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Item 8 of the provisional agenda

SYNTHESIS OF SUBMISSIONS ON THE STATUS OF IMPLEMENTATION OF THE FRAMEWORK AND ACTION PLAN FOR CAPACITY-BUILDING FOR THE EFFECTIVE IMPLEMENTATION OF THE CARTAGENA PROTOCOL ON BIOSAFETY

Note by the Executive Secretary

I. INTRODUCTION

1. At its sixth meeting, in decision BS-VI/3, the Conference of the Parties serving as the meeting of the Parties to the Cartagena Protocol on Biosafety adopted the Framework and Action Plan for Capacity-Building for the Effective Implementation of the Cartagena Protocol. The Parties agreed to review, at their eighth meeting, the Framework and Action Plan for Capacity-Building in conjunction with the third assessment and review of the effectiveness of the Cartagena Protocol and mid-term evaluation of the Strategic Plan for the Protocol. Furthermore, the meeting of the Parties requested the Executive Secretary to prepare, for consideration at its meetings, reports on the status of implementation of the Framework and Action Plan on the basis of the submissions made by Parties, other Governments and relevant organizations.

2. At their eighth meeting, in decision CP-VIII/3, the Parties decided to maintain the Framework and Action Plan for Capacity-Building as adopted in decision BS-VI/3, and urged Parties, for the remaining period until 2020, to prioritize and focus, as appropriate, on operational objectives relating to the development of national biosafety legislation, risk assessment, detection and identification of living modified organisms, and public awareness, education and participation in view of their importance in facilitating the implementation of the Protocol. Furthermore, in the same decision, the Parties requested the Executive Secretary to facilitate priority capacity-building activities to support the implementation of the Cartagena Protocol as reflected in the Short-term Action Plan (2017-2020) to Enhance and Support Capacity-Building for the Implementation of the Convention and its Protocols annexed to decision XIII/23 of the Conference of the Parties.

3. The present note contains, in section II, a synthesis of submissions by Parties, other Governments and organizations on the status of implementation of the Framework and Action Plan for Capacity-building.

II. SUMMARY OF SUBMISSIONS ON THE STATUS OF IMPLEMENTATION OF THE FRAMEWORK AND ACTION PLAN FOR CAPACITY-BUILDING

4. The Secretariat issued notification 2018-036,[1] inviting Parties, other Governments and relevant organizations to submit information on the status of implementation of the Framework and Action Plan for

[1] Ref No. SCBD/SPS/AL/MPM/MW/87278, issued on 9 April 2018.

Capacity-Building for the Effective Implementation of the Cartagena Protocol on Biosafety, including a summary of the results of the activities undertaken, good practices and lessons learned. Submissions were received from 28 Parties (Belarus, Bosnia and Herzegovina, Burkina Faso, Colombia, Congo, Côte d'Ivoire, Czechia, Democratic Republic of the Congo, Germany, Hungary, India, Iran (Islamic Republic of), Japan, Liberia, Malawi, Malaysia, Mexico, Namibia, Nigeria, Peru, Slovenia, Somalia, Spain, Venezuela (Bolivarian Republic of), Viet Nam, Yemen, Zambia and Zimbabwe), one other Government (Argentina) and one indigenous peoples and local communities organization (Society for Wetland Biodiversity Conservation – Nepal (IPLCs Nepal)). [2] The original submissions are available at http://bch.cbd.int/protocol/cpb_art22_submissions.shtml.

5. Below is a summary of the status of implementation of the seven focal areas of the Framework and Action Plan for Capacity-Building based on descriptions of activities undertaken provided in the submissions:

Focal area 1 - National biosafety frameworks

6. The information submitted to the Secretariat suggested that good progress had been made towards the "development and implementation/enforcement of national biosafety policies and laws and the implementing regulations or guidelines" (activity 1.1 of the Framework and Action Plan for Capacity-Building) with a majority of Parties reporting that biosafety policies and laws were, at least to some extent, in place. However, according to the submissions, several Parties still did not have in place any biosafety policies or laws.

7. With regard to the development of a best practice guide on (a) implementation of national biosafety frameworks; (b) enforcement of national biosafety laws and regulations; (c) establishment and management of administrative systems; and (d) mainstreaming of biosafety into relevant policies/plans, as well as the development of training modules based on elements of the guide (activities 1.2 and 1.3), most countries reported having carried out several activities. However, six countries did not report any progress in these activities (Bosnia and Herzegovina, Congo, Côte d'Ivoire, Democratic Republic of the Congo, Somalia and Yemen). Several countries indicated that biosafety had been integrated into national policies and strategies (Hungary, India, Iran (Islamic Republic of), Malawi, Malaysia, Mexico and Spain), while others indicated that efforts to mainstream biosafety had been initiated (Burkina Faso and Zimbabwe) but progress had been slow (Liberia). Peru indicated that political support was required in biosafety issues and that intersectoral coordination needed to be improved. Burkina Faso reported that an advocacy document for the integration of biosafety into sectoral policies had been developed for the benefit of its ministerial sectors. Congo indicated that the lack of law and a validated national framework did not allow for the structuring of its institutions. The Democratic Republic of the Congo noted a lack of sufficient means for sensitizing decision makers to the importance of integrating biosafety into national strategies and development plans.

8. In relation to the organization of training-of-trainers workshops on administering the biosafety regulatory systems (activity 1.4) and of training courses and on-the-job training programmes for personnel (activity 1.6), many countries provided information about specific training activities. The Democratic Republic of the Congo noted the importance of training courses and on-the-job training. India indicated that the "train the trainer" approach was being used for organizing trainings to strengthen enforcement on implementation of a national biosafety framework with many workshops, having organized more than 40 such workshops in the preceding 10 years. The Islamic Republic of Iran indicated that a training-of-trainers workshop would be organized in December 2018, and IPLCs Nepal singled out training of trainers as an important approach to develop capacity.

[2] Germany and Slovenia indicated that their biosafety frameworks are fully in place and in accordance with the Cartagena Protocol. Thus, these countries do not have the need to carry out specific capacity-building activities, and did not report on the status of implementation of the Framework and Action Plan.

9. Several countries reported on the development and/or implementation of an electronic system for handling notifications and registering applications and approvals/decisions taken (activity 1.5), including Burkina Faso, Colombia, Czechia, India, Iran (Islamic Republic of), Malawi, Malaysia, Mexico, Nigeria and Spain. The Democratic Republic of the Congo noted the lack of financial resources to put in place electronic systems for notifications and decisions, and that, to date, decisions taken with regard to the approval of living modified organisms had not been registered electronically. Hungary indicated that an update of the competent authority's official national database was under way. Namibia reported the development of a non-electronic "Work Instruction" for handling applications. Nigeria noted that their node of the Biosafety Clearing-House was a functional electronic system for import notification through the Integrated Customs Information System (ICIS). Peru indicated that a biosafety information management platform was being developed.[3] Yemen and Zimbabwe indicated that they relied solely on the central portal of the Biosafety Clearing-House for registering notifications and decisions.

10. In conclusion, the information submitted to the Secretariat suggested that good progress had been made towards the "development and implementation/enforcement of national biosafety policies and laws and the implementing regulations or guidelines" with a majority of Parties reporting that biosafety policies and laws were, at least to some extent, in place. However, according to the submissions, several Parties still did not have in place any biosafety policies or laws.

Focal area 2 - Risk assessment and risk management

11. The majority of countries reported on activities for the establishment of institutional arrangements (e.g., technical and advisory committees or other arrangements) for conducting or reviewing risk assessments (activity 2.1). These include Belarus, Bosnia and Herzegovina, Burkina Faso, Colombia, India, Iran (Islamic Republic of), Japan, Liberia and Malawi, among others.

12. Several countries reported having organized training-of-trainers workshops on risk assessment and risk management (activity 2.2) and training of scientists, phytosanitary officers, inspectors and other relevant officials on monitoring of living modified organisms (LMOs), enforcement and emergency response (activity 2.9), including Argentina, Belarus, Colombia, Czechia, India and Japan, among others. Burkina Faso had conducted technical training for phytosanitary and veterinary agents for the monitoring and rapid detection of LMOs. Colombia noted that several capacity-building activities had been carried out under the "LAC-Biosafety América Latina: Construcción de Capacidad Multi-País en Cumplimiento del Protocolo de Cartagena sobre Bioseguridad" project for training decision makers and other professionals involved in biosafety from Brazil, Colombia, Costa Rica and Peru. India had carried out a training-of-trainers workshop, which included topics on problem formulation, environmental risk assessment, dossier preparation and monitoring of confined field trials. Liberia noted that training on risk assessment was implemented at a very low scale in the country. Argentina reported having organized six capacity-building workshops since 2017. IPLCs Nepal indicated that capacity-building on risk assessment had not taken place and noted the importance of such activities.

13. Some countries, including Belarus, India and Iran (Islamic Republic of), reported having carried out capacity-building activities related to the development of guidance documents for risk assessment (activity 2.3).

14. In regard to the development or strengthening of technical infrastructure for risk assessment and risk management (activity 2.4), Burkina Faso reported having created a laboratory dedicated to conducting risk assessments of LMOs and that would provide services to member countries of the West African Economic and Monetary Union. Colombia reported on the accreditation in 2014 of a national laboratory for detection and monitoring of LMOs. India noted that continuous efforts were being made to strengthen the technical infrastructure for risk assessment and risk management. The Islamic Republic of Iran reported that the establishment of a Regional Center for Biosafety & Bioethics at the National Institute of Genetic

[3] http://genesperu.minam.gob.pe.

Engineering and Biotechnology was about 50 per cent achieved and laboratories had been equipped and personnel trained.

15. In terms of conducting scientific biosafety research (activity 2.5), Belarus reported that 47 projects had been implemented within a framework of subprogramme "Agricultural Biotechnology" of the State programme "Innovative Biotechnologies" aimed at ensuring the development of biosafety support systems. Czechia reported that several small-scale field trials had been carried out for research purposes. The Islamic Republic of Iran indicated that several research projects had been conducted on the safety assessment of transgenic rice, potato and cotton. Japan noted that research projects had been carried out with regard to LMOs, including biology of host species and compatible species

16. With regard to research and information-sharing on biodiversity to facilitate risk assessment and risk management of LMOs (activities 2.6 and 2.7), the level of implementation was fairly low, with only a few countries reporting on such activities. For example, Colombia noted that the sharing of information on biodiversity was done through a national database. India reported that a series of crop-specific biology documents had been prepared by reviewing the existing data on biodiversity of specific crop species in the country and other information relevant to risk assessment and risk management; five such documents on maize, rice, cotton, okra and brinjal were prepared in 2008 and eight more documents were prepared on sorghum, mustard, potato, papaya, chickpea, pigeon pea, tomato and rubber under the UNEP-GEF Phase II Capacity Building Project on Biosafety. India further noted that databases on the wild and cultivated relatives of various living modified plants under confined field trials were under preparation. Malawi noted that research involving national biodiversity inventories had been done but not necessarily focusing on risk assessment and management for LMOs.

17. The development of LMO monitoring frameworks and programmes, including post-release monitoring of LMOs (activity 2.8) was reported by some countries (Colombia and India). Czechia indicated that such frameworks were already in place before the reporting period. The Islamic Republic of Iran noted that in accordance with its biosafety policy, "a system has to be established for detection, control, monitoring and auditing of LMOs after their release", but did not report on the progress toward this end. In Japan, the Ministry of the Environment and the Ministry of Agriculture, Forestry and Fisheries had been conducting monitoring on some specific living modified plants.

18. Several countries did not report on most or all activities under this focal area (Bosnia and Herzegovina, Congo, Côte d'Ivoire, Democratic Republic of the Congo, Hungary and Liberia), while others reported on their needs. For example, Congo indicated that institutional arrangements and capacity-building had not been initiated due to the lack of financial resources and human capacity, and a laboratory for detection of LMOs was lacking. The Democratic Republic of the Congo noted the importance of carrying out the activities listed under this focal area but did not report any progress in this regard.

19. In conclusion, Parties continued to prioritize this focal area and a large number of activities were reported. Overall, some progress had been made under this focal area but more still needed to be done. In line with decision CP-VIII/3, continued prioritization of this focal area during the remaining period of the Strategic Plan for the Cartagena Protocol and of the Framework and Action Plan for Capacity-Building might be advisable.

Focal area 3 - Handling, transport, packaging and identification

20. With regard to the establishment of national systems for implementing the Protocol's requirements on the handling, transport, packaging and identification of LMOs (activity 3.1) and mechanisms for auditing their efficacy (activity 3.3), Belarus, Czechia, India, Iran (Islamic Republic of), Japan, Malaysia and Viet Nam, among others, reported that national systems are in place. Malawi noted that it was participating in a Multi-Country Project to Strengthen Institutional Capacity on LMO Testing (MCP-ICLT) in support of biosafety national decision-making. Malaysia reported, among other activities, on the development of guidelines for handling, transport, packaging of LMOs under containment and field trials. Mexico noted that its national regulations contained provisions that were applicable to the handling, transport, packaging and identification of LMOs, but in some cases, it was necessary to advance such

instruments to allow their full implementation. Nigeria reported that such national systems did not exist in that country. Zambia reported that national systems were not yet in place but guidelines were being developed. Zimbabwe noted that its border officers were trained in inspection and collection of samples that are sent for testing at designated laboratories.

21. Activities for the 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 (activity 3.2) were reported by less than half of the countries that made submissions. Burkina Faso reported that this activity was ongoing. Belarus reported that products that contain LMO-derived products must be labelled as "Contains GMOs". Colombia reported that its authorities were developing sampling plans aimed at identifying the possible entry into the country of unauthorized LMOs intended for direct human consumption or as raw materials, as well as for foods that were declared as GMO-free on their label. Japan noted that national systems had been developed, particularly for LM plants. Malawi reported that two of its laboratories were participating in the MCP-ICLT project, which would provide basic equipment for the detection of LMOs and for training of laboratory technicians in LMO sampling and detection. Malaysia reported on the development, in 2018, of national standard operating procedures for LMO sampling. Mexico noted that its laboratories for detection and identification of LMOs were well recognized, with trained and specialized personnel. Namibia reported on the development of internationally benchmarked standard operating procedures, test methods and sampling protocols that ensured that there was mutual recognition of LMO identification results within and between countries. Peru noted the need for inter-laboratory tests to be promoted, through the Secretariat's Network of Laboratories for the Detection of LMOs, in order to harmonize protocols and obtain similar results after the analysis of the same samples.

22. Many countries indicated having organized training workshops on LMO documentation and identification requirements for customs and border control officials and other stakeholders (activity 3.4) and trainings for local scientists and laboratory technicians in LMO detection and analysis (activity 3.7), including Belarus, Burkina Faso, Colombia, Viet Nam and Zimbabwe.

23. With regard to the development of standardized forms and checklists on identification requirements for use in verification of the documentation accompanying LMO shipments (activity 3.5), India noted that checklists and forms for import permits were in place, while the Islamic Republic of Iran and Japan indicated that specific forms had been designed and implemented for the importation of LMOs. Namibia noted that it had adopted forms that would assist applicants in providing the right information needed to assess their applications. Zambia noted that it had some documentation in place but it needed improvement.

24. On the development of methodologies and protocols for sampling and detection of LMOs (activity 3.6), several countries noted the implementation of standardized methods for LMO detection, including Belarus, Czechia, Malaysia, Mexico and Peru, among others. Hungary noted that it conducted annual updates of the Sampling Guide for the GMO Control Plan for food and feed. Mexico noted that its detection and identification methods had been adapted to local needs, depending on the materials that needed to be analysed.

25. Furthermore, some countries also submitted information related to the establishment of infrastructure for detection and identification of LMOs, including accredited laboratories (activity 3.7) and (sub)regional networks of laboratories for LMO detection (activity 3.8). Belarus and Spain noted that they currently had 17 and 21 laboratories, respectively, accredited for LMO detection. Bosnia and Herzegovina noted that one of its laboratories was authorized and accredited for identification of LM soy and corn. Côte d'Ivoire's national biosafety laboratory was part of the laboratories network of the West African Economic and Monetary Union (UEMOA). Japan noted that it possessed an infrastructure for detection and identification of LMOs, including a system of accrediting private laboratories. Nigeria, Zambia and Zimbabwe reported having one to two laboratories designated for sampling and detection of LMOs. Peru reported that its laboratory was part of the Latin America and Caribbean Laboratory Network for the

detection and identification of LMOs. The Bolivarian Republic of Venezuela noted that it was in the process of equipping a laboratory for LMO detection to strengthen its capacity to monitor and manage risks.

26. Among the submissions received, several countries did report on any or most planned activities under this focal area (Argentina, Bosnia and Herzegovina, Congo, Côte d'Ivoire, Democratic Republic of the Congo, Liberia, Somalia and Yemen). Liberia reported on the establishment of its national GMO laboratory, but noted that the laboratory had not become functional because of the lack of trained personnel and indicated that additional training was needed. Somalia and Yemen reported that none of the planned activities under this focal area had been undertaken. IPLCs Nepal noted the relevance of the planned activities under this focal area and the importance of involving indigenous peoples and local communities in the implementation of such activities.

27. In conclusion, there has been some improvement in the implementation of this focal area since the Framework and Action Plan for Capacity-Building was adopted in 2012 but more still needed to be done. Countries recognized the importance of this focal area for the implementation of the Protocol. However, the capacity for the handling, transport, packaging and identification varied significantly among countries. For example, there was wide variation among countries in the number of laboratories that had been accredited for LMO detection. More needed to be done in terms of training of laboratory personnel and networking among laboratories and countries. This focal area might continue to be a priority during the remaining period of the Strategic Plan for the Cartagena Protocol and of the Framework and Action Plan for Capacity-Building.

Focal area 4 - Liability and redress

28. Few countries provided details on most of the planned activities under this focal area.

29. Some countries indicated that an analysis of existing national policies, laws and institutional mechanisms to determine how they address or could address the requirements of the Supplementary Protocol (activity 4.1) had been carried out (Japan, Mexico and Viet Nam) while others indicated which laws contain provisions that were or could be relevant in this regard (Burkina Faso, Nigeria and Zimbabwe). India reported that an analysis of existing national policies and laws had been conducted in light of the requirements of the Supplementary Protocol. Namibia and Peru explained that such an analysis had yet to be carried out. The Bolivarian Republic of Venezuela noted that it was part of the currently ongoing project on integrated implementation of the Cartagena Protocol on Biosafety, the Nagoya-Kuala Lumpur Supplementary Protocol on Liability and Redress and the Convention on Biological Diversity, developed by the Secretariat with the support of the Government of Japan through the Japan Biodiversity Fund.

30. With regard to the establishment of new, or amendment of existing, domestic legal and administrative frameworks to implement the requirements of the Supplementary Protocol (activity 4.2), Japan indicated that it had amended its laws in 2017 and relevant instructions and guidelines had also been amended to ensure the appropriate implementation of the Supplementary Protocol. Congo noted that it was preparing for updating its draft law and the national framework taking into account the requirements of the Supplementary Protocol. Czechia explained that adapting its laws was not necessary as its existing national legal and administrative frameworks adequately addressed the provisions of the Supplementary Protocol. India noted that new laws or amendments were not foreseen.

31. On the 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 (activity 4.4), Japan indicated that its relevant organizations continued to provide trainings, including for evaluating damage. Viet Nam had collaborated with international organizations to organize workshops for the exchange of international experiences. Zambia had conducted activities on monitoring and conducting inspections to evaluate damage, addressing non-conformances and corrective measures for unintended effects, and to determine appropriate response measures.

32. With regard to databases and knowledge sharing to facilitate the establishment of baselines and monitoring of the status of biodiversity at genetic, species and ecosystem levels (activity 4.5), the Agency for Nature Conservation and Landscape Protection of Czechia had established the corresponding databases and was also responsible for biodiversity monitoring. Japan noted that relevant information continued to be shared through its national node of the Biosafety Clearing-House (BCH).

33. Burkina Faso reported on one activity carried out for 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 (activity 4.6). Congo and Zambia indicated that capacity-building in this context was needed.

34. In relation to mobilizing financial and other support for the ratification and implementation of the Supplementary Protocol (activity 4.8), Côte d'Ivoire reported that steps had been taken to restart the process of ratification of the Supplementary Protocol. India was seeking approval of a project, through the Global Environment Facility, on strengthening capacities for implementation of the Cartagena Protocol and requirements under the Supplementary Protocol. The Democratic Republic of the Congo explained that it had adopted the Supplementary Protocol in 2017, but implementation had not begun due to lack of resources. Malawi and Zambia were still at the stage of consultations in regard to this activity.

35. The Democratic Republic of the Congo noted the importance of carrying out activities under this focal area but did not report any progress.

36. In conclusion, few countries provided details on most of the planned activities under this focal area. According to the information submitted, overall progress under this focal area had been moderate. It was expected that the entry into force, on 5 March 2018, of the Nagoya-Kuala Lumpur Supplementary Protocol on Liability and Redress would increase the demand for more activities in this area, including for capacity-building support.

Focal area 5 - Public awareness, education and participation

37. Among the countries that made submissions, most reported on activities undertaken in relation to the collection of information on legal frameworks and experiences on public awareness, education and participation (activity 5.1). For example, Belarus reported that the right of citizens and non-governmental organizations to receive complete, timely and reliable information on the safety of an activity involving an LMO was established by law. Burkina Faso noted that an awareness and information programme on biotechnology and biosafety had been implemented for the public in that country. In India, booklets on key features of the legal framework had been prepared in eight local languages for wider outreach, and had been widely distributed for public awareness among stakeholders, including farmers. Malawi indicated that this activity had been partially done since 2016 through media and panel discussions. Malaysia had conducted a survey in 2018 to assess the level of knowledge among the public of LMOs and biosafety-related issues, and the findings included the need to enhance awareness among stakeholders (students, researchers and policy makers) and the general public, as well as the need to diversify the method of disseminating information on biosafety-issues. Mexico had shared experiences in biosafety through communication activities that had taken place throughout the year, including "open-house" days, a science week, dissemination workshops, conferences, seminars, etc. In Namibia, a national public awareness strategy had been developed.

38. The development and dissemination of training packages/online modules, guidance materials and other tools on public awareness, education and participation for different target groups (activity 5.2) and/or the organization of workshops on the implementation of such guidance/toolkit (activity 5.3), was reported by many countries, including Belarus, Burkina Faso, Colombia, India, Iran (Islamic Republic of), Japan, Liberia, Malaysia, Mexico, Namibia, Nigeria, Peru, Viet Nam and Zimbabwe. Belarus reported the development of online modules on LMO biosafety issues, including for staff in detection laboratories, experts conducting risk assessment, persons responsible for LMO authorization, and the general public, as part of an online training organized by its "National Coordination Biosafety Centre". Colombia indicated that, as part of a project for some countries in Latin America, audiovisual and digital tools on biosafety

communication had been developed. India had organized several national workshops for providing training and sensitization to stakeholders about risk communication using the toolkits prepared under the capacity-building project, and a regional workshop on risk communication for ten countries in the Asia-Pacific region. The Biosafety Society of Iran had conducted a series of workshops in different provinces between 2015-2018 for making the public aware of modern biotechnology and biosafety. In Japan, relevant ministries had developed and published guidance materials on its biosafety laws for different target groups, including the manufacturers of pharmaceuticals and gene therapy products. Liberia reported the development of guidelines for networking, cooperation and information-sharing on biosafety-related issues among its competent authorities. Mexico reported the development of several materials for public awareness, education and participation, including information materials used in the consultations with indigenous peoples and local communities in the areas where the release of LMOs was planned. Mexico indicated that such materials complied with the standards of the Mexican indigenous law regarding cultural relevance. Mexico also reported having developed posters, videos and computer graphics, which, upon request, had been translated to the original languages of the communities being consulted. Namibia noted that booklets, calendars, diaries, T-shirts, caps and posters had been developed and distributed to create awareness during roadshows and workshops. The Bolivarian Republic of Venezuela was developing a Q&A tool to provide answers to the different stakeholder groups. Zambia indicated that a stakeholder meeting on the BCH had been organized in February 2018. Zimbabwe reported that a monthly newsletter and newspaper articles had been used to raise awareness.

39. Training-of-trainers workshops for biosafety educators, communicators and other government and non-government personnel at national and (sub)regional levels (activity 5.4) were carried out by some countries. Belarus indicated that this activity had been organized as part of the project on "Capacity-building to Promote Integrated Implementation of the Cartagena Protocol on Biosafety and the Convention on Biological Diversity", organized by the Secretariat, in 2016 and that in this context 17 round tables and training workshops had been held for all target groups at the national level. In Burkina Faso, training-of-trainers activities had been conducted targeting cotton companies, rural supervisory staff, and university and school teachers. Czechia indicated that workshops had been organized for the interested public and educators in cooperation with specialized agencies or societies. In India, training-of-trainers workshops had been organized for members of regulatory committees, scientists and other government and non-government personnel at national and regional levels. Malawi noted, among the lessons learned from its training-of-trainers events, that there was a good level of communication on biotechnology but not on biosafety issues. In Malaysia, an LMOs Risks Communication Workshop had been organized to promote effective communication on biotechnology and biosafety. Mexico reported that a Biosecurity Training Programme had been initiated in 2016 to develop capacity in biotechnology and biosafety of teachers and academic staff. In Peru, studies were being carried out to develop better communication strategies on biosafety. Zimbabwe had held a "Communication and Engagement Workshop within the Biosafety Context", organized in partnership with South Africa in 2017.

40. Some countries reported having established mechanisms to inform the public about existing opportunities and modalities for participation (activity 5.5). In the case of Belarus, its National Coordination Centre for Biosafety informed the Aarhus Convention Centre about biosafety events, including trainings and workshops, which then informed registered organizations, via email, about the possibility to participate. In Burkina Faso, a decree on public information and participation in decision-making had been adopted, setting out the channels and legal means for public information and the conditions for public participation in biosafety decision-making. In Colombia, Mexico and Viet Nam, applications for the import of new LMOs into these countries were published for public consultation. In evaluating LMOs for introduction into the environment, Japan published a summary of the risk assessment report as well as the content of the expert consultation for comment by the public, and the final decisions were also published on the websites of the Japanese version of the Biosafety Clearing-House (J-BCH) and relevant ministries. In Nigeria, the National Biosafety Management Agency used media outlets, through its programme "Issues of the Moment", and social media (Twitter and Facebook) to inform the public about existing opportunities and modalities for participation.

41. A few countries, from among those that submitted information, reported having national biosafety websites, searchable databases and national resource centres (activity 5.6). These include Belarus (www.biosafety.by), Burkina Faso, Colombia (www.invima.gov.co/autorizaciones-ovm.html), Czechia (www.mzp.cz/biosafety), Hungary (www.gmo.kormany.hu; http://gen6.dev.xdroid.com), India (http://moef.gov.in, http://geacindia.gov.in, http://dbtindia.nic.in, http://dbtbiosafety.nic.in, https://biosafety.icar.gov.in), Iran (Islamic Republic of), Japan (http://www.biodic.go.jp), Malaysia, Mexico, Namibia, Nigeria (www.nbma.gov.ng), Peru (http://bioseguridad.minam.gob.pe), Viet Nam (http://www.antoansinhhoc.vn), Zambia and Zimbabwe. Yemen indicated that its National Biosafety Website had been suspended due to the lack of financial resources.

42. Activities for the development and implementation of biosafety public-awareness programmes (activity 5.7) were reported by many countries, including Belarus, Burkina Faso, Czechia, Iran (Islamic Republic of), Japan, Malaysia, Mexico, Namibia and Nigeria, among others. For example, in Czechia, a biosafety public-awareness programme was included in broader educational programmes, such as the State Programme on Environmental Education and Public Awareness, and some universities had developed their own educational programmes on modern biotechnology and biosafety measures. In Hungary, the government had carried out several public-awareness programmes, including a "GMO Roadshow" during which 16 cities were visited in order to raise public awareness and get feedback from farmers and consumers on biosafety-related matters. India had organized more than 500 workshops to create awareness about biosafety issues since ratifying the Cartagena Protocol. In the Islamic Republic of Iran, the Biosafety Society of Iran conducted several public awareness workshops and seminars for different stakeholders, including elementary and school students, university students in biology-related fields and biology teachers. The Government of Japan, in accordance with its national biodiversity strategy, had been raising awareness of the domestic biosafety law and on LMOs. In Liberia, a Biosafety Public Awareness Strategy had been developed but not yet implemented. Malawi reported that this activity had concluded with the development of a communication strategy on biosafety and a biosafety mainstreaming strategy in place. Since 2014, Mexico had been carrying out a series of Biotechnology and Biosafety Seminars in which experts on selected topics were invited to share their research results and experiences; in collaboration with the Inter-American Institute of Agricultural Cooperation (IICA), these seminars had been disseminated online to other countries in the Latin America region, reaching larger audiences. In Namibia, country-wide awareness campaigns and information dissemination events had been developed, including roadshows, shopping malls displays, expositions and industrial shows displays. Peru noted that five independent biosafety events were organized per year for university students and researchers, government officials and the general public. Since enacting its Law on Biodiversity, ministries and agencies in Viet Nam had collaborated with national and international organizations to organize training courses and seminars for capacity-building and awareness-raising on biosafety. Yemen noted that awareness-raising programmes had been implemented in the past, but were currently on hold. In Zimbabwe, the National Biotechnology Authority, on a regular basis, made presentations on biosafety to students from local universities, and exhibited in trade fares, shows, conferences and workshops.

43. Among the countries that made submissions, some did not report any activity under this focal area (Bosnia and Herzegovina, Congo, Côte d'Ivoire, Democratic Republic of the Congo and Somalia). The Democratic Republic of the Congo noted the importance of the activities under this focal area and indicated that public awareness activities had not been carried out due to the lack of resources. IPLCs Nepal also noted the importance of the planned activities under this focal area.

44. In conclusion, the information contained in the submissions suggested that this focal area was where most activities in the context of the Framework and Action Plan for Capacity-Building had been carried out. Nevertheless, in practice, the number and scope of activities carried out under this focal area varied significantly among countries, with only a few countries reporting on the implementation of the full range of activities foreseen in the Framework and Action Plan. As noted by many countries, this continued to be an important focal area under the Framework and Action Plan, and more work needed to be done to achieve the expected outcomes in the Strategic Plan.

Focal area 6 – Information-sharing

45. Among the submissions received, most Parties reported that they had established national and regional infrastructures for accessing the BCH and that measures had been taken to update the information regularly (activity 6.1), and pointed to the appointment of national focal points and national authorized users for the BCH. However, the Democratic Republic of the Congo and Zimbabwe reported limited progress/access.

46. With regard to the development of national systems for gathering/managing information for submission to the BCH (activity 6.2), most submissions indicated that a system was in place for submitting information to the BCH. Burkina Faso noted that a network of BCH national focal points from francophone Africa existed at the regional level but that it was not yet functional. Peru explained that a national information platform on genetic resources and biosafety was currently under development that would allow gathering of information to feed the BCH.

47. Several Parties reported in their submissions that they had created national websites (activity 6.3), including Belarus, Burkina Faso, Czechia, India, Iran (Islamic Republic of), Malaysia, Mexico, Namibia, Nigeria, Peru and Zambia. Several other countries indicated that this was yet to be completed (Yemen, Zimbabwe). Colombia noted that it had developed a national BCH, but that it had only been operational until 2012.

48. Among the submissions received, many Parties reported that BCH trainings had been organized, or were planned, for specific target groups (activity 6.4). Nigeria reported that no trainings had been held, and Malawi indicated that this activity had been partially fulfilled.

49. On the 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 (activity 6.5), several Parties noted that partnerships had been established: Mexico highlighted its cooperation with the BioTrack database of the Organisation for Economic Co-operation and Development (OECD) and GMO platform of the Food and Agriculture Organization of the United Nations (FAO); Côte d'Ivoire indicated that a partnership had been initiated with the West African Virus Epidemiology (WAVE) programme of the Université Félix Houphouët-Boigny; and Malaysia and India mentioned their involvement in the Asia BCH Family. Belarus, the Democratic Republic of the Congo and Zambia noted that such initiatives had not been established yet or were currently being implemented/addressed.

50. Most of the respondents to the notification noted that the organization of training for information management experts on the BCH and facilitating the use of the BCH by various stakeholders (activity 6.6) had occurred or was planned (Belarus, Burkina Faso, Colombia, Congo, India, Malaysia, Mexico, Namibia, Peru, Viet Nam, Yemen, Zambia and Zimbabwe). Only Nigeria indicated that no BCH trainings had been provided.

51. Belarus stated that a mechanism to monitor the use of the BCH at the national level and to address gaps (activity 6.7) would be developed and India noted that it was under consideration. Malaysia's national BCH monitored site visits and was updated continuously. A number of countries reported that the BCH national focal point monitored the information provided to the BCH and coordinated to resolve any missing information. Yemen responded that a monitoring mechanism had not yet been established.

52. In terms of the continuation of the BCH capacity-building projects at national and (sub)regional levels (activity 6.8), several Parties noted, or expressed their interest in, their continued involvement (Belarus, Colombia, India, Japan, Mexico, Namibia, Viet Nam, Zimbabwe), while others reported the ability to continue such activities was subject to the availability of resources/funds (Congo, Malaysia, Peru). Three Parties expressed their dissatisfaction for not having been selected for the "BCH III Project" (Democratic Republic of the Congo, Iran (Islamic Republic of) and Nigeria).

53. Activities related to the enhancement of the BCH coordination mechanism at the national level, including interministerial and inter-agency collaboration with relevant stakeholders (activity 6.9) were reported on by several countries. Belarus explained that such activities were under discussion and Zambia

noted that they were in the process of being implemented. Viet Nam cited its regulations on this matter while noting that "the information provision and exchange among ministries, agencies and localities remain limited".

54. In conclusion, most Parties reported that they had established national and regional infrastructures for accessing the BCH and measures had been taken to update the information regularly. Several Parties reported in their submissions that they had created national websites. Among the submissions received, many Parties reported that BCH trainings had been organized for specific target groups. Several Parties expressed their interest in continuation of the BCH capacity-building projects at national and (sub)regional levels. The information submitted suggested that moderate progress had been made under this focal area. It was expected that support provided through the global UNEP-GEF "BCH III Project" would help Parties further implementing this focal area. Three Parties expressed their dissatisfaction for not having been selected for the "BCH III Project".

Focal area 7 - Biosafety education and training

55. Among the submissions received, the comments pertaining to the undertaking of periodic training needs assessments to ascertain the demand for biosafety education and training programme (activity 7.1) revealed that several Parties had attempted to identify training needs assessments and target audiences. Notably, Malaysia had prepared a module to be integrated into its biosafety training workshops based on feedback received from organizers and institutions. The Bolivarian Republic of Venezuela stated that such training needs assessments were under review.

56. With regard to activity 7.2 (development and/or strengthening of biosafety education and training programmes at national and (sub)regional levels, including online and continuing education programmes), most respondents indicated that biosafety curricula had been developed, to an extent, either online or in person (Belarus, Burkina Faso, India, Japan, Liberia, Malawi, Malaysia, Mexico, Namibia, Zambia and Zimbabwe). However, a need to further intensify national and regional programmes was noted by Zambia, and activities were carried out from time to time, according to Nigeria.

57. A number of Parties noted their use of the BCH with regard to the exchange of information on existing biosafety education and training courses and programmes through the BCH (activity 7.3). A variety of uses were reported, for example, sharing links to national online courses (Belarus), participation in online fora (Islamic Republic of Iran), reporting on national biosafety activities and sharing materials for workshops and seminars (Malaysia, Mexico), and the posting of "news" items (Zimbabwe). IPLCs Nepal drew attention to the valuable role IPLCs played when it came to education, awareness, capacity-building and lobbying for policymaking.

58. Many respondents affirmed that biosafety had begun to be integrated into the curricula of existing relevant academic programmes and courses (activity 7.4), including Belarus, Burkina Faso, Czechia, India, Iran (Islamic Republic of), Japan, Malawi, Malaysia, Namibia, Venezuela (Bolivarian Republic of), Viet Nam and Zimbabwe. Notably, the Islamic Republic of Iran stated that biosafety was a stand-alone course within the PhD programme in biotechnology in both the Faculty of Agriculture and the Faculty of Medicine. The necessity for including IPLCs in curricula was indicated by IPLCs Nepal.

59. Several Parties indicated that national and (sub)regional coordination mechanisms or networks for institutions involved in biosafety education and training had been established (activity 7.5). However, Nigeria, Somalia and Yemen noted that such mechanisms had not been established in their countries and Zambia mentioned that this area needed to be strengthened.

60. The exchange of biosafety training and research materials among academic institutions (activity 7.6) was reported to occur, to varying degrees, by a handful of Parties (Belarus, India, Iran (Islamic Republic of), Mexico, Venezuela (Bolivarian Republic of) and Zimbabwe). Mexico called for an increase in efforts to provide materials to educational programmes. Likewise, Yemen and Zambia and IPLCs Nepal called for enhancements in this area.

61. Colombia, India, Malawi, Mexico and Zimbabwe described their experiences with the development of academic exchange and fellowship programmes to facilitate the sharing of expertise, including through North-South and South-South cooperation (activity 7.7). India, for example, reported that it had participated in several study tours for regulators and scientists and pointed to the South Asia Biosafety Programme (SABP), "a USAID funded initiative, active in the region and supported by national agencies, which has contributed to exchange of information and expertise in South Asian region among India, Bangladesh, Sri Lanka and Bhutan. South Asia Biosafety Conference organized annually by SABP in association with ILSI Research Foundation and Biotech Consortium India Limited and supported by national academies and government ministries is extremely useful in facilitating exchange of information in the region". Mexico highlighted its collaborative research programme with the International Centre for Genetic Engineering and Biotechnology (ICGEB) "through which it participates in an academic exchange programme that provides scholarships for short studies and postgraduate studies, as well as financing for projects and training courses". And Zimbabwe had collaborated with partner organizations (ABNE, ICGEB and GMASSURE) that invited experts from the North to lecture at workshops.

62. Countries reported that a variety of information was provided in the BCH database on existing biosafety training and education programmes/courses, academic staff/experts on relevant subjects and training materials (activity 7.8), such as the status of trainings, various guidelines, the sharing of information with the region's national focal points, capacity-building activities and projects, and the roster of experts. Several Parties indicated that the expansion and maintenance of the database in the BCH was lacking in their countries: Democratic Republic of the Congo, Malawi, Somalia, Yemen and Zambia.

63. Finally, among the 15 submissions from Parties received under activity 7.9 (strengthening the capacity of existing universities, research institutes and centres of excellence to deliver biosafety education and training), five Parties commented that such capacity in their countries was lacking or simply highlighted it as "very necessary" (Democratic Republic of the Congo, Malawi, Somalia, Yemen, and Zambia). Of the remaining Parties, the respondents described the range of experiences in their countries. For example, India explained that regular events were organized to raise awareness of biosafety within universities, research and academic institutes; the Islamic Republic of Iran had established a regional centre for biosafety and bioethics; Malaysia had shared resource materials with biosafety officers of all registered Institutional Biosafety Committees in order to facilitate in-house training; and the Executive Secretary of Mexico's CIBIOGEM[4] regularly gave lectures on biosafety to university students. The participation of IPLC organizations and networks and the valuable role they could play was emphasized by IPLCs Nepal.

64. In conclusion, the activities under this focal area were carried out to varying degrees among countries. While assessing training needs, developing curricula and establishing networks seemed to have been undertaken by many countries, follow-up activities focusing on actual development or strengthening of capacities had been limited. Further efforts might be required towards developing and implementing programmatic approaches to educational opportunities in biosafety that were focused on structured long-term training rather than on short-term isolated activities.

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[4] Comisión Intersecretarial de Bioseguridad de Organismos Genéticamente Modificados.