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INVASIVE ALIEN SPECIES: PROGRESS REPORT

*Note by the Executive Secretary***

I. INTRODUCTION

1. In paragraph 9(a) and 17(a)-(d) of decision XIII/13 the Conference of the Parties also requested the Executive Secretary to report on the progress in the development of tools or technical guidance in collaboration with various international organizations.

2. Accordingly, this document presents the progress on: e-commerce (Section II); options for supplementing risk assessment and risk management standards for the use of biological control agents against invasive alien species (Section III); decision support tools (Section IV); cost-benefit and cost-effectiveness analysis (Section V); guidance on invasive alien species management that takes into consideration the impacts of climate change (Section VI); and information on the potential consequences of invasive alien species on social, economic and cultural values (Section V) in order to supplement the information provided in CBD/SBSTTA/22/9.

II. PROGRESS ON DEVELOPING A GUIDANCE FOR PARTIES THAT MAY ASSIST NATIONAL CUSTOMS AUTHORITIES IN FACILITATING THE NECESSARY CONTROL OF LIVE ALIEN SPECIES SOLD VIA E-COMMERCE

3. Under this section the activities taken by the international organizations addressing the risks posed by live alien species sold via e-commerce to supplement the information provided in CBD/SBSTTA/22/9. Information was collected through the eighth meeting of the Inter-agency Liaison Group on Invasive Alien Species held in Brussels, Belgium from 22 to 23 November 2017, the World Customs Organization Working Group on E-Commerce Sub-groups meeting held in Brussels, Belgium, 23-25 January 2018, and other informal exchanges among the relevant organizations made by the Secretariat.

A. Convention on International Trade in Endangered Species of Wild Fauna and Flora

4. Since its fourteenth meeting of the Conference of the Parties to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) in 2007 the Conference of the Parties to the CITES has considered the matters related to illegal trade of CITES listed species via ecommerce.

* CBD/SBSTTA/22/1.

** Issued without editing.

Since then, a working group on e-commerce was established, and several amendments on resolution Conf. 11.3 on Compliance and Enforcement were adopted by the Conference of the Parties to the CITES.

5. The latest amended resolution (Conf. 11.3 (Rev. CoP17))¹ recommended Parties to the CITES regarding e-commerce of specimens to:

(a) Evaluate or develop their domestic measures to ensure that they are sufficient to address the challenges of controlling legal wildlife trade, investigating illegal wildlife trade and punishing the perpetrators, giving high priority to the offer for sale of specimens of species listed in Appendix I;

(b) Establish, at the national level, a unit dedicated to investigating wildlife crime linked to the Internet or incorporate wildlife trade issues into existing units that investigate or monitor computer or cyber-crime; and

(c) Establish at the national level a mechanism to coordinate the monitoring of Internet-related wildlife trade and to provide for the timely sharing between designated contact points in CITES Management and Enforcement Authorities of information that results from these activities; and

6. It is important to note that the Conference of the Parties to the CITES considered about the trade in those specimens of the species listed in the CITES Appendices. The measures taken by Parties to the CITES aim to address the events of illegal trade via e-commerce (Conf. 11.3 (Rev. CoP17)). However, the relevance with preventing biological invasions risk has been outside the focus of the work under the measures taken by Parties to CITES. The expected measures to minimize the impact of invasive alien species sold via e-commerce need to be developed specifically on invasive alien species, noting that listing regulated species should be supported by scientific evidence of biological invasions. In addition, to assist national border authorities in facilitating the necessary control of live alien species sold via e-commerce, national regulation on invasive alien species needs to be enacted, rather than seeking conformity with the CITES management measures.

B. International Plant Protection Convention

7. The topic of e-commerce of plants was initially discussed during the 22nd Technical Consultation among Regional Plant Protection Organizations in 2010². Following these recommendations in 2012, the Implementation Review and Support System (IRSS) conducted a study on “Internet Trade (e-Commerce) in Plants: Potential Phytosanitary Risks”³. During the seventh Commission on Phytosanitary Measures (CPM) in 2012, a special topic session was organized on internet trade. The topic of e-commerce was discussed during CPM-8, and after further consultation, the recommendation 014/14 on Internet Trade (E-Commerce) in Plants and other Regulated Articles was adopted at CPM-09⁴.

8. A special session was organized during CPM-12 in 2017:

(a) To emphasize the CPM-9 recommendation on e-commerce and its implementation so far;

(b) To raise awareness on the phytosanitary risk associated with e-commerce;

(c) To make known experiences on e-commerce in relation to phytosanitary risk

9. During this session, the latest initiatives on e-commerce by international organisations such as the World Trade Organization (WTO), the World Custom Organization(WCO) and the CBD were presented,

¹ <https://cites.org/sites/default/files/document/E-Res-11-03-R17A.pdf>

² The report of the 22nd TC-RPPO is available at <https://www.ippc.int/en/2010---22nd-tc-among-rppos/>

³ The IRSS study Internet Trade (e-Commerce) in Plants: Potential Phytosanitary Risks is available at <https://www.ippc.int/en/irss/activities/2/>

⁴ The CPM-09 Recommendation 014/14 is available at https://www.ippc.int/sites/default/files/documents/20140127/cpm_2014_14_cpm_recommendations_2014-01-26_201401270647--202.46%20KB.pdf

as well as the key stakeholders from the private sector, namely Global Express Association (federating the main carriers such as DHL, Fedex and UPS) and eBay, and received recommendations to take phytosanitary considerations into account in their activities and CPM 12 requested that the Bureau consider a way forward during its June 2017 meeting.

10. Consequently, the CPM-12 (2017) special topic session on e-commerce allowed to formulate recommendations⁵ on the followings:

- (a) Enhance collaboration among international organizations:
 - (i) Collaborate further at the national level
 - (ii) Identify and report risks to e-traders
 - (iii) Engage express delivery companies can (DHL Express, Fedex, UPS, TNT)
- (b) Raise awareness of suppliers, transporters and other organizations and the general public.

11. The Bureau recommended that e-commerce issues could be worked through the Trade Facilitation Agreement and suggested that the IPPC Secretariat should work with Bureau members to undertake the following actions:

- (a) Prepare a concise factsheet on e-Commerce addressed to National Plant Protection Organizations (NPPOs) and collate a contact list stakeholders/websites involved in e-commerce to be posted on the IPPC website on its restricted pages.
- (b) Contact other e-Commerce players like Amazon to raise the importance of the issue (through their Directors if necessary);
- (c) Engage Universal Postal Union in cooperation;
- (d) Draft standardized information for those stakeholders with a list of key commodities and advice to contact relevant NPPOs;
- (e) Participate in the WCO subgroups for traders representing different stages in trade chains
- (f) Create an umbrella work programme on e-commerce, ePhyto, Phytosanitary Capacity Evaluation, etc. within the WTO Trade Facilitation Agreement (TFA)/World Bank, work within the 3 standard setting organizations recognized by the WTO, organize the IPPC Seminar during the SPG with the World Bank after which more concrete actions should be discussed again by the Bureau;
- (g) Prepare a joint publication with WCO based on the WCO manual;
- (h) Prepare a draft summary with an Action Plan for the next 3 years regarding Trade Facilitation Agreement that would include e-commerce recommendations (currently unfunded). The Action Plan will be discussed during the Strategic Planning Group in October 2018. The Plan would culminated in a 2020 conference/symposium to be dedicated to the implementation of the Trade Facilitation Agreement.

C. World Customs Organization

12. The World Customs Organization Working Group on E-Commerce (WGEC) was established in July 2016 and the first WGEC⁶ met in October 2017 in Brussels, Belgium. Following the first meeting of the WGEC, the World Customs Organization (WCO) has carried out a survey among its member States and published “WCO Study Report on Cross-border E-Commerce”⁷ in March 2017.

⁵ IPPC CPM-12 (2017) E-commerce (Internet trade) of plants Special Topic Session held in Incheon, Korea
<http://phytosanitary.info/activity/ippc-cpm-12-2017-e-commerce-internet-trade-plants-special-topic-session-held-incheon-korea>

⁶ <http://www.wcoomd.org/~media/wco/public/global/pdf/topics/facilitation/activities-and-programmes/ecommerce/summary-report-1st-meeting-wg-ecommerce.pdf?la=en>

⁷ <http://www.wcoomd.org/~media/wco/public/global/pdf/topics/facilitation/activities-and-programmes/ecommerce/wco-study-report-on-e-commerce.pdf?la=en>

13. The report of the first meeting of the WGEC emphasised that enhanced collaboration with all stakeholders including international organisations and health/sanitary authorities was as a means to ensure compliance with technical standards and Sanitary and Phytosanitary (SPS) /Technical Barriers to Trade measures (TBT) measures based on scientific rationale and to take off banned products from the supply chain.

14. After the eighth meeting of the Inter-agency Liaison Group on Invasive Alien Species co-organized by the WCO and the Secretariat of the CBD, the WCO invited the Secretariat of the CBD to: (i) WGEC Sub-groups meeting held in Brussels, Belgium, 23-25 January 2018, and (ii) the first Global Cross-border E-Commerce Conference in Beijing, China, 9-10 February 2018 to draft the WCO Cross-Border E-Commerce Framework.

15. The Secretariat of the CBD has input safety and security risks related to invasive alien species sold via e-commerce at the meetings mentioned in paragraph 14 above. Currently, the issue of invasive alien species is newly added to the draft WCO Cross-Border E-Commerce Framework in a chapter of safety and security. To develop risk management standard for border authorities this framework is expected to provide basis of additional management standard related to invasive alien species. The draft will be further considered by the WGEC at its third meeting to be held in April 2018.

16. Once the draft WCO Cross-Border E-Commerce Framework is endorsed at the third meeting of the WGEC, the WCO Cross-Border E-Commerce Framework will be finalized by the Policy Commission of the World Customs Organization in June 2018. When the final WCO Cross-Border E-Commerce Framework will be presented to the SBSTTA as information as soon as it is approved under the WCO process. Then, the WCO initiates updating the WCO instruments and tools to reflect the WCO Cross-Border E-Commerce Framework. The Secretariat of the CBD is invited by the WCO to continue collaboration with the WCO Secretariat to ensure that the WCO instruments and tools will sufficiently cover the risk management to minimize the spread of invasive alien species.

17. With regards to the response of the Expert Workshop on Invasive Alien Species in Preparation for the twenty-second meeting of the Subsidiary Body on Scientific, Technical and Technological Advice (hereafter expert workshop)⁸, the workshop participants recognised the serious threat posed via e-commerce to biodiversity and ecosystem services, including the increasing opportunities of introduction of alien species in distant environments. The expert workshop highlighted that the primary way of addressing the risk associated with e-commerce is development of national regulations, to assist national Customs agencies to enforce halting entries of invasive alien species. The expert workshop also stressed the importance of data sharing and information flow on invasive alien species to facilitate the national process of setting regulation specifically on invasive alien species.

18. The expert workshop also highlighted that the CBD national focal points should engage with national Customs authorities (the Customs Administration designated to the World Customs Organization) to raise the issue of invasive alien species, in collaboration, among the users and operators of e-commerce.

19. It is noteworthy that the border officials may enforce measures to halt entry of invasive alien species if they are officially regulated. Official regulation on alien species arriving in its territory needs to be set by the national process as a matter of urgency.

⁸ CBD/IAS/EM/2017/1/2

III. OPTIONS FOR SUPPLEMENTING RISK ASSESSMENT AND RISK MANAGEMENT STANDARDS FOR THE USE OF BIOLOGICAL CONTROL AGENTS AGAINST INVASIVE ALIEN SPECIES

20. In addition to the international standards (ISPMs 3, 2 and 11) indicated in *Summary of Technical Considerations for the Use of Biological Control Agents to Manage Invasive Alien Species* Parties submissions in response to notification 2017-056 allowed to share possible options of risk assessment and risk management methods among Parties and observers to the Convention:

(a) In Australia has published and available Federal Department of Agriculture & Water Resources revised guidelines and processes for the risk assessment for the importation and release of classical biological control agents, based on the IPPC Import Risk Analysis process, that are relevant for this assessment⁹

(b) In Canada (Canadian Food Inspection Agency) the North American Plant Protection Organization regional standards RSPM 710 (Guidelines for Petition for First Release of Non-indigenous Phytophagous Biological Control Agents – Revised) and 1211 (Guidelines for Petition for First Release of Non-indigenous Entomophagous Biological Control Agents – Revised). to guide the petition and evaluation process. The Canadian Food Inspection Agency has a procedure in place for assessing the risk associated with biocontrol organisms and determining the first environmental release of non-indigenous organisms for invasive plants and plants pests;

(c) The European and Mediterranean Plant Protection Organization (EPPO) of which 51 member countries have adopted three standards on safe use of biological control, PM6 - Safe use of biological control 12: PM6/001(1) (First import of exotic biological control agents for research under contained conditions), PM6/002(3) Import and release of non-indigenous biological control agents, PM6/003(4) List of biological control agents widely used in the EPPO region A Decision Support Scheme to support further harmonisation of decisions on release of biological control agents in the EPPO region is under development.

21. In case of weedy alien plants biological control, CABI highlighted the successful cases of rust fungus pathogen to control *Mikania micrantha*, in Kerala, India. Other countries authorized the release of the rust *Puccinia spegazzinii* first after repeated full host-range testing was undertaken in China and Taiwan. After Fiji and Papua New Guinea requested some tests on a few native species with supplemental data on host-range testing provided by CABI, release of *Puccinia spegazzinii* was authorized. *Puccinia spegazzinii* was then introduced to Vanuatu, Palau, Cook Islands, Guam and Malaysia. The result was successful because of an optimum release strategy, with careful isolation of rust, a genotype study on the targeted *Mikania micrantha* and a study of compatibility of climate, in association with risk communication on the science behind the release of biological control. Australia also has a standardised process for the risk assessment and release of plant pathogens for the biological control of weeds as for other types of biological control agent.

22. Suggested options on risk assessment and risk management in developing countries may include:

- (a) To exploit the research and experience of developed countries and to make known biological control agents for invasive alien weeds that are available to developing countries, following appropriate testing;

⁹ http://www.agriculture.gov.au/biosecurity/risk-analysis/biological-control-agents/protocol_for_biological_control_agents

¹⁰ <https://www.nappo.org/english/standards-and-protocols/regional-phytosanitary-standards-rspms/rspm-07/>

¹¹ <https://www.nappo.org/english/standards-and-protocols/regional-phytosanitary-standards-rspms/rspm-12/>

¹² <https://gd.eppo.int/standards/PM6/>

- (b) By adopting a long-term strategy with capacity building with realistic timeframe and mechanism for continuing funding for developing countries where the infested areas are large and alternative management options are inadequate, expensive and not sustainable.

23. Regarding the biological controls on invasive alien animal species, *Summary of Technical Considerations for the Use of Biological Control Agents to Manage Invasive Alien Species* annexed to decision XIII/13 does not refer to international standards developed by the World Organisation for Animal Health (OIE). The Import Risk Analyses¹³ on both aquatic and terrestrial animals and animal products consider disease risk to the importing country. In case of analysing the risk of pathogenic agents against invasive animal species, these international standards can be applicable.

24. Cases of biological control on invasive animal species were not submitted by Parties except the case of control of European rabbits in Australia. The release of viral biological control agents for the control of vertebrate pests in Australia has been approved under three Acts. The Biological Control Act 1983¹⁴, the Biosecurity Act 2015¹⁵ and the Environmental Protection and Biodiversity Conservation Act 1999¹⁶. The Biological Control Act is a unique piece of Australian legislation aimed nominating targets and agents under the Act based on a full cost-benefit assessment and risk assessment for biological control agents or targets that may present some form of conflict of interest for certain sectors of society. The Biosecurity Act assessment legislates how the release of a biological control agent will require demonstration no negative impacts on Australian agricultural industries, the environment and trade. The Environmental Protection and Biodiversity Conservation Act regulates releases based on no potential for direct or indirect release of impacts on listed threatened and endangers species or communities. As Australia is the only CBD country that has regulated, processed and released a viral biological control agent for a vertebrate pest there are unlikely to be other sources of information available.

25. The impact of climate and other environmental changes may also impact on establishment and efficacy of biological control agents against invasive alien species. While it is recognised that climate change is likely to have impacts on the effectiveness of certain biological control agents there is little published scientific evidence to suggest that this is a major concern yet.

26. The outcome of the expert workshop in response to the information above was as follows:

(a) The expert workshop welcomed the input from Canada providing details on risk assessment and post release monitoring of biological control agents from the North American Plant Protection Organization's Regional Standards for Phytosanitary Measures, which were built on the International Standard for Phytosanitary Measures No.3 and other international standards for risk analyses. The Expert Workshop stressed the importance that these standards, along with others (e.g. the methodologies or risk analysis of biological control agents used in Australia, New Zealand or United Kingdom), could supplement the "Summary of technical considerations for the use of biological control agents to manage invasive alien species" annexed to decision XIII/13.

(b) The expert workshop highlighted that such standards, when applied comprehensively and with precaution, can be applied by the least developed countries, small island developing States and countries with economies in transition.

¹³ http://www.oie.int/fileadmin/Home/eng/Health_standards/aahc/2010/chapitre_import_risk_analysis.pdf and http://www.oie.int/fileadmin/Home/eng/Health_standards/tahc/current/chapitre_import_risk_analysis.pdf

¹⁴ <https://www.legislation.gov.au/Details/C2017C00008>

¹⁵ <http://www.agriculture.gov.au/biosecurity/legislation/new-biosecurity-legislation>

¹⁶ <http://www.environment.gov.au/epbc>

(c) The expert workshop noted that the Guidance documents and the International Organization for Biological Control's best practices papers published on use of biocontrol agents can be used to provide additional guidance.

IV. PROGRESS ON OTHER TOOLS AND TECHNICAL GUIDANCE SETTINGS

27. The expert workshop considered: (i) the Cost-benefit and cost effectiveness analysis; (ii) Invasive alien species management and climate change, and summary of the outcome on the subjects above are as follows.

A. Cost-benefit and cost effectiveness analysis

28. The expert workshop found that the cost-benefit and cost-effectiveness analysis framework produced by the IUCN would be a useful basis for enhancing the prevention and management of invasive alien species, noting its potential application for informing Parties on the pathways analysis and species prioritisation. The expert workshop stressed the importance for further research on this issue.

29. The expert workshop also highlighted that submission of information on the methods used for pathway analysis and priority species to the CBD Secretariat is helpful to further develop the framework.

B. Invasive alien species management and climate change

30. The expert workshop interpreted that land use change and natural disasters in paragraph 17 (c) of decision XIII/13 were as the processes exacerbated by climate change.

31. The expert workshop highlighted that priority should be given to assessing what work has been done on the prevention and management of invasive alien species in the context of climate change, in order to identify gaps in available information, and understand how other relevant organisations/bodies are dealing with this issue.

32. The expert workshop suggested the CBD Secretariat to engage with UNFCCC to understand how best to address invasive alien species within the Nationally Determined Contributions and National Adaptation Plans that were considered under the UNFCCC process.

33. The expert workshop stressed the importance of incorporating the impacts of climate change within invasive alien species risk analysis (assessment, management and communication).

C. Impacts of alien species on social, economic and cultural values

34. The expert workshop stressed that cultural and social values of Indigenous Peoples and Local Communities (IPLCs) and their livelihoods have been impacted by invasive alien species. The expert workshop also stressed the importance of self-determination and empowerment of IPLCs to incorporate their traditional knowledge and experiences into their invasive alien species management measures.

35. The expert workshop highlighted that a major challenge is the mobilisation of information on the effects of invasive alien species on social and cultural values of IPLCs, and noted the importance of exploring alternative mechanisms to engage with IPLCs in mobilization of information.

36. The expert workshop further noted that the work on cost-benefit and cost-effectiveness analyses aims to incorporate the impacts of invasive alien species upon social, economic and cultural values and livelihoods, as well as on their management.

37. The expert workshop stressed the importance of incorporating social and cultural values within invasive alien species risk analysis (assessment, management and communication).

V. ACHIVING AICHI BIODIVERSITY TARGET 9

A. Data for identification and prioritization of species and pathways

38. The Global Register of Introduced and Invasive Species 17 made the validated invasive species occurrence information (checklists) of 20 Parties and three sub-national islands freely accessible on the Internet¹⁸ through the collaboration of country editors participating the Global Invasive Alien Species Information Partnership, IUCN Invasive Species Specialist Group (ISSG) and the Global Biodiversity Information Facility (GBIF). According to the GBIF and IUCN-ISSG, the invasive alien species checklists for 198 countries, including overseas territories of the European Union are expected to be available by the end of 2018 at the dedicated web site²⁵. This information will be made accessible from the CBD Clearing-house Mechanism in due course.

39. The IUCN has published a consultation document on IUCN standard classification of the impact of invasive alien taxa¹⁹ in May 2017. The document describes the Environmental Impact Classification for Alien Taxa (EICAT) to be applied in a consistent and comparable manner across different assessments. The EICAT data is expected to be used for evidence based policy decisions on which alien taxa are considered to be invasive. In addition, the IUCN plans to develop a database on social and economic impacts posed by invasive alien species (SEICAT) with similar approach to the EICAT.

40. Note that the EICAT and SEICAT intend to classify the impact level of invasive alien species however they do not replace the risk assessment process to regulate the international movement of alien species at the national and regional levels. It is to capture both the maximum impact ever recorded and the current impact level caused by the alien species in different regions, which may support prioritization of species and choosing management options, including risk communication among the different sectors involved in international trade and transport.

41. The CBD pathway categorization was further clarified by the experts⁷ to provide guidance on how to interpret the definitions of the CBD pathways categorisation system, and some regional and global datasets were adapted to the CBD pathways categorization system, e.g. European Union and Global Invasive Species Database. The result was not reported to the Secretariat though the bases of searching by the CBD pathways categorization system is adopted on the Global Invasive Species Database for Parties to review by accessing at <http://www.iucngisd.org/gisd/> and select pathways.

42. The expert workshop welcomed the tools and databases mentioned above to support Aichi Target 9, which enable data from diverse sources to be compiled, standardized, shared and made freely accessible via open data platforms; particularly, the expert-curated national invasive alien species lists, aggregated occurrence data both in native and introduced ranges, and pathway information, among others. Data on those regulated invasive alien species remains a significant gap to date in the databases compiled and presented by the Global Invasive Information Partnership in a consolidated manner, and this gap needs to be filled. Existing tools that can act to identify species should be examined with a view to their wider application, taking account of variation of regulation on invasive alien species under different national jurisdictions.

¹⁷ Pagad S. et al. Nature Scientific Data volume 5, Article number: 170202 (2018) doi:10.1038/sdata.2017.202

¹⁸ https://www.gbif.org/dataset/search?publishing_org=cdef28b1-db4e-4c58-aa71-3c5238c2d0b5

¹⁹ https://www.iucn.org/sites/dev/files/eicat_standard_version_1_may_2017.pdf

43. The expert workshop emphasised the need for continued and increased investment in mobilization of invasive alien species data, to the maintenance and updating of shared data infrastructures, expert curation and building capacity in use of data-sharing tools and information on best practices. Ongoing support for data mobilization and free and open access is critical for progressing toward achieving Aichi Biodiversity Target 9, and managing invasive alien species in the face of climate change and e-commerce, as well as evaluating those response measures applied, including the use of biological control agents.

B. Capacity development to achieve Aichi Biodiversity Target 9

44. In response to paragraph 9(b) of decision XII/17 the Executive Secretary, with generous financial support from the Government of Japan through Japan Biodiversity Fund, called for proposals from developing countries to organize the Global Taxonomy Initiative (GTI) training courses on DNA technologies for rapid species identification and selected eleven projects to be executed in 2018 (Notifications 2017-11020 and 2018-02121). Out of the eleven training courses selected, six projects of the GTI training courses to be organized in Belarus and Moldova; Brazil; Nigeria; Sri Lanka; Suriname; Tunisia are specifically targeting the trainees in relevant officials and individuals in conservation sector, border authorities and/or National Plant Protection Organization. The six training courses covering invasive alien species are referring to the national legislation and National Biodiversity Strategies and Action Plans which indicates the invasive alien species of the national concern.

45. The Secretariat has been in a process of developing a standardized GTI training manual for DNA Barcoding, in collaboration with University of Guelph in Canada, which will be made publicly available by June 2018. The standardized GTI training manual for DNA Barcoding takes into account the needs of border control officials, national plant protection officials and conservation officials for rapid identification of the species / specimens of national or regional concern (e.g. invasive alien species, pests, endangered species). The manual also contributes to establish shared DNA sequence datasets for specific application purposes of DNA Barcoding (e.g. invasive alien species).

46. In response to paragraph 9(a) of decisions XII/17 and IX/4 A and B, “Capacity building Workshop for Caribbean Small Island Developing States towards Achieving Aichi Biodiversity Target 9” was held in Kingston, Jamaica from 18 to 22 September 2017. The workshop was convened by the Secretariat of the CBD with generous financial support from the Government of Japan, United Nations Environment Program (UN Environment), and in-kind contributions from the Great Britain Non-native Invasive Species Secretariat of the United Kingdom of Great Britain and Northern Ireland, the Secretariat of the Caribbean Community, the Centre for Agriculture and Biosciences International (CABI), and logistical assistance from the Government of Jamaica. A report of the workshop is accessible at <https://www.cbd.int/meetings/IASWS-2017-01>.

20 <https://www.cbd.int/doc/notifications/2017/ntf-2017-110-gti-en.pdf>

21 <https://www.cbd.int/doc/notifications/2018/ntf-2018-021-gti-en.pdf>