CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES
OF WILD FAUNA AND FLORA
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Fourteenth meeting of the Conference of the Parties
The Hague (Netherlands), 3-15 June 2007

Interpretation and implementation of the Convention

Trade control and marking issues

Electronic permitting

REPORT OF THE SECRETARIAT

1.   This document has been prepared by the Secretariat.

Background

2.   Resolution Conf. 12.3 (Rev. Cop13) on Permits and certificates describes a model format for export and import permits, re-export and pre-Convention certificates, certificates of origin and certificates of captive breeding and artificial propagation, as well as the minimum information to be contained in these documents, the preferred numbering systems and security methods, and the codes to be used to identify the source of the specimens and the purpose of the transaction.

3.   In Decision 12.76, the Conference of the Parties, in response to the view held by some Parties that the Internet represents a reliable, secure and accepted mechanism used by several countries to communicate rapidly among Management Authorities, directed the Secretariat to:

     … study and evaluate the possibility of creating a future centralized system that would allow the establishment of a communications network through the CITES website that would make it possible to check the authenticity and veracity of permits and certificates issued and received by each of the Parties.

4.   At its 13th meeting (CoP13, Bangkok, 2004), the Conference of the Parties discussed issues related to the use of computerized systems to meet obligations set out in the Convention and related Resolutions and Decisions. Some Parties expressed the view that the development of an electronic licensing system would greatly assist in the handling and processing of CITES applications, the issue of electronic permits and the collation and dissemination of CITES trade information.

5.   Following these discussions, the Conference adopted Decision 13.70 which directs the Secretariat, subject to the provision of appropriate funding, to:

     a)   *advise the Parties on the work done by UNEP-WCMC in the development of simple Internet based software tools and provide recommendations based on experience and testing by Parties;*

     b)   *evaluate the experience of other permit-based agreements or conventions, such as CCAMLR, in using electronic permitting systems;*

     c)   *provide guidance to the Parties on the extent to which it may be practicable to make use of computerized systems to meet their obligations under CITES and on the extent to which this*

would be consistent with the obligations set out in the Convention and related Resolutions and Decisions of the Parties and subject to the direction of the Standing Committee; and

d) *engage the World Customs Organization on data harmonization and how it relates to the implementation of CITES and report on their efforts at the 54th meeting of the Standing Committee.*

The Secretariat is grateful to the United Kingdom of Great Britain and Northern Ireland for its financial support to the Secretariat to fulfil this Decision.

Progress made in the implementation of Decisions 12.76 and 13.70

6. The use by Parties of computerized systems to meet CITES obligations has largely focused on the processing of document applications and the issuance of documents, and the compiling and submission of annual reports on trade. According to UNEP-WCMC, the majority of annual reports are now received in electronic format. The Conference of the Parties adopted a new biennial report format at CoP13, that was circulated to the Parties with Notification No. 2005/035 of 6 July 2005. There are plans to develop an interactive version of this format that will allow the electronic submission of the biennial reports using the CITES website and will provide simple tools for analysing their content.

7. The Secretariat undertook in 2006 a review of new information and communication technologies currently used by Parties and relevant organizations to create electronic permits or similar electronic trade documentation. In addition, the Secretariat reviewed new developments in Information and communication technologies related to international trade and transport.

8. It issued Notification to the Parties No. 2006/058 on 7 November 2006, requesting those Parties that have developed or are developing electronic permitting systems to advise it of the status of those systems. At the time of writing, responses had been received from Canada, Germany, Malta, Singapore, Spain, and the United Arab Emirates. The Secretariat also reviewed electronic permit issuance systems currently being used or under development in Brazil, Italy and Switzerland.

9. The Secretariat participated in a meeting of the Working Group of the Standing Committee on Information Technology and Electronic Systems, established at the 53rd meeting of the Standing Committee (Geneva, June-July 2005) in support of Decision 13.69. The meeting was held in Rome, Italy on 14 September 2006. At the request of the Working Group, the Secretariat sent a questionnaire on the use of electronic permitting systems to 30 Parties known or believed to be developing such systems.

10. The Secretariat has considered examples of best practice in the use of electronic technologies, and has reviewed the electronic document systems currently used by the Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR) to regulate catches of *Dissostichus* spp., and by the International Air Transport Association (IATA) to facilitate air travel and transport (such as the use of electronic passenger ticketing by airlines and the development of electronic airway bills (e-AWB).

11. Discussions were held with UNEP-WCMC on the development of simple Internet-based software tools that can enhance the implementation of the Convention. However, these tools are still at an early stage of development, and funding will be required to create and test such tools.

Examples of electronic CITES permit issuance systems

12. The Brazilian electronic permit system offers traders access through the Web to their CITES permits and certificates. Using the system, traders are able to access information related to previous transactions, and enter information directly into certificates and permits. Verification by the Scientific Authority is done electronically and the Management Authority undertakes the final verification and printing. Information is compiled in a database and can use web services[1] to communicate with other

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[1] Web services are software systems designed to support interoperable machine to machine interaction over a network.

electronic permitting systems. Future enhancements may include printing of permits and certificates in locations other than that of the Management Authority.

13. Canada has initiated the development of a CITES electronic permitting system, with the goal of replacing the existing paper-based procedure. In the first phase, scheduled for January 2007, the system will be deployed in the main CITES office. In the second phase, web access to the system will be extended to Canadian provincial and territorial representatives and other government departments. Eventually, the electronic permitting system will offer traders access to an online permit application.

14. Germany has developed an electronic application system for CITES permits and certificates where users are able to complete an electronic form which is then uploaded for processing. The German electronic system has been in operation since 2004 and currently processes approximately 15 % of all applications.

15. The electronic permit system developed and used by Italy has been in use for several years for processing applications and issuing permits and certificates. This system offers selected traders the ability to complete applications for CITES permits and certificates online. It is based on a stable and secure database platform able to handle a very large number of permits and certificates.

16. Singapore implemented an electronic application system for CITES permits and certificates on 1 March 2006. Applications are submitted through the use of a web-based form which is then processed by authorities online. Singapore is further developing the system to allow Management Authorities from any Party to verify permits and certificates issued by Singapore.

17. Spain plans to offer a public electronic application system in the future. Information on CITES permits and certificates resides in a database and is currently accessible by CITES Authorities and other government bodies that issue CITES documents.

18. The electronic permit system developed and used by Switzerland offers selected traders the ability to apply for permits and certificates online. The completed forms are converted by the Management Authority into PDF (Portable Document Format) for printing and subsequent processing. The Swiss system was designed with sufficient flexibility in that it may be adapted to communicate with other electronic permitting systems. This system enables the Management Authority to issue permits from one office, while the printed permit form can be obtained from designated offices throughout Switzerland.

19. Information on the reviewed electronic systems indicates that a number of Parties have automated the permit application and permit issuance process. Several Parties view this as a step towards automating other components of the electronic permit procedure in the move towards a fully electronic system. The Parties mentioned above have expressed their willingness to share their expertise and experience on electronic systems. The Management Authority of Switzerland is interested in testing the feasibility of exchanging and accessing data with and from other electronic permitting systems.

CCAMLR Electronic Catch Documentation Scheme

20. Pursuant to CCAMLR's Conservation Measure 10-05[2], which reflected concerns by its Parties that illegal, unreported and unregulated (IUU) fishing in the Convention Area was threatening populations of *Dissostichus* spp., the CCAMLR Commission[3] implemented a Catch Documentation Scheme (CDS) for these species. The CDS is designed to track the landings and trade flows of *Dissostichus* spp. caught in the Convention Area and, where possible, adjacent waters. The aim is to enable the Commission to identify the origin of specimens of these species. entering the markets of all Parties to the Scheme, and to help determine whether such specimens taken in the Convention Area are caught in a manner consistent with the Convention's conservation measures.

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[2]   *CCAMLR Conservation Measures Directory (http://www.ccamlr.org/pu/e/e_pubs/cm/drt.htm).*

[3]   *The Convention establishes a Commission to manage the marine living resources of the area for which it is responsible.*

21. During the intersessional period of 2003, the CCAMLR Secretariat implemented a trial Electronic Catch Documentation Scheme (E-CDS) in an effort to ensure that catch documents are handled in the most efficient and timely way. The success of the trial period of E-CDS was reflected in Resolution 21/XIII which urges "contracting Parties and non-contracting Parties cooperating in CDS, to adopt the E-CDS as a matter of priority". By December 2006, the majority of CCAMLR Parties were using E-CDS and all Parties had used it to some extent.

22. The E-CDS makes use of two documents: the *Dissostichus* catch document and the *Dissostichus* export/re-export document. These documents are issued by the flag or export State and sent either by fax or electronic mail to the fishing vessel or trading company, and completed forms are returned to the relevant government authority for authorization. If authorized, the information is entered in a central database hosted at the CCAMLR Secretariat in Hobart, Australia. Parties are able to access this information online and can generate summaries containing relevant and specific information as necessary. This information is considered confidential, and access is strictly restricted to contracting Parties.

23. The development of E-CDS is notable in that it was built using open web-based formats[4], protocols[5] and standards[6], offering users easy but secure access to needed documentation. Because of obligations related to submission of the CDS, all registered electronic documentation resides in a centralized database hosted at the CCAMLR Secretariat. The E-CDS makes use of electronic signatures and data encryption to ensure secure authorized access to and registration of required electronic documentation. CCAMLR has retained the traditional paper-based CDS in parallel to the development and implementation of the E-CDS, as not all of its Parties use the E-CDS.

24. The E-CDS offers security from fraudulent or unauthorized documents. Data encryption coupled with electronic signatures allow for immediate verification of documentation. Flag States are able to verify that the information in the catch documents is consistent with the data reports derived from an automated satellite-linked Vessel Monitoring System (VMS). The timeliness and efficiency in issuing and verifying *Dissostichus* Catch Documents offer Parties access to information on a real-time basis. This is a particularly important element given the need for rapid verification of landed or transhipped catches and timely approval of imports. The E-CDS data can be analysed for trends, and these analyses can assist Parties in the development of more effective conservation measures.

25. Given the success of the E-CDS, the CCAMLR Secretariat is planning several improvements to the system, including re-design of the E-CDS website to improve its interface and functions, and offering Parties the option of eliminating paper documents and moving exclusively to E-CDS. The CCAMLR Secretariat is also planning to strengthen links between the E-CDS and other CCAMLR monitoring databases in order to provide enhanced verification of E-CDS information. It provides an ongoing E-CDS training programme for Parties, particularly non-Contracting Parties which voluntarily cooperate with CCAMLR in the implementation of the CDS, and is looking to extend this training programme in the future. Initial scepticism of some Parties has largely evaporated, given the functionality, ease of use and security features of the E-CDS. The CCAMLR Secretariat is prepared to provide information on the application of the E-CDS to other interested organizations.

Decision 12.76

26. The Secretariat believes that with sufficient financial and human resources, it is possible to create a centralized system that would allow for the establishment of a communication network through the CITES website to check the authenticity and veracity of permits and certificates issued and received by each of the Parties. Since the adoption of Decision 12.76, however, new information and communication technologies have gained wider acceptance and use, and offer Parties more choices with regard to the registration of their data. It is now possible for Parties to offer access to their data through a central web portal while hosting their data on local systems. The result would be an interoperable distributed network of data based on common information exchange formats, protocols

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[4]   *Format: The organization or layout of a document or object.*

[5]   *Protocols: A set of formal rules describing how to transmit data, especially across a network.*

[6]   *Standards: definitions or formats that have been approved by a recognized standards organization or are accepted as de facto standards by the industry.*

and standards. Parties that prefer to submit and register their data on a centralized system could also do so. The benefits of such an information architecture is that it would encourage adoption of common formats, protocols and standards, offer Parties more choices in registering their data and facilitate harmonization with other relevant global initiatives.

<u>Global initiatives and trends in the use of information and communication technologies to facilitate trade and transport</u>

27. Several global trends have encouraged the development and use of information and communication technologies to facilitate international trade and transport. For example, approximately 80 % of exports (measured in value) from developing countries are manufactured goods[7], and these countries are now able to take advantage of new patterns of trade such as the growth in e-commerce[8]. This is a sharp change from the situation as recently as 20 years ago when 20 % of exports from developing countries were manufactured goods and the use of e-commerce technologies was insignificant.

28. Other factors driving the use of information and communication technologies include the increased use of containerized transport, the need for greater security and economic growth.

29. As a result, there is growing recognition of the need to reduce the time, cost and effort associated with processing international trade transactions. For example, it is estimated that an average international trade transaction involves 27 to 30 different parties (seller, buyer, carrier, etc.) and at least 40 documents. Approximately 200 data elements are typically requested. Of these, approximately 15 % are re-keyed into a computer up to 30 times and 60 to 70 % re-keyed at least once[9].

30. There are several efforts underway to simplify and standardize trade documentation:

    a) The UN Layout Key (UNLK) was first adopted in 1963 and serves as a master layout design from which other trade documents can be derived. It organizes coded information (address, buyer, seller, documentation requirements for certain products, etc.) in a box format in fixed locations on a document. The UNLK can be used for creating international and national layout keys and standard forms used in electronic data processing applications;

    b) The United Nations Electronic Data Interchange for Administration, Commerce and Transport (UN/EDIFACT) is approved as an ISO standard for the electronic interchange of structured trade data between and among computerized information systems. It comprises internationally agreed standards, directories and guidelines; and

    c) The United Nations electronic Trade Documents (UNeDocs) use the latest Internet technologies and standards to combine existing trade document standards for paper with data modelling techniques, electronic tools and eXtensible Markup Language (XML)[10]. In this manner, trade documents are defined through data definitions, applicable standards and best trading practices. UNeDocs combine paper and electronic options since some governments and traders are likely to rely on paper trade documentation for some time to come. Users benefit from improved data security, signature authentication, access to secured information and the exchange of advance information of trade data for security or goods clearing purposes.

31. Compliance with international security requirements is becoming increasingly dependent on the ability to implement information and communication technology-based solutions. One recent

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[7]   *AD Transport newletter, no. 28, 2005, p. 8. (UNCTAD/SDTE/TLB/MISC/2005/3) (http://www.unctad.org/en/docs/sdtetlbmisc20053_en.pdf)*

[8]   *E-commerce (electronic commerce or EC) is the buying and selling of goods and services over the Internet, especially through the World Wide Web (WWW). E-commerce and a newer term, e-business, are often used interchangeably.*

[9]   *Trade Facilitation and Customs cooperation: Implementation strategy for data exchange between Customs administrations. Asian Development Bank, project number 36027. (http://www.adb.org/Documents/Reports/Consultant/36027-REG-TACR.pdf)*

[10] *eXtensible Markup Language (XML): designates a universal commonly data format for publishing and exchanging structured documents over the Internet.*

development in integrating the use of such technology in international trade is the World Customs Organization (WCO) Framework of Standards to Secure and Facilitate Global Trade (SAFE Framework). The SAFE Framework aims to:

> *establish standards that provide supply chain security and facilitation at a global level to promote certainty and predictability; enable integrated supply chain management for all modes of transport; enhance the role, functions and capabilities of Customs to meet the challenges and opportunities of the* 21st century*; strengthen cooperation between Customs administrations to improve their capability to detect high-risk consignments; strengthen Customs/Business cooperation; and, promote the seamless movement of goods through secure international trade supply chains[11].*

32. The SAFE Framework is based on principles contained in the Revised Kyoto Convention (International Convention on the Simplification and Harmonization of Customs Procedures (as amended)), including: risk management based on advance electronic information, use of modern technology, including e-commerce technologies, and a partnership with industry. This in turn requires use of computerized Customs systems, both at the export and import stages, as well as the use of information and communication technologies by traders for the electronic submission of data for Customs clearance purposes. The WCO, in its *Guidelines for the development of new or enhanced Customs information and communication technology systems*, suggests that Customs administrations should further ensure that their respective IT systems are interoperable and based on open standards.

33. These recommendations are exemplified through the WCO Data Model which establishes a standard, international, harmonized data set that will meet government requirements for international cross-border trade and is geared exclusively to the requirements of an automated environment. Initiatives such as the SAFE Framework and the WCO Data Model attempt to simplify, harmonize and standardize international trade and transport procedures to achieve greater efficiency in international trade transactions. They are collaborative efforts between governments and trade to provide an effective framework for the facilitation of international trade.

34. The overall challenge in using information and communication technologies to facilitate trade relates to the ability of electronic documents to replicate effectively the relevant functions of traditional paper documents in a secure electronic environment while ensuring that the use of electronic records or data messages has the same legal recognition as the use of paper documents. This entails some harmonization of laws and regulations concerning the use of e-commerce and use of new technologies such as electronic signatures.

35. There are several new developments and information and communication technologies available to deal with the above challenge. Several international agreements offer a basis for global harmonization of laws and regulations concerning the use of e-commerce. Among these is the UNCITRAL Model Law on Electronic Commerce[12] which is intended to facilitate the use of modern means of communications and storage of information. It is based on the establishment of a functional equivalent in electronic media for paper-based concepts such as writing, signature and original. By providing standards by which the legal value of electronic messages can be assessed, the Model Law plays a significant role in enhancing the use of paperless communication. It also contains rules for electronic commerce in specific areas, such as carriage of goods.

36. The UNCITRAL Model Law on Electronic Signatures[13] aims at bringing additional legal certainty to the use of electronic signatures. It establishes criteria of technical reliability for the equivalence between electronic and hand-written signatures.

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[11] *World Customs Organization. (2005). Framework of Standards to Secure and Facilitate Global Trade.* (http://www.wcoomd.org/ie/EN/Press/Cadre%20de%20normes%20GB_Version%20Juin%202005.pdf)

[12] *UNCITRAL Model Law on Electronic Commerce.* (http://www.uncitral.org/uncitral/en/uncitral_texts/electronic_commerce/1996Model.html)

[13] *UNCITRAL Model Law on Electronic Signatures.* (http://www.uncitral.org/uncitral/en/uncitral_texts/electronic_commerce/2001Model_signatures.html)

37. A recent United Nations forum on trade facilitation concluded that:

> *… for governments paperless trade is an important instrument to increase security, development and revenues from international trade. It increases the security of trade operations by providing electronic data, which are more structured, more reliable and easier to process and use for target consignment, such as automated risk analysis. Administrative costs are lower and less revenue is lost through fraud and non-compliance. Paperless trade allows governments to reduce delays and costs at the border, and increase their services for trade. It is a driver for the modernization of administrations and promotes the adoption of eBusiness in the national economy.[14]*

38. Adherence to standardized and electronic trade documentation and use of information and communication technologies yield many tangible benefits, including fewer documents and forms that are easier to complete; reduced time, money and human resources leading to lower total transaction costs; harmonized data elements which facilitates document transmission between and among countries; easy reproduction and fewer mistakes when data are entered only once; and improved administrative controls and improved security.

39. These developments have led to a new initiative called the Single Window Concept. The Single Window may be described as "a system that allows traders to lodge information with a single body to fulfil all import or export related regulatory requirements[15]". In other words, the Single Window environment provides one entrance, either physical or electronic, for the submission or handling of all data and documents related to the release and clearance of an international transaction. This entrance is ideally managed by one agency, which informs the appropriate agencies and/or directs combined controls.

40. While the implementation of a Single Window does not necessarily imply the implementation and use of new information and communication technologies, countries may enjoy fuller benefits of a Single Window by using such technologies and internationally accepted dataset standards.

Use of computerized systems to meet obligations under CITES

41. Articles of the Convention and most Resolutions related to permits and certificates are consistent with the use of computerized systems. Use of computerized systems can accommodate obligations under Articles III-IV, VI, VIII-X and Resolutions Conf. 9.5 (Rev. CoP13), Conf. 9.7 (Rev. CoP13), Conf. 10.15 (Rev. CoP12), Conf. 10.16 (Rev.), Conf. 10.20, Conf. 11.12, Conf. 11.15(Rev. CoP12) and Conf. 13.6.

42. Resolution Conf. 12.3 (Rev. CoP13) offers guidance concerning the standardization of permits and certificates. As it is based on traditional paper documents, it does not take into account the possibility of paperless transactions or electronic signatures and other electronic security measures. The Resolution refers to applicant signatures, the signature and the stamp or seal of the issuing authority, forms printed on security paper, and the use of security stamps.

43. The use of common information exchange formats, protocols and standards in electronic permitting systems enables Parties to exchange data and information in an efficient and timely manner, and permits linkages to other relevant information systems (such as the WCO Single Window). Cooperation among Parties is needed to ensure that electronic permitting systems are developed and implemented according to commonly agreed information exchange formats, protocols and standards.

44. Information and communication technologies have achieved sufficient stability and security to offer Parties viable alternatives to the traditional paper and handwritten signature procedures for permits now in effect. Several Parties have progressed significantly in automating electronic permit issuance and have taken note of developments related to information exchange formats, protocols and

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[14] *United Nations Centre for Trade Facilitation and Electronic Business. (2005). A Roadmap towards Paperless Trade: 3rd Executive Forum on Trade Facilitation, Paperless Trade in International Supply Chains, Enhancing Efficiency and Security, 20-21 June 2005. (http://www.unece.org/forums/forum05/presentations/Roadmap_Final.doc)*

[15] *United Nations Economic Commission for Europe. (2003). The Single Window Concept.(ECE/Trade/324) (http://unpan1.un.org/intradoc/groups/public/documents/UNECE/UNPAN019892.pdf)*

standards. Some Parties, in discussions with the Secretariat, stated that they could begin to make their data on permits available to other Parties as appropriate. They recognized a need for greater cooperation in the implementation and use of information exchange formats, protocols and standards, and that guidance in this topic would be useful.

45. There are similarities among the systems being developed and implemented by Parties in that specific components such as the application process are developed before other components; there is strong interest in moving towards a fully automated system; there is recognition of the need for a paper-based system to exist in parallel to an electronic system, at least for the near future; and while similar in approach and application, these systems have been mostly developed independently of one another and are not interoperable, i.e. they are not necessarily able to exchange and use information with similar systems. This latter point highlights the need for effective collaboration and sharing of expertise for the enhancement and future development of electronic permitting systems, in particular in the areas of information exchange formats, protocols and standards.

46. The electronic automation of the permit and certificate procedure will require a revision of Resolution Conf. 12.3 (Rev. CoP13) to accommodate electronic signatures and other security measures. Such changes should be proposed after a review of how electronic signatures and other electronic security measures are applied in electronic trade transactions.

DRAFT DECISIONS OF THE CONFERENCE OF THE PARTIES

Directed to the Standing Committee

14.xx   The Standing Committee's Working Group on the Use of Information Technology and Electronic Systems shall extend its mandate pursuant to Decision 13.69 to assist the Secretariat in drafting guidelines in the use of common information exchange formats, protocols and standards and electronic signatures to promote the development and use of electronic permitting systems among Parties and shall present a report at the 15th meeting of the Conference of the Parties on the progress made by the Working Group.

Directed to the Secretariat

14.xx   Subject to the availability of financial and human resources, the Secretariat, in cooperation with the Working Group on the Use of Information Technology and Electronic Systems, shall prepare a CD-ROM and Web-based toolkit on electronic permitting systems for consideration at the 57th meeting of the Standing Committee to assist Parties with implementation of electronic permitting systems. The toolkit shall include:

   a)   advice on the use of common information exchange formats, protocols and standards for use with electronic permitting systems;

   b)   advice on the use of electronic signatures and other electronic security measures;

   c)   advice on the development and implementation of interoperable information exchange pilot projects on electronic permitting systems;

   d)   a list of Parties willing to assist less developed countries in developing electronic permitting systems;

   e)   a list of Parties currently using electronic permitting systems; and

   f)   information on new developments in the use of electronic documents by relevant organizations.