strategic, demand-driven and cost-effective;
- (b) Diversify approaches to human resources development beyond seminars and workshops to include formal education and training programmes, learning-by-doing approaches, staff exchanges, peer-to-peer learning through professional networking, and self-instruction;
- (c) Promote formal academic training in biosafety at graduate and post-graduate levels in order to develop a cadre of biosafety experts in various fields at the national level;
- (d) Broaden the scope and depth of training activities in specific areas of professional responsibilities (including risk assessment, risk management, LMO detection and others);
- (e) Adopt a systematic approach to training in biosafety, including, *inter alia*, conduct of training needs assessments, setting of clear training objectives, use of a wide of a range of customized training methods and tools, systematic evaluation and follow-up of the training activities;
- (f) Promote the “training-of-trainers” approach and ensure that the trained trainers have the necessary pedagogical skills, institutional support, structures, facilities and resources to be able train others;
- (g) Maximize existing opportunities for distance-learning, including interactive e-learning modules available online and on CD-ROM, in order to increase the number of participants benefiting and help to reduce the cost of training;
- (h) Institutionalize short-term biosafety trainings (including seminars and workshops), which are currently offered on an ad hoc one-off basis by various government departments and organizations, under designated national or regional training institutions, to facilitate their delivery in a systematic, integrated and efficient manner;
- (i) Review the criteria for selection of target audiences for training and other capacity-building activities to ensure that a wide range of participants (from both government and non-government organizations), who are in most need, have the requisite background and are in a position to readily apply the acquired knowledge and skills, are given due consideration;
- (j) Adopt a long-term and phased approach to capacity-building within the context of the national capacity-building strategies, the national biosafety frameworks (NBFs) and the Strategic Plan for the Protocol;

(k) Adopt a regional or subregional approach to capacity-building in biosafety to, *inter alia*, facilitate the sharing of information and technical resources, enhance coherence and synergy of capacity-building activities, and maximize the use of existing institutional, technical and human resources;

(l) Incorporate in all biosafety capacity-building projects sustainability measures, including strategies for retention of the knowledge and capacity built and continued use of the projects outputs, once the external funding and other support ends;

(m) Ensure that all biosafety capacity-building projects are systematically tracked and evaluated based on prior agreed indicators, and share evaluation reports through the Biosafety Clearing-House.

3.7 *Sustainability strategies and measures*

24. The essence of capacity-building is to ensure that Parties have lasting capabilities to fulfil their obligations under the Protocol. In this regard, Parties, other Governments and relevant organizations are encouraged to incorporate into the design and delivery of capacity-building initiatives strategies and measures that would foster ongoing action, sustainable results and long-term impact beyond the “lifespan” of the initiatives. It is advisable to develop sustainability plans at the design stage and not in the final months of capacity-building interventions. It is also advisable to build sustainability elements into the various modes of delivery of capacity-building initiatives.

25. Among other things, Parties, other governments and relevant organizations are encouraged to:

- (a) Set realistic objectives for their capacity-building initiatives;
- (b) Ensure active involvement of relevant stakeholders to foster a sense of ownership and commitment to long-term action;
- (c) Create effective linkages among different sectors; establish strategic partnerships to leverage and maximize resources;
- (d) Build strong institutions and coordination mechanisms that involve relevant stakeholders;
- (e) Mainstream biosafety into broader development plans and relevant sectoral programmes;
- (f) Adopt modes of delivery such as “training of trainers” that create a “multiplier effect”; incorporate biosafety management costs into the national budgets;
- (g) Ensure that the design of capacity-building initiatives is based on realistic assessments of the domestic resources available to sustain the activities; and
- (h) Diversify the sources of funding and technical support.

26. Another important strategy to promote sustainability is to institutionalize the implementation of capacity-building activities to ensure that the knowledge, skills and other capacities developed as part of capacity-building interventions are retained and integrated into existing institutional programmes. In this regard, it is important to ensure that the institutions selected to implement initiatives are well managed and appropriately resourced to take-over and sustain the initiatives’ activities. It is also crucial to ensure that the institutions selected are recognized in the national regulatory frameworks, have permanent staff and supportive leadership, rely on local personnel and resources to implement the activities and have strong support from the government. The latter may require deliberate awareness-raising and outreach to senior management and political leadership to help muster the necessary political will and commitment.

27. In addition, a consistent and objective approach to monitoring and evaluation would help to ensure the sustainability of initiatives by enabling Parties, other Governments and relevant organizations to determine adjustments that need to be made during the implementation process.

28. Finally, promotion of regional and South-South cooperation, establishment of inter-agency partnerships and networks, establishment or strengthening of regional centres of excellence, and the development of adaptable capacity-building products, such as online training modules or e-learning courses and online databases or virtual libraries, are important strategies that could facilitate sustained access to technical support and assistance and ongoing knowledge-sharing and learning.

IV. THE RESULTS-ORIENTED CAPACITY-BUILDING ACTION PLAN (2012-2020)

29. The Action Plan below is designed to facilitate the implementation of the capacity-building components of the Strategic Plan of the Cartagena Protocol on Biosafety for the period 2011-2020. It includes an indicative list of expected results and a set of activities to be implemented, as appropriate, by Parties, other Governments and relevant organizations at the international, regional, and national levels to contribute to capacity-building for the effective implementation of the Protocol in a strategic and focused manner. The proposed activities are not meant to be prescriptive or exclusive. Rather they are illustrative of the kinds of core activities that would need to be undertaken, as appropriate, in order to achieve the desired results by 2020. The Action Plan is meant to complement other relevant initiatives and plans, including the Strategic Plan for Biodiversity 2011-2020 and its Aichi Biodiversity Targets, and the Bali Strategic Plan for Technology Support and Capacity-Building.

4.1 Objectives, activities and expected results

Focal area 1: National biosafety frameworks

Operational objective 1

To further support the development and implementation of national regulatory and administrative systems.

Outcomes

- National biosafety frameworks developed and implemented;
- Functional national biosafety systems.

Indicators	Results/Outputs	Activities
<ul style="list-style-type: none"> • Number of Parties with operational regulatory frameworks (biosafety laws and regulations) • Number of Parties with functional administrative arrangements 	<ul style="list-style-type: none"> (a) National biosafety policies, laws and regulations in place and being implemented (b) National institutions and administrative systems for handling LMO applications in place (c) Standard operating procedures for handling LMO applications in place (d) Provisions made in the national annual budgets for operationalizing the national biosafety system (e) Trained staff in place to administer the national biosafety system 	<ul style="list-style-type: none"> 1.1 Development and implementation/enforcement of national biosafety policies and laws and the implementing regulations or guidelines 1.2 Development of a best practice guide on: <ul style="list-style-type: none"> (i) Implementation of national biosafety frameworks; (ii) Enforcement of national biosafety laws and regulations; (iii) Establishment and management of administrative systems; and (iv) Mainstreaming of biosafety into relevant policies/plans 1.3 Development of training modules based on elements of the above guide 1.4 Organization of training-of-trainers workshops on the elements of the best

Indicators	Results/Outputs	Activities
	(f) Biosafety is mainstreamed into broader development plans and sectoral policies and programmes, including the national biodiversity strategies and action plans	<p>practice guide</p> <p>1.5 Development and/or implementation of an electronic system for:</p> <p>(i) handling of notifications and</p> <p>(ii) registration of applications and approvals/decisions taken</p> <p>1.6 Organization of training courses and on-the-job training programmes for personnel responsible for administering the biosafety regulatory systems</p>

Focal area 2: Risk assessment and risk management

Operational objective 2

To enable Parties to evaluate, apply, share and carry out risk assessments and establish local science-based capacities to regulate, manage, monitor and control risks of living modified organisms (LMOs).

Outcomes

- Resources, including human resources, and the administrative mechanisms required to assess risks of LMOs are available;
- Training materials and technical guidance on risk assessment and risk management developed and used by Parties;
- Infrastructure and administrative mechanisms established for the management of risks of LMOs at national, subregional or regional levels.

Indicators	Results/Outputs	Activities
<ul style="list-style-type: none"> • Ratio of risk assessment summary reports as against number of decisions on LMOs on the BCH • Number of people trained on risk assessment of LMOs as well as in monitoring, management and control of LMOs • Number of Parties that have infrastructure including laboratories for monitoring, management and control of LMOs • Number of Parties using the training materials and technical guidance developed • Number of Parties that are of the opinion that the training materials 	<p>(a) Parties have trained experts in fields relevant for risk assessment and risk management</p> <p>(b) Guidance on risk assessment and risk management of LMOs readily available and being used by Parties</p> <p>(c) Local experts conducting risk assessments and/or risk assessment audits as part of decision-making regarding LMOs</p> <p>(d) Parties submitting risk assessment summaries to the BCH</p> <p>(e) Baseline data on biodiversity relevant for risk assessment and risk management available</p> <p>(f) Parties have the necessary infrastructure for risk assessment and risk management</p>	<p>2.1 Establishment of institutional arrangements (e.g., technical and advisory committees or other arrangements) for conducting or reviewing risk assessments</p> <p>2.2 Organization of training-of-trainers workshops on risk assessment and risk management</p> <p>2.3 Development of guidance documents on risk assessment and risk management</p> <p>2.4 Development or strengthening of technical infrastructure for risk assessment and risk management</p> <p>2.5 Conducting scientific biosafety research relating to LMOs</p> <p>2.6 Review of existing data and/or conducting new research to acquire data on biodiversity for specific ecological areas (e.g., botanical files, consensus documents, national inventories, etc.) relevant to risk assessment and risk management</p> <p>2.7 Establishment and maintenance of user-friendly databases to facilitate easy</p>

Indicators	Results/Outputs	Activities
and technical guidance are sufficient and effective	(g) Parties using science-based risk assessment methods (h) Parties have LMO monitoring programmes based on defined protection goals, risk hypotheses and relevant assessment endpoints	access to data on biodiversity relevant for risk assessment and risk management 2.8 Development of LMO monitoring frameworks and programmes, including post-release monitoring of LMOs 2.9 Training of scientists, phytosanitary officers, inspectors and other relevant officials on LMO monitoring, enforcement and emergency response

Focal area 3: Handling, transport, packaging and identification

Operational objective 3

To develop capacity for handling, transport, packaging and identification of living modified organisms.

Outcomes

- Customs/border control officials and other officials are able to enforce the Protocol's requirements related to handling, transport, packaging and identification of LMOs;
- Personnel are trained and equipped for sampling, detection and identification of LMOs.

Indicators	Results/Outputs	Activities
<ul style="list-style-type: none"> • Number of customs/border control officers and laboratory personnel trained • Percentage of Parties that have established or have reliable access to detection laboratories • Number of national and regional certified laboratories with the capacity to detect LMOs • Number of certified laboratories in operation 	(a) National systems for implementing the Protocol's requirements on the handling, transport, packaging and identification of LMOs in place and are operational (b) National systems, including standard operating procedures, for detection and identification of LMOs in place (c) Local experts able to detect and identify LMOs in shipments (d) Capacity for verification and certification of documentation accompanying LMO shipments at the points of entry in place (e) Certified LMO testing facilities established at national and (sub)regional levels (f) Systems for traceability and labelling of LMOs in place (g) Regional and subregional networks of laboratories for LMO detection and	3.1 Establishment of national systems for implementing the Protocol's requirements on the handling, transport, packaging and identification of LMOs 3.2 Development of national systems to implement international rules and standards for sampling and detection of LMOs to facilitate mutual recognition of LMO identification results within and between countries 3.3 Establishment of mechanisms for auditing the efficacy of the national systems for handling, transport, packaging and identification of LMOs 3.4 Organization of national and (sub)regional training workshops on LMO documentation and identification requirements for customs and border control officials and other relevant stakeholders 3.5 Development of standardized forms and checklists on identification requirements for use in verification of the documentation accompanying LMO shipments 3.6 Development of methodologies and protocols for sampling and detection of LMOs and/or adapting existing ones 3.7 Organization of trainings for local scientists and laboratory technicians in LMO detection and analysis 3.8 Establishment of infrastructure for detection

Indicators	Results/Outputs	Activities
	identification established	and identification of LMOs, including accredited laboratories 3.9 Establishment of (sub)regional networks of laboratories for LMO detection

Focal area 4: Liability and redress

Operational objective 4

To assist Parties to the Protocol to establish and apply rules and procedures on liability and redress for damage resulting from the transboundary movements of living modified organisms, in accordance with the Nagoya – Kuala Lumpur Supplementary Protocol on Liability and Redress.

Outcomes

- Institutional mechanisms or processes identified or established to facilitate the implementation of the Nagoya – Kuala Lumpur Supplementary Protocol on Liability and Redress.

Indicators	Results/Outputs	Activities
<ul style="list-style-type: none"> • Number of eligible Parties that received capacity-building support in the area of liability and redress involving LMOs • Number of domestic administrative or legal instruments identified, amended or newly enacted that fulfil the objectives of international rules and procedures in the field of liability and redress 	<ul style="list-style-type: none"> (a) Existing national policies, laws and administrative systems identified and used, and/or amended, to implement the Supplementary Protocol requirements (b) Guidance available and being used by competent authorities in the discharge of their responsibilities under the Supplementary Protocol (c) National capacity for determining appropriate response measures in the event of damage developed (d) User-friendly databases/ knowledge management systems in place and being used to establish baselines and to monitor the status of biodiversity (e) Financial and other support being provided by the GEF, bilateral and multilateral donors and relevant organizations for the ratification and implementation of the Supplementary Protocol (f) Best practices and lessons learned in the implementation of the 	<ul style="list-style-type: none"> 4.1 Analysis of existing national policies, laws and institutional mechanisms to determine how they address or could address the requirements of the Supplementary Protocol 4.2 Establishment of new, or amendment of existing, domestic legal and administrative frameworks to implement the requirements of the Supplementary Protocol 4.3 Development of guidance to assist competent authorities in discharging their responsibilities under the Supplementary Protocol 4.4 Organization of training activities to strengthen the scientific and technical capacity of the competent authorities to be able to evaluate damage, establish causal links and determine appropriate response measures 4.5 Establishment of databases and knowledge management systems to facilitate the establishment of baselines and monitoring of the status of biodiversity at genetic, species and ecosystem levels 4.6 Strengthening national capacity to provide for administrative or judicial review of decisions on response measures to be taken by the operator in accordance with Article 5.6 of the Supplementary Protocol 4.7 Compilation and exchange of information on experiences and lessons learned in the implementation of the Supplementary Protocol through the BCH 4.8 Mobilization of financial and other support for ratification and implementation of the

Indicators	Results/Outputs	Activities
	Supplementary Protocol available through the BCH	Supplementary Protocol

Focal area 5: Public awareness, education and participation

Operational objective 5

To enhance capacity at the national, regional and international levels that would facilitate efforts to raise public awareness, and promote education and participation concerning the safe transfer, handling and use of living modified organisms.

Outcomes

- Parties have access to guidance and training materials on public awareness, education and participation concerning the safe transfer, handling and use of LMOs;
- Parties are enabled to promote and facilitate public awareness, education and participation in biosafety.

Indicators	Results/Outputs	Activities
<ul style="list-style-type: none"> • Percentage of Parties having in place mechanisms for ensuring public participation in decision-making concerning LMOs not later than 6 years after accession to/ratification of the Protocol • Percentage of Parties that inform their public about existing modalities for participation • Number of Parties having in place national websites and searchable archives, national resource centres or sections in existing national libraries dedicated to biosafety educational materials 	<p>(a) Programmes for promoting public awareness are being implemented</p> <p>(b) Guidance materials and toolkits including methodologies and best practices for promoting public awareness, and promote education and participation in place and being used by Parties</p> <p>(c) Improved mechanisms for public awareness, and promote education and participation</p> <p>(d) Effective implementation of public awareness, and promote education and participation at national, regional and international level</p>	<p>5.1 Collection of information on legal frameworks and mechanisms put in place and actual experiences on public awareness, education and participation</p> <p>5.2 Development and dissemination of training packages/online modules, guidance materials and other tools for different target groups</p> <p>5.3 Organization of regional and national workshops on the implementation of the above guidance/toolkit in order to strengthen or establish national mechanisms for public awareness, education and participation, interlinking with complementary international agreements</p> <p>5.4 Organization of training-of-trainers workshops for biosafety educators, communicators and other government and non-government personnel at national and (sub)regional levels</p> <p>5.5 Establishment of mechanisms to inform the public about existing opportunities and modalities for participation</p> <p>5.6 Establishment of national biosafety websites, searchable databases and national resource centres</p> <p>5.7 Development and implementation of biosafety public-awareness programmes</p>

Focal area 6: Information-sharing**Operational objective 6**

To ensure that the BCH is easily accessed by all established stakeholders, in particular in developing countries and countries with economies in transition.

Outcomes

- Increased access to information in the BCH and sharing of information through the BCH by users in developing countries and countries with economies in transition;
- Tools to facilitate implementation of the Protocol are easily accessible through the BCH;
- Information on the BCH is easily accessible to stakeholders, including the general public.

Indicators	Results/Outputs	Activities
<ul style="list-style-type: none"> • Number of submissions to the BCH from developing countries and countries with economies in transition • Amount of traffic from users to the BCH from developing countries and countries with economies in transition 	<ul style="list-style-type: none"> (a) Parties able to register mandatory information in the BCH (b) Parties, non-Parties and other stakeholders are able to post non-mandatory information to the BCH (c) Improved coordination and sharing of experiences on the BCH at national, (sub)regional, and global levels (d) Increased awareness and capacity of relevant stakeholders and general public to access information through BCH (e) National systems set up to gather, manage and upload onto the BCH all the information required under the Protocol 	<ul style="list-style-type: none"> 6.1 Establishment/maintenance of national and regional infrastructure for accessing the BCH 6.2 Development of national and (sub)regional systems for gathering/managing information for submission to the BCH 6.3 Creation of national websites using, as appropriate, AJAX and Hermes tools 6.4 Organization of BCH training for specific target groups, using the BCH Regional Advisors' network 6.5 Enhancement of cooperation between relevant international organizations on the further development and population of the BCH to maximize use of existing resources, experiences and expertise and to minimize duplication of activities 6.6 Organization of training for information management experts on the BCH and putting in place mechanisms to facilitate use of the BCH by various stakeholders 6.7 Establishment of mechanisms to enable countries to monitor the use of the BCH at the national level and to address gaps 6.8 Continuation of the BCH capacity-building projects at national and (sub)regional levels 6.9 Enhancement of the BCH coordination mechanism at the national level, including interministerial and interagency collaboration with relevant stakeholders

Focal area 7: Biosafety education and training**Operational objective 7**

To promote education and training of biosafety professionals through greater coordination and collaboration among academic institutions and relevant organizations.

Outcomes

- A sustainable pool of biosafety professionals with various competencies available at national/international levels;
- Improved biosafety education and training programmes;
- Increased exchange of information, training materials and staff and students among academic institutions and relevant organizations.

Indicators	Results/Outputs	Activities
<ul style="list-style-type: none"> • Number of academic institutions by region offering biosafety education and training courses and programmes • Number of biosafety training materials and online modules available 	<ul style="list-style-type: none"> (a) Improved identification of training needs and target audiences (b) Information on the current situation with regard to existing biosafety-related education and training initiatives available (c) Relevant documentation (including real-life dossiers and full risk assessment reports) made available for biosafety education and education purposes (d) Compilations of existing biosafety training and education initiatives and trainers are made available (e) E-learning courses and other distance education and training programs on biosafety are available (f) Scientific and professional conferences and workshops support exchange of information and experiences (g) Biosafety regulators continuously trained through on-the-job and off-the-job training programmes 	<ul style="list-style-type: none"> 7.1 Undertaking of periodic training needs assessments to ascertain the demand for biosafety education and training programme, and to identify target audiences 7.2 Development and/or strengthening of biosafety education and training programs at national and (sub)regional levels, including online and continuing education programs 7.3 Exchange of information on existing biosafety education and training courses and programmes through the BCH 7.4 Integration of biosafety into the curricula of existing relevant academic programs and courses 7.5 Establishment of national and (sub)regional coordination mechanisms or networks for institutions involved in biosafety education and training to facilitate the sharing experiences and best practices 7.6 Exchange of biosafety training and research materials among academic institutions 7.7 Development of academic exchange and fellowship programs to facilitate the sharing of expertise, including through North-South and South-South cooperation 7.8 Expansion and maintenance of the database in the BCH on existing biosafety training and education programmes/courses, academic staff/experts on relevant subjects and training materials. 7.9 Strengthening the capacity of existing universities, research institutes and centres of excellence to deliver biosafety education and training

4.2 Roles and responsibilities

30. The primary responsibility of implementing this Action Plan rests with Parties and other Governments. Other entities will play a supporting role, including providing financial and technical assistance. Parties and other Governments will, *inter alia*, be responsible for:

- (a) Identifying and communicating their capacity-building needs to the Biosafety Clearing-House (BCH);
- (b) Designing and implementing specific capacity-building interventions;
- (c) Mobilizing local resources and availing themselves of financial and technical support available through bilateral and multilateral channels;
- (d) Providing to the BCH reports on their capacity-building activities;
- (e) Providing an enabling environment and leadership to encourage the development of capacity-building initiatives by other entities; and
- (f) Providing direction to and coordination for capacity-building activities of other entities, including donors, within the framework of the national capacity-building strategy or action plan.

31. Other entities, including the Global Environment Facility (GEF), United Nations agencies and other intergovernmental organizations, regional bodies, bilateral and multilateral donors, academic and research institutions, non-governmental organizations and the private sector will play different roles in support of Parties and other Governments, based on their comparative advantage and expertise, taking into account the indicative roles identified in annex II to decision BS-I/5.

32. In addition to the roles specified in annex II to decision BS-I/5, the Secretariat will, subject to the availability of resources, undertake the following tasks:

- (a) Assist Parties in identifying their capacity-building needs by providing appropriate needs assessment tools, providing advice upon request and organizing (sub)regional workshops in this regard;
- (b) Organize (sub)regional workshops on project proposal development;
- (c) Prepare toolkits on good practices and lessons learned in biosafety project design, management and evaluation;
- (d) Organize training workshops for Parties on resource mobilization for biosafety to, *inter alia*, facilitate sharing of experiences and good practice and the development of resource mobilization strategies, in the context of activities to facilitate implementation of the Convention's strategy for resource mobilization.

33. The Conference of the Parties serving as the meeting of the Parties to the Protocol has an overall responsibility to provide guidance on the implementation of this Action Plan and to review its effectiveness and relevance.

4.3 Resources for implementation

34. The Action Plan will be implemented with financial support from various sources, including GEF, bilateral and multilateral funding, and voluntary financial contributions through the Secretariat. Parties are also encouraged to include in their national budgets allocations to finance biosafety capacity-building activities.

35. Parties will be invited to assess and submit to the Secretariat their funding requirements related to the implementation of the Action Plan as part of the overall process to assess the amount of financial resources needed by developing country Parties, in particular the least developed and the small island developing States among them, and Parties with economies in transition to implement the Strategic Plan for Biodiversity 2011-2020 and the Strategic Plan for the Cartagena Protocol on Biosafety for the period 2011-2020. In addition, Parties and other Governments are encouraged to identify and maximize opportunities for technical assistance and cooperation from regional and international sources for the implementation of the Action Plan.

36. The ability to mobilize adequate financial, human and technical resources in a predictable manner and on a sustainable basis will be critical to the successful implementation of the Action Plan. In this regard, Parties are encouraged to develop and implement national strategies for resource mobilization and exchange, through the BCH, information on the experiences, good practices and lessons learned.

4.4 Monitoring and evaluation

37. Monitoring and evaluation of the implementation of the Action Plan will be done by the Conference of the Parties serving as the meeting of the Parties to the Protocol. The Secretariat will prepare, on the basis of submissions by Parties and other Governments, a report on the status of implementation of the Action Plan and on how the framework is being used by Parties, other Governments and relevant organizations in the planning, implementation and monitoring of their biosafety capacity-building activities or in supporting or financing biosafety programmes. The report will be submitted to the Conference of the Parties serving as the meeting of the Parties to the Protocol for its consideration and guidance on measures for improvement.

38. The reports on the status of implementation of the Action Plan will outline the activities implemented and the key results achieved in order to provide a clearer sense of the overall progress made at different levels. In this regard, governments and relevant organizations would be requested to make submissions on both their activities and the results achieved. This would serve as a good measure of the outcomes for the capacity-building focal area of the Strategic Plan of the Protocol.

39. The indicators provided in the Action Plan will be used to monitor and evaluate the progress made. A more elaborate monitoring framework, describing, *inter alia*, the indicators and the data collection methodology, including how and where the data will be collected, will be developed by the Secretariat.

V. REVIEW OF THE FRAMEWORK AND ACTION PLAN

40. A comprehensive review of the Framework and Action Plan will be carried out for consideration by the Conference of the Parties serving as the meeting of the Parties to the Protocol in conjunction with the mid-term review of the Strategic Plan for the Protocol and the third assessment and review of the effectiveness of the Protocol, its procedures and annexes mandated by Article 35 of the Protocol.