CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES
OF WILD FAUNA AND FLORA

Seventieth meeting of the Standing Committee
Rosa Khutor, Sochi (Russian Federation), 1-5 October 2018

Implementation of the Convention

Trade control and traceability

ELECTRONIC SYSTEMS AND INFORMATION TECHNOLOGIES: REPORT OF THE WORKING GROUP

1. This document has been submitted by Switzerland, as the Chair of the Standing Committee Working Group on Information Technologies and Electronic Systems, in consultation with the Secretariat.*

Background

2. At its 17th meeting (Johannesburg, 2016), the Conference of the Parties adopted Decisions 17.156-17.159 on *Electronic systems and information technologies:*

Directed to the Parties

17.156 Parties are encouraged to submit to the Secretariat information regarding their planned and ongoing projects related to the use of electronic systems and information technologies in improving the management of CITES trade, and regarding the lessons learned.

Directed to the Standing Committee

17.157 The Standing Committee shall re-establish the Working Group on Electronic Systems and Information Technologies to work in collaboration with the CITES Secretariat to undertake the following tasks:

a) to further collaborate with the United Nations Environment Programme-World Conservation Monitoring Centre (UNEP-WCMC) their development of the Electronic Permit Information eXchange (EPIX) system as a conduit for the exchange of CITES permits and certificates, and as a central registry to facilitate validation of CITES permit data by CITES Management Authorities and Customs officials;

b) identify where the progress in the EPIX system, and the subsequent facilitation of the reporting requirements of Parties, may potentially affect the provisions of Resolution Conf. 11.17 (Rev. CoP17) on National reports and the amendment of Guidelines for the preparation and submission of CITES annual reports distributed by the Secretariat.

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* *The geographical designations employed in this document do not imply the expression of any opinion whatsoever on the part of the CITES Secretariat (or the United Nations Environment Programme) concerning the legal status of any country, territory, or area, or concerning the delimitation of its frontiers or boundaries. The responsibility for the contents of the document rests exclusively with its author.*

c) *to work the United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT), the United Nations Conference on Trade and Development (UNCTAD), the International Trade Centre (ITC), the World Bank, the World Customs Organization (WCO), and the World Trade Organization (WTO) in the context of the Agreement on Trade Facilitation, and other relevant partners, to continue the development of joint projects that would facilitate Parties' access to electronic permitting services and their alignment to international trade standards and norms, such as the revision of the CITES e-permitting toolkit and the development of the eCITES module in ASYCUDA;*

d) *to work with the Secretariat of the International Plant Protection Convention (IPPC) in the development of electronic trade documentation and learn from IPPC's efforts to develop electronic phytosanitary certificates; and*

e) *to monitor and advise on Parties' work related to the development of traceability systems for specimens of CITES-listed species to facilitate their harmonization with CITES permits and certificates.*

17.158 The Standing Committee shall:

a) *review the progress of implementation of Decision 17.157 and make recommendations as necessary, including any suggestions for the revision of Resolution Conf. 11.17 (Rev. CoP17) and the amendment of Guidelines for the preparation and submission of CITES annual reports distributed by the Secretariat, to the 18th meeting of the Conference of the Parties; and*

b) *review the information submitted by Parties under Decision 17. 156, as well as the progress of implementation of Decision 17.157 and make recommendations as necessary, any suggestions for the revision of Resolution Conf. 12.3 (Rev. CoP17) on Permits and certificates to ensure the Resolution allows for electronic border clearance processes that are consistent with and incorporate the requirements of Articles III, IV, V and VI into any e-permitting system, examining in particular the issues of presentation and validation, to the 18th meeting of the Conference of the Parties.*

Directed to the Secretariat

17.159 The Secretariat shall, subject to the availability of external funding:

a) *publish on the CITES website the results of planned and ongoing projects undertaken by Parties related to the use of electronic systems and information technologies in improving the management of CITES trade, and the lessons learned, as submitted by Parties;*

b) *communicate with national lead ministries responsible for the development of Single Window environments, to raise awareness of CITES and to ascertain the availability of financial support to assist CITES Management Authorities to develop CITES e-permitting systems; and*

c) *provide capacity-building and advisory services to support Parties interested in implementing electronic solutions for the management of CITES permits and certificates.*

<u>Intersessional working group on electronic systems and information technologies</u>

3. The Standing Committee, at its 69th meeting (SC69, Geneva, November 2017) established the working group on electronic systems and information technology to implement Decisions 17.157 and 17.158 with a mandate to:

   a) further collaborate with the United Nations Environment Programme-World Conservation Monitoring Centre (UNEP-WCMC) on the development of the Electronic Permit Information eXchange (EPIX) system as a conduit for the exchange of CITES permits and certificates, and as a central registry to facilitate validation of CITES permit data by CITES Management Authorities and Customs officials;

   b) identify where the progress in the EPIX system, and the subsequent facilitation of the reporting requirements of Parties, may potentially affect the provisions of Resolution Conf. 11.17 (Rev. CoP17)

on *National reports* and the amendment of Guidelines for the preparation and submission of CITES annual reports distributed by the Secretariat.

c) work with the United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT), the United Nations Conference on Trade and Development (UNCTAD), the International Trade Centre (ITC), the World Bank, the World Customs Organization (WCO), and the World Trade Organization (WTO) in the context of the Agreement on Trade Facilitation, and other relevant partners, to continue the development of joint projects that would facilitate Parties' access to electronic permitting services and their alignment to international trade standards and norms, such as the revision of the CITES e-permitting toolkit and the development of the eCITES module in ASYCUDA;

d) work with the Secretariat of the International Plant Protection Convention (IPPC) in the development of electronic trade documentation and learn from IPPC's efforts to develop electronic phytosanitary certificates;

e) monitor and advise on Parties' work related to the development of traceability systems for specimens of CITES-listed species to facilitate their harmonization with CITES permits and certificates;

f) make recommendations as necessary, including any suggestions for the revision of Resolution Conf. 11.17 (Rev. CoP17) on *National reports* and the amendment of the Guidelines for the preparation and submission of CITES annual reports distributed by the Secretariat, to the 18th meeting of the Conference of the Parties; and

g) review the information submitted by Parties under Decision 17. 156, and make recommendations as necessary, any suggestions for the revision of Resolution Conf. 12.3 (Rev. CoP17) on *Permits and certificates* to ensure the Resolution allows for electronic border clearance processes that are consistent with and incorporate the requirements of Articles III, IV, V and VI into any e-permitting system, examining in particular the issues of presentation and validation, to the 18th meeting of the Conference of the Parties; and

h) report back to the 70th meeting of the Standing Committee.

4. The membership of the Working Group was agreed as follows Switzerland (Chair), Australia, Bahamas, Canada, China, France, Georgia, Germany, Guatemala, Japan, Kenya, Kuwait, Malaysia, Norway, Portugal, Republic of Korea, Russian Federation, Saudi Arabia, Singapore, South Africa, Switzerland, Thailand, Uganda, United Arab Emirates, United Kingdom of Great Britain and Northern Ireland, United States of America, and Viet Nam; and Associazione Piscicoltori Italiani, Environmental Investigation Agency, International Wood Products Association, Legal Atlas, United Nations Economic Commission for Europe and United Nations Environment Programme.

5. The Standing Committee approved the work programme of the intersessional working group in Annex 1 of document SC69 Doc. 40.

CITES Website on Information relating to the use of electronic systems and information technologies [Decision 17.159 a)]

6. The Secretariat continued to maintain the CITES website for Electronic Systems and Information Technologies (see www.cites.org/eng/prog/eCITES) and provided information on the outputs of the Working Group on electronic Systems and Information technologies on this website.

eCITES Implementation Framework to support Management Authorities in the implementation of electronic CITES systems [Decision 17.159 c)]

7. To support Parties in the planning and implementation of eCITES projects, the Secretariat prepared the eCITES Implementation Framework[1] - *A Practitioner's Guide to implement electronic CITES Permits*. This Framework provides guidance and specific recommendations for automation of permit procedures in Management Authorities, implementation of electronic data exchange with Customs for improved CITES border controls, electronic Permit Information Exchange (EPIX) to prevent fraudulent use of permits and automated generation of annual reports. It promotes a structured, stepwise implementation approach to

[1] https://cites.org/sites/default/files/20180219eCITESImplementationFramework.pdf

electronic CITEs systems which Parties can adapt to their specific needs and readiness to change to automated procedures.

8. In preparing the Guide the Secretariat received substantial support by Management Authorities and international experts who shared their experience in the automation of permit processes. The contributions are acknowledged in the introduction of the Guide.

9. The Working Group reviewed and amended the Guide prepared by the Secretariat. The Working Group believes that the Guide contains valuable expertise and recommendations for Parties, which will help to reduce time and costs for national eCITES implementation projects.

Recommendations on the electronic equivalent of physical signatures and seals in electronic CITES permits and certificates [SC69 Doc. 40, Draft Programme of Work, work item III]

10. Resolution Conf. 12.3 (Rev. CoP17) establishes the equivalence of paper and electronic CITES permits. The Resolution includes requirements for physical signatures, seals and stamps in paper permits or, in the case of electronic forms an electronic equivalent of the physical signature[2].

11. In preparing for exchange of electronic CITES permits, a number of Parties expressed the need for guidance regarding the implementation of electronic signatures. These Parties were concerned that the provision would mandate the use of digital signatures based on asymmetric encryption technology and Public Key Infrastructure (PKI) for authentication of signatures. In cross-border trade PKI is considered to be problematic as many countries do not have legal systems in place which recognise national PKI or allow recognition of digital signatures certified by PKI systems of other countries.

12. The Secretariat consulted with UN/CEFACT experts on this topic and reviewed UNECE Recommendation 14 *Authentication of trade documents*[3], which provides recommendations to Governments and trade on the use of physical and electronic signatures in trade documents.

13. UNECE Recommendation 14 distinguishes between electronic and digital signatures:

    An *electronic signature* can be implemented by any process or technology that is considered as a functional equivalent of a physical signature. A typical example for use of electronic signatures are eBanking systems where the user connects with a password. The eBanking system will then record all activities of the user, such as payment instructions and money transfers. In case of litigation these records are used as evidence to connect the electronic instruction with the user which serves as a functional equivalent of physical signatures.

    A *digital signature* is defined as a specific technical implementation of an electronic signature that uses PKI type encryption algorithms and technologies as outlined in paragraph 11 above. Digital signatures are used, for example, in exchange of digital currencies where sender and receiver remain anonymous.

14. UNECE Recommendation 14 establishes that any electronic process that provides the functional equivalence of the physical signature in the paper form constitutes an electronic signature and should be accepted in electronic document exchanges.

15. It follows from the advice of UN/CEFACT Recommendation 14 that Parties are not required to use digital (i.e. PKI type) signatures as electronic equivalent to a physical signature. Instead Parties can use other forms of electronic signature, for example, by authenticating exporters through IDs and passwords when requesting CITES permits and recording this information in the eCITES system of the Management Authority.

16. The Secretariat, in consultation with the UN/CEFACT Chair, prepared a *Note on electronic signatures in CITES Permits* to summarise options for the electronic equivalence of physical signatures and seals in electronic CITES permits and certificates. This Note is provided in Annex 1 of this document.

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[2] *For example, Resolution Conf. 12.3 (Rev. CoP17) paragraph 2.e) "if a permit or certificate form, whether issued in an electronic or paper format, includes a place for the signature of the applicant, the absence of the handwritten signature or in case of electronic forms any electronic equivalent should render the permit or certificate invalid;"*

[3] *https://www.unece.org/tradewelcome/un-centre-for-trade-facilitation-and-e-business-uncefact/outputs/cefactrecommendationsrec-index/list-of-trade-facilitation-recommendations-n-11-to-15.html*

17. The Working Group reviewed the Note and supported the recommendations made therein. To codify these recommendations, the Secretariat prepared a suggestion for amending Resolution Conf. 12.3 (Rev.CoP17) which includes these recommendations in a new Section II "*Regarding the electronic equivalent of physical signatures and seals*". to be inserted between the existing *Section II Regarding export permits and re-export certificates* and Section III. The text of this proposal is contained in the Annex 2 of this document.

Electronic Permit Information Exchange Decision [17.157 a) and b)]

18. In 2017 Switzerland, France and UNEP-WCMC completed a joint feasibility study on the exchange of electronic permits between Management Authorities using a central hub acting as a clearing house. UNEP-WCMC developed an initial technical prototype for such an exchange hub.

19. In evaluating, the countries found that the development of a secure, central hub solution requires significant preparatory work and agreements between Parties as well as substantial funds for implementation and operation of the hub.

20. Switzerland and France resolved to progress the pilot by implementing a direct (Party to Party) permit exchange between the two Management Authorities, thus avoiding the need to develop and maintain a central hub. Progress has been made in developing the direct information exchange solution and both Parties have now concluded the technical tests. The Parties are now preparing functional tests for coordination of permit control processes by both Authorities and to test the exchange of information on the actual numbers exported or imported.

21. Switzerland and the Secretariat received expression of interest for electronic permit exchanges from other Parties including China, Czech Republic, Malaysia, Norway, Singapore, Sweden and Thailand. Switzerland is in contact with Parties for their integration into a future network of EPIX exchanges. To share the knowledge and expertise gained to date, Switzerland and the Secretariat prepared three documents for the consideration of the Working Group:

    The concept paper on *Development of electronic permit information exchange for CITES* (available in an information document to SC70) explains the differences between exchange of paper and electronic permits, introduces some of the challenges when migrating from paper to electronic permits and suggests a set of recommendations and standards that CITES should develop and adopt to facilitate the exchange of electronic permits between Parties. The paper focusses on requirements of direct exchanges permits between Parties (point-to-point exchanges). If two Parties decide to exchange CITES permits through a Hub this would require additional agreements and standards to manage the operation of the Hub. The paper briefly discusses these additional requirements. The paper acknowledges the potential future role of Blockchain technology for EPIX but does not discuss this technology due to the current lack of practical experience on BC for permit exchange.

    The document on *EPIX Onboarding: Simplifying the implementation of Electronic Permit Information Exchanges between Parties* (available in an information document to SC70) to facilitate integration of new Parties into already established electronic permit exchanges. It proposes a three step process with a separation of roles between the on boarding Party, the Parties already exchanging electronic permits and the Secretariat.

    The draft technical specification for EPIX message exchanges used in the Swiss French pilot[4] were shared with the WG. While this specification is likely to be amended it provides already important technical information for Parties preparing for electronic permit information exchanges and on possible future CITES standards for electronic permit information exchange.

ASYCUDA eCITES software for the automation of CITES Business Processes [Decision 17.157 c)]

22. UNCTAD developed the ASYCUDA aCITES which provides an off-the shelf software solution for Management Authorities for electronic certification, control and reporting of trade in CITES listed species. The system can be configured to the specific requirements and needs of the Management Authority including adaptation to national languages, legal requirements and workflows. The aCITES system is available to Parties for implementation in the framework of a technical cooperation project with UNCTAD which includes

[4] https://cites.org/sites/default/files/eng/prog/e/SI_DataExchange_EN.DOCX

the adaptation to national requirements, development country specific reports, integration into Customs control processes, capacity building and capacity building.

23. The Standing Committee, at its 69th meeting, noted the availability of a low cost software solution for the automation of CITES processes, called upon interested Parties to evaluate whether an implementation of this system in their Management Authority can strengthen CITES permit control and called upon donor agencies to take note of the interest of many Management Authorities from developing countries to adopt automated solutions and the need to provide funding for the implementation

24. The Secretariat received official request to support an aCITES implementation from Sri Lanka and the Bahamas and is aware of the interest in aCITES implementations by Canada, Georgia as well as Pacific islands countries and other countries from the Caribbean region. The Secretariat and UNCTAD are in discussion with selected Parties to develop technical cooperation projects.

25. The main obstacle for aCITES implementation is the lack of funding by interested Parties from developing countries. As outlined in the Questionnaire on electronic systems and information technologies for CITES management (eCITES) Management Authorities from developing countries generally require complementary funding by donor agencies to implement efferent and automated permit issuance and control processes. Management Authorities have asked the Secretariat to draw the attention of donor agencies to the importance of automation of CITES permit processes for the sustainability of trade in CITES listed species in their countries and the fight against illegal trade in wildlife.

Collaboration with international organizations on alignment of eCITES norms and standards to international standards) [Decision 17.157 e)]

26. The Secretariat continues to work and liaise with the United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT) and in particular with the UN/CEFACT Working Group on Agriculture Trade. The Secretariat attended the 30th UN/CEFACT Forum (Rome, 2017) and 31st Forum (Geneva, 2018) and presented the current state of work on eCITES including the ongoing work on CITEs standards for electronic traceability systems.

27. In implementing Decision 17.157 d) the Secretariat continues to liaise and exchange experience with the ePhyto project[5] for the electronic exchange of phytosanitary certificates conducted jointly by the International Plant Protection Convention (IPPC) and the World Trade Organization. The Secretariat attended the 2nd ePhyto Project Advisory Committee meeting (Geneva, December 2017) and presented the current state of preparations for CITES Electronic Permit Information Exchange. The Secretariat also participated in a Webinar organised by the Inter-American Institute for Cooperation on Agriculture to promote exchange of electronic certificates in agriculture trade.

Integration into automated border control procedures for improved control of trade in CITES listed species Decision [17.158 b)]

28. Switzerland together with the UNCTAD Centre of Excellency in Gibraltar organised a workshop on Customs Control of Trade in CITES listed Species: Trends, Technologies and Opportunities for improved Trade and Regulatory Control, (Gibraltar, UK, May 2018). Representatives from Management Authorities, national Customs Organizations and Internationale Organizations such as European Commission, World Customs Organization (WCO) and EUROPOL attended the workshop and shared their expertise in latest instruments for control of international trade. Presentations and background documents of the workshop are available at the eCITES Website (https://cites.org/eng/prog/eCITES),

29. The Workshop showed that Customs controls worldwide are now based on Risk Management as a core instrument to detect non-compliant trade transactions and to prevent laundering of illegal trade in legal supply chains Risk Management uses objective selectivity criteria to identify potentially non-compliant trade transactions which then lead to targeted inspections. The WTO Trade Facilitation Agreement (TFA) recommends that customs and other relevant border controls use a Risk Management system to control trade, to the extent possible. Its application for efficient border control is supported by the WCO Risk Management Compendium. In Resolution Conf. 11.3 (Rev.CoP17) on Compliance and Enforcement, Parties are advised to develop a comprehensive strategy for border controls which should include on policy of risk assessment and targeted inspections for physical controls.

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5 http://ephyto.ippc.int/

30. Risk Management uses modern information and communication technologies, including electronic document exchanges, data analysis and automated risk identification. Risk Management requires that electronic information on CITES permits can be made available to Customs.

31. To strengthen the control of trade in CITES listed species, Management Authorities and Customs Authorities would have to work closely together to ensure that the national Customs Risk Management system is configured with specific, CITES relevant risk criteria and that Customs can control all in-and outgoing consignments for compliance with CITES regulations.

32. To achieve this Management Authorities need a good understanding of latest policies, instruments and procedures used by Customs administrations for the control of international trade. It equally requires that Customs Administrations understand the priorities of their national Management Authority for CITES trade controls so that they can integrate CITES selectivity criteria into their Risk Management system. After the implementation both administrations need to establish a formal process to review the efficiency of the CITES selectivity criteria taking into account the seizures that have been made through the risk based process.

33. Realizing that international illegal trade has reached alarming levels, the Workshop noted a general lack of guidance and training materials available to Management Authorities to develop this kind of collaboration with Customs. Consequently, many Customs administrations are not in a position to fully use the strength of their Risk Management systems for the control of trade in CITES listed species.

34. As noted in the Summary and Recommendations of the Workshop (available in an information document) the participants at the workshop suggested to develop recommendations, guidelines and training materials to establish systematic collaboration between Management Authorities and national Customs organizations for integration of CITES Risk Management into the existing trade and border control systems. Participants outlined the need of automation of CITES permit processes and electronic information exchange with Customs as a precondition for CITES electronic risk management by Customs.

35. Participants also recommended to assess existing CITES resolutions on permit issuance and processing including Resolution 12.3 (Rev. CoP17) with a view to creating an enabling environment for cooperation between CITES Management Authorities and Customs or Border administrations for the implementation of modern and efficient control procedures for trade in CITES listed species.

36. The Standing Committee is invited to consider the information provided in this report.

Recommendations

37. The Standing Committee is invited to consider the information provided in this report.

38. The Standing Committee is invited to propose the amendment of Resolution Conf. 12.3 (Rev. CoP17) on *Permits and certificates* as provided in Annex 2 of this document for the consideration of the Conference of the Parties at its next meeting (CoP 18).

39. The Standing Committee is invited to propose the decisions provide in Annex 3 of this document for the consideration of the Conference of the Parties at its next meeting (CoP 18).

Note on electronic signatures in cites permits and certificates

1. This document has been drafted by the Secretariat for discussion in the CITES Working Group on electronic Systems and Information Technologies

CITES documentary requirements

2. CITES Resolution Conf. 12.3 (Rev. CoP17)[6] provides a compilation of recommendations and standards relating to documentary requirements of CITES permits and certificates in paper and electronic format.

3. Resolution Conf. 12.3 (Rev. CoP17) states the equivalence of paper and electronic CITES permits:

> *RECOGNIZING that permits and certificates may be issued in paper, electronic or both formats;*
>
> *RECOGNIZING that there is no obligation on Parties to issue permits or certificates in electronic formats;*
>
> *2. AGREES that:*
>
> *b) Permits and certificates may be issued in paper format or electronic format provided all Parties involved have agreed with the electronic format*
>
> *3. RECOMMENDS that:*
>
> *k) all Parties consider the development and use of electronic permits and certificates;*

4. With regard to signatures and stamps Resolution Conf. 12.3 (Rev. CoP17) states the **functional equivalence of physical and electronic signatures:**

> *2. AGREES that:*
>
> *e) if a permit or certificate form, whether issued in an electronic or paper format, includes a place for the signature of the applicant, the absence of the handwritten signature or in case of electronic forms any electronic equivalent should render the permit or certificate invalid;*
>
> *Annex 1 Information that should be included in CITES permits and certificates*
>
> *l) The name of the signatory and his/her handwritten signature for paper permits and certificates or its electronic equivalent for electronic permits and certificates*
>
> *m) The embossed seal or ink stamp of the Management Authority or its electronic equivalent*

Concerns of Parties

5. Several Parties informed the Secretariat that the requirement for electronic signatures in Resolution Conf. 12.3 (Rev. CoP17) could cause practical problems in the implementation of electronic CITES permits.

6. In particular Parties were concerned that an electronic equivalent of a physical signature is often associated with asymmetric encryption technology such solutions using the RSA algorithm and Public Key Infrastructure (PKI).

7. As most countries do not have PKI and/or legislation that fully supports use of PKI for trade documents, the lack of PKI infrastructure would prevent the widespread adaption of electronic CITES permits.

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6 https://cites.org/eng/res/12/12-03R17.php

International recommendations for use of electronic signatures in trade documents

8. The Nations Centre for Trade Facilitation and electronic Business (UN/CEFACT), an intergovernmental body of UNECE, is the UN focal point to develop international standards for trade facilitation and electronic Business.

9. CITES has a well-established liaison with UN/CEFACT. The CITES Permit is based on the UN Layout Key (UN/CEFACT Recommendation 1), and the CITES XML standard for electronic permits7 is based on the eCERT standard of UN/CEFACT.

10. UN/CEFACT has issued Recommendation 14 on Authentication of trade documents8, which provides recommendations to Governments and trade on the use of physical and electronic signatures in trade documents. In developing this Recommendation UN/CEFACT worked closely with the United Nations Commission on International Trade Law (UNCITRAL) and prepared Recommendation 14 in alignment with relevant work of UNCITRAL.

11. Recommendation 14 was revised in 2014 to meet the latest requirements of electronic document exchanges.

Guidance on use of electronic Signatures in UN/CEFACT Recommendation 14

12. UN/CEFACT and UN/CITRAL specifically distinguish between *electronic signatures* and *digital signatures*: An electronic signature does not call for a specific type of technology, rather it is a process that serves the same functions as a manual signature. An *electronic signature* is defined as

> *Data in electronic form in, affixed to or logically associated with, a data message, which may be used to identify the signatory in relation to the data message and to indicate the signatory's intention in respect of the information contained in the data message.*
>
> *In its broadest sense, a signature (manual-ink or its electronic equivalent) creates a link between a person (physical or legal) and the content (document, transaction, procedure, or other). This link can be considered as having three inherent functions: an identification function, an evidentiary function and an attribution function.*
>
> *In international business relations, one of the basic foundations[9] is trust between the parties; the requirements of a signature will, in many cases, most likely reflect that trust.*

13. By contrast, the term *digital signature* denotes the implementation of an electronic signature in a specific technology and is usually associated with signatures using asymmetric encryption and PKI technology. Thus a digital signature is a specific technology choice for the implementation of an electronic signature.

14. When implementing electronic signatures, UN/CEFACT recommends that Parties avoid adopting solutions that are costlier and burdensome than the manual signature process (UN/CEFACT Recommendation 14, para 38). Similarly, UNCITRAL recommends that the method of authentication should be “as reliable as was appropriate for the purpose for which the data message was generated”10.

15. UN/CEFACT specifically notes that an electronic signature providing the required security level can be implemented through different technologies other than PKI.

16. The Recommendation states that, for example, an electronic signature could be implemented through a registration and verification process based on an ID/password for identification of the user and a secure connection between the user and the application.

17. The important criteria to qualify as an electronic signature is not the technology used but whether the electronic signature is a *functional equivalent* to the paper signature, i.e. whether the chosen technology

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7 *CITES ePermitting Toolkit, https://oldsrv.cites.org/eng/prog/e/toolkit/index.htm*

8 *https://www.unece.org/tradewelcome/un-centre-for-trade-facilitation-and-e-business-uncefact/outputs/cefactrecommendationsrec-index/list-of-trade-facilitation-recommendations-n-11-to-15.html*

9 *For further discussion on the Functions of a signature see UN/CEFACT Recommendation 14, para 16*

10 *UNCITRAL “Model Law on Electronic Commerce with Guide to Enactment 1996 with additional articles 5bis as adopted in 1998”*

solution delivers the same level of reliability as the physical signature (UN/CEFACT Recommendation 14, para 66).

Relevance of Recommendation 14 for CITES electronic signatures

18. Resolution Conf. 12.3 (Rev. CoP17) establishes the functional equivalence of physical and electronic signatures in CITES permits and explicitly uses the term “electronic signature”.

19. UN/CEFACT Recommendation 14 and UNCITRAL Model Law states that any electronic process that provides the functional equivalence of the physical signature constitutes an electronic signature.

20. If CITES follows advise of UN/CEFACT Recommendation 14 then Parties are not required to use digital (i.e. PKI type) signatures as electronic equivalent to the paper based signature. Instead Parties can use other forms of electronic signature, for example, by identifying exporters through ID and passwords when requesting CITES permits or by using secure document exchange for cross border permit exchanges with other Parties.

Guidance to Parties on electronic Signatures in CITES permits

21. Resolution Conf. 12.3 (Rev. CoP17) currently lacks clear guidance to Parties on which functionality the paper or electronic signature should provide, i.e. an explanation why a signature or a seal is required in the document.

Recommendation

22. It is therefore suggested that the ePermitting Working Group provides following recommendation to the Standing Committee for an update of Resolution Conf. 12.3 (Rev. CoP17):

    RECOMMENDS that

    a) Parties should consider UN/CEFACT Recommendation 14 as best practice when implementing the electronic equivalent of signatures and seals in electronic CITES permitting systems;

    b) Parties using electronic CITES systems should use username and passwords and/or similar technologies to authenticate all users that have access to the system;

    c) electronic CITES systems must keep an audit trail, i.e. keep electronic records that enable the Management Authority to identify the person who requested, approved, processed or altered electronic CITES permits and certificates; and

    d) archives of audit trials must be kept for no fewer than 5 years after the expiry date of the permit; and

    AGREES that in electronic CITES systems that meet the above requirements, the electronic equivalent of a physical signature and a seal is provided through the identification of the permit applicant, the identification of the official that issued or authorized the document, and the identification of the issuing agency.

Proposed amendments to Resolution Conf. 12.3 (Rev. CoP17)

Regarding the electronic equivalent of physical signatures and seals

RECOMMENDS that:

a) Parties consider UN/CEFACT Recommendation 14 on Authentication of trade documents as good practice when implementing the electronic equivalent of signatures and seals for electronic CITES permitting exchanges;

b) Parties using electronic CITES systems authenticate all users that have access to the electronic system using username and passwords and/or similar technologies;

c) Ensure that electronic CITES systems keep an audit trail, i.e. keep electronic records that enable the Management Authority to identify the person who requested, approved, processed or altered electronic CITES permits and certificates; and

d) Keep archives of audit trials for no fewer than 5 years after the expiry date of the permit; and

AGREES that in electronic CITES systems that meet the above requirements, the electronic equivalent of a physical signature and a seal is provided through the identification of the permit applicant, the identification of the official that issued or authorized the document, and the identification of the issuing agency and the endorsement by the Customs office.

Decisions to be forwarded to CoP18

18.AA Directed to Parties

Parties are invited to

a) support the Working Group on electronic permit processing and efficient control procedures; and

b) consider the *eCITES Implementation Framework* and the recommendations contained within this document when planning and implementing electronic CITES systems and report their experiences and lessons learned during the implementation of these systems to be shared in future revisions of this Framework.

Parties are requested:

a) to consider the implementation of electronic CITES systems to increase transparency and efficiency of the permit issuance and control process, to prevent use of fraudulent permits and to provide quality data for improved sustainability assessment and to take note of the UNCTAD aCITES system as a low cost, off-the-shelf solution that is now available to Parties for implementation;

b) using electronic CITES systems to:

   i) consider UN/CEFACT Recommendation 14 on *Authentication of trade documents* as good practice when implementing the electronic equivalent of signatures and seals for electronic CITES permitting exchanges;

   ii) use username and passwords and/or similar technologies to authenticate all users that have access to the system;

   iii) ensure that electronic CITES systems keep an audit trail, i.e. keep electronic records that enable the Management Authority to identify the person who requested, approved, processed or altered electronic CITES permits and certificates;

   iv) keep archives of audit trials for no fewer than 5 years after the expiry date of the permit; and

   v) agree that in electronic CITES systems that meet the above requirements, the electronic equivalent of a physical signature and a seal is provided through the identification of the permit applicant, the identification of the official that issued or authorized the document, and the identification of the issuing agency and the Customs office that endorsed the permit;

c) to establish a systematic dialogue and ongoing collaboration between their Management Authorities and their national Customs and border control agencies to implement an efficient, risk based control system for cross border trade in CITES listed species; and

d) to provide information to the Secretariat on the state of automaton of CITES permit processes and the implementation control systems for cross border trade in CITES listed species and share their lessons learned.

18.BB Directed to the Standing Committee

The Standing Committee shall establish a Working Group on electronic permit processing and efficient control procedures to work in collaboration with the CITES Secretariat to undertake the following tasks:

a) to work with the United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT), the United Nations Conference on Trade and Development (UNCTAD), the International Trade Centre (ITC), the World Bank, the World Customs Organization (WCO), the World Trade Organization (WTO) and other relevant partners, to continue the development of joint projects that would facilitate Parties'

access to electronic permitting services and their alignment to international trade standards and norms, such as the further development and implementation of the UNCTAD aCITES system;

b) to work with the World Customs Organization, the United Nations Office on Drugs and Crime, the Global Container Control Programme and other relevant national and international organizations and initiatives to develop recommendations, guidelines and training materials to support the establishment of risk based trade control systems to combat illegal trade in wildlife and facilitate compliant trade;

c) develop recommendations and best practice guidelines for CITES permit issuance and control processes when using electronic CITES permit systems and information exchanges;

d) to work with all relevant partners on the development of standards and solutions for Electronic Permit Information eXchange (EPIX) for the exchange of CITES permits and certificates and to improve the validation of CITES permit data by CITES Management Authorities and Customs officials;

e) to work with the Secretariat of the International Plant Protection Convention (IPPC), National Plant Protection Organizations (NPPOs) and other relevant organizations to learn from their efforts and work towards a harmonization of standards and procedures for licenses, permits and certificates frequently used in conjunction of cross border trade in CITES listed specimen; and

f) to monitor and advise on Parties' work related to the development of traceability systems for specimens of CITES-listed species to facilitate their harmonization with CITES permits and certificates.

The Standing Committee shall:

a) review the progress of implementation of the above Decision and make recommendations as necessary, including any suggestions for the revision of Resolution Conf. 11.17 (Rev. CoP17) and the amendment of Guidelines for the preparation and submission of CITES annual reports distributed by the Secretariat, to the 19th meeting of the Conference of the Parties; and

b) review the information submitted by Parties, the Secretariat and the Working Group and make recommendations as necessary, including the revision of Resolution Conf. 12.3 (Rev. CoP17) on *Permits and certificates* to foster efficient collaboration and information exchange between Management Authorities and Customs and border control agencies for implementation of risk based controls to simplify legal trade and to combat illegal trade in wildlife to the 19th meeting of the Conference of the Parties.

18.CC Directed to the Secretariat

The Secretariat shall, subject to the availability of external funding

a) Organize in collaboration with the WG on and relevant partners an international workshop on modern Customs procedures for improved control of trade in CITES listed species to simplify compliant trade and combat against illegal trade in wildlife and prepare recommendations to the Standing Committee;

b) Prepare a report on risk management systems for efficient control of trade in CITES listed species and prepare recommendations to the Standing Committee;

c) Work with national and international organizations such as the WCO, UNCTAD, the UN regional Commissions, UNODC, WTO and the World Bank to support Parties in the implementation of efficient and risk based procedures for control in CITES listed species using information technologies and modern trade control procedures;

d) Maintain the eCITES website and publish the results of planned and ongoing projects undertaken by Parties related to automation of CITES procedures and controls and electronic permit information exchanges and outputs provided by the working group on electronic permit processing and efficient control procedures; and

e) Provide capacity building and advisory services to support Parties interested in implementing electronic solutions for the management and control of CITES permits and certificates and support Parties in establishing electronic permit systems and information exchanges.