

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

SUMMARY

MONDAY 1 OCTOBER
AFTERNOON

10. Arrangements for the 18th meeting of the Conference of the Parties (CoP18)

10.5 Selection of nominees for the chairmanship of the committees

The Standing Committee noted the oral update by the Secretariat.

10.6 Sponsored Delegates Project

The Standing Committee noted document SC70 Doc. 10.6; welcomed the generous support of donors for the Sponsored Delegates Project, and requested governments, international organizations, non-governmental organizations and private bodies to pledge their financial support.

The Standing Committee recommended that the Secretariat continue to apply clear selection criteria and requested the Secretariat to continue to take into account the various possible options for the selection criteria and additional ways to prioritize beneficiary Parties, including the guidelines of the Development Assistance Committee of the Organization for Economic Cooperation and Development (OECD-DAC) and the prioritization of small island developing States and least developed countries.

The Standing Committee recommended that the Secretariat explore further the practical arrangements for the provision of the Sponsored Delegates Project for delegates attending the meetings of the Animals, Plants and Standing Committee and bring any recommendations it may have to the Conference of the Parties, as appropriate.

27. Compliance matters

27.2 Possible establishment of a Compliance Assistance Programme: Report of the Secretariat

The Standing Committee noted document SC70 Doc. 27.2 and instructed the Secretariat to submit, in consultation with the Chair of the Standing Committee, a more detailed proposal for consideration at the 18th meeting of the Conference of the Parties, specifying the additional cost and source of funding for such a programme and ensuring that a Compliance Assistance Programme is part of a holistic approach to capacity-building as outlined in document SC70 Doc. 22.2.

27.3 Application of Article XIII

27.3.1 Application of Article XIII in the Lao People's Democratic Republic

The Standing Committee agreed the following recommendations:

1. *Regarding management of exports of Dalbergia spp.*

- a) Parties shall suspend commercial trade in specimens of the genus *Dalbergia* spp., including finished products such as carvings and furniture, from Lao PDR, until Lao PDR makes scientifically based non-detriment findings for trade in the relevant species, including *D. cochinchinensis* and *D. oliveri*, to the satisfaction of the Secretariat.

2. *Regarding national legislation for the implementation of CITES*

Lao PDR shall, as a matter of priority:

- b) adopt adequate legislative measures to implement the Convention that meet the minimum requirements set out in Resolution Conf. 8.4 (Rev. CoP15) on *National laws for implementation of the Convention*;
- c) ensure that the amended Penal Code enters into force and is disseminated widely among all relevant law enforcement and criminal justice stakeholders;

3. *Regarding CITES Authorities*

Lao PDR shall

- d) continue to monitor and address the need for capacity building and training of staff in CITES Management and Scientific Authorities as well as in customs and border controls on CITES-related matters with the support of the CITES Secretariat;
- e) every three months, submit to the Secretariat copies of export permits and other CITES permits and certificates issued by the Management Authority;

4. *Regarding enforcement*

Lao PDR shall

- f) continue to effectively implement existing relevant plans, in particular its National Ivory Action Plan (NIAP), and report on progress in implementation according to the fixed formats and deadlines;
- g) take urgent steps to progress the implementation of its National Wildlife Crime Response Strategy Plan to tackle illegal trade in wildlife as adopted by Decision MAF No. 1559 (2018)
- h) implement and collect data on the enforcement indicators of the International Consortium on Combating Wildlife Crime (ICWC) with the assistance of the ICWC partners;
- i) continue to effectively disseminate and implement PM Order No. 05/2018 and take steps to disseminate and implement the revised Penal Code as soon as it enters into force;
- j) investigate and prosecute mid- to high-profile cases involving organized or transboundary activities, such as those identified by various international partners; and continue to provide to the Secretariat the results (arrests and prosecutions) of any investigations conducted by competent national authorities to determine the origin of specimens in illegal trade, the identities of individuals involved in smuggling, and the results of any legal proceedings against alleged perpetrators for the period July 2018-January 2019; and
- k) continue to work with the law enforcement agencies from China, Malaysia, Singapore, Thailand and Viet Nam, in the context of the Wildlife Enforcement Network of the Association of Southeast Asian Nations (ASEAN-WEN) and other relevant networks to facilitate the exchange of information and best practices with the objective of improving the mechanisms for justice and police cooperation on the issues of trade and transiting of illegal wildlife and illegal wildlife 'tourism'.

5. *Regarding monitoring of wildlife farms and related trade*

Lao PDR shall

- l) enact and implement the legislative guidelines for systematic management of wildlife farming in order to ensure compliance with the provisions of the Convention and relevant Resolutions and Decisions;
- m) finalize the full audit of the tigers kept in captivity, combined with a marking scheme and genetic analysis of the animals to establish their origin in collaboration with relevant international organizations to comply with paragraph 1 g) of Resolution Conf. 12.5 (Rev. CoP17) on *Conservation of and trade in tigers and other Appendix-I Asian big cat species* and Decision 14.69; and
- n) establish an appropriate advisory mechanism with involvement of relevant international organizations to provide support and advice on the transformation of the tiger farms.

6. *Regarding awareness raising*

- o) Lao PDR shall continue to implement outreach campaigns targeted to raise awareness among nationals, traders, visitors and consumers from neighbouring countries about the laws and regulations of the State for the protection of fauna and flora. Campaigns should particularly continue to focus on raising awareness in special economic zones.

7. *Regarding capacity-building and technical assistance*

- p) Parties, the CITES Secretariat, international non-governmental organizations and development partners shall make efforts to respond to the requests for capacity-building and technical support expressed by Lao PDR to implement the action plan and aim to coordinate their support to maximize effectiveness and minimize overlap.

8. The Standing Committee requested that Lao PDR submit a report to the Secretariat by 1 February 2019 on the implementation of the recommendations 1-6 in order for the Secretariat to convey this report and its comments and recommendations to the next meeting of the Standing Committee (SC71) and agreed to review progress made by Lao PDR at its 71st meeting and take appropriate compliance measures, including a recommendation to suspend all commercial trade, if progress is considered insufficient.

27.3.3 Application of Article XIII in Guinea

The Standing Committee noted the oral update by the Secretariat; agreed that the suspension of all commercial trade in CITES-listed species with Guinea be maintained and requested the Secretariat to present the results of its technical mission in the country at its 71st meeting.

27.4 National ivory action plans process: Report of the Secretariat

The Standing Committee established an in-session working group on the national ivory action plan process (NIAP) with a mandate to review the proposed amendments to paragraph b) of Step 5 of Annex 3 on *Guidelines to the National Ivory Action Plans Process* of Resolution Conf. 10.10 (Rev. CoP17) on *Trade in elephant specimens* as contained in Annex 3 of document SC70 Doc. 27.4.

The membership of the in-session working group on NIAP was agreed as follows: Canada (Chair), Belgium, Cameroon, China, Ethiopia, European Union, France, Gabon, Israel, Japan, Kenya, Malaysia, Mozambique, Netherlands, Niger, Singapore, South Africa, Thailand, United Arab Emirates, United Kingdom of Great Britain and Northern Ireland, United Republic of Tanzania, United States of America and Viet Nam; and China Wildlife Conservation Association, David Shepherd Wildlife Foundation, Environmental Investigation Agency (U.K.), Fondation Franz Weber, Wildlife Conservation Society, World Wildlife Fund and Zoological Society of London.

The Standing Committee agreed the following recommendations:

Parties that continue with NIAP implementation

Angola

- a) The Standing Committee:
- i) agreed an overall rating of 'limited progress' in line with Step 4 paragraph e) of the *Guidelines*;
 - ii) requested Angola to take urgent steps to significantly progress the implementation of its revised and updated NIAP between SC70 and SC73, with a particular focus on:
 - A. finalizing the new Criminal Code to enable authorities to take strong action against wildlife crime, as anticipated by action A.1 in the revised and updated NIAP; and
 - B. taking steps to put in place the Action Plan as reported upon against action C.1 in the revised and updated NIAP, and to mobilize the Ivory Seizure Task Force as reported on against action D.6 in the NIAP, with a particular focus on addressing any illegal ivory carving industries in Angola, initiating inspections and enforcement actions in domestic markets, and scaling up inspections at ports and border checkpoints to detect, prevent and address illegal trade in worked ivory originating from the country.
 - iii) encouraged Parties, governmental, intergovernmental and non-governmental organizations and others to, where possible, provide financial and technical assistance to Angola, in accordance with Decision 17.82, and recommendation I) on NIAPs agreed at SC69, as presented in document SC69 Sum.10 (Rev. 1).

Cambodia

- b) The Standing Committee:
- i) welcomed the progress made by Cambodia and agreed an overall rating of 'partial progress' in line with Step 4, paragraph e), of the *Guidelines*; and
 - ii) encouraged Cambodia to consider the proposals made by the Secretariat following its mission, as referred to in paragraph 13 in Annex 1 to document SC70 Doc. 27.4, and to draw upon the offer of support from the Secretariat and the United Nations Office on Drugs and Crime in this regard, as deemed appropriate.

Cameroon

- c) The Standing Committee:
- i) noted the progress made by Cameroon in the implementation of its NIAP, and agreed an overall rating of 'limited progress' in line with Step 4, paragraph e), of the *Guidelines*; and
 - ii) encouraged Parties, governmental, intergovernmental and non-governmental organizations and others to, where possible, provide financial and technical assistance to Cameroon.

Congo and Gabon

- d) The Standing Committee:
- i) noted that Congo and Gabon submitted reports on progress with NIAP implementation, available as Annex 26 and 27 to document SC70 Doc. 27.4;
 - ii) noted that the reports submitted by Congo and Gabon were not submitted 90 days in advance of the present meeting, as required by Step 4, paragraph a) of the *Guidelines*, and that the Secretariat was as a result, not able to evaluate the reports prior to the present meeting, as required by Step 4, paragraph c), of the *Guidelines*; and
 - iii) requested the Secretariat to evaluate the progress reports from Congo and Gabon and bring any matters arising to the attention of the Standing Committee as may be needed.

Democratic Republic of the Congo

- e) The Standing Committee:
- i) noted the revised and updated NIAP of the Democratic Republic of the Congo;
 - ii) agreed an overall rating of 'limited progress' in line with Step 4, paragraph e), of the *Guidelines*;
 - iii) requested the Democratic Republic of the Congo to enhance efforts to progress the implementation of its NIAP actions between SC70 and SC73; and
 - iv) requested the Democratic Republic of the Congo to use the template for progress reports on NIAP implementation available on the NIAP webpage for future reporting on progress.

Egypt

- f) The Standing Committee:
- i) agreed an overall rating of 'limited progress' in line with Step 4, paragraph e), of the *Guidelines*;
 - ii) requested Egypt to revise and update its NIAP in accordance with Step 2 of the *Guidelines*, and to ensure that the actions in the NIAP respond to current ivory trafficking trends, taking into consideration the findings in the ETIS report prepared for SC69, as highlighted in paragraph 46 of Annex 1 to document SC70 Doc. 27.4; and
 - iii) requested Egypt to submit the revised and updated NIAP to the Secretariat for assessment in accordance with Step 3 of the *Guidelines*, and commence implementation as soon as the revised and updated NIAP is accepted as 'adequate' by the Secretariat, and provide associated reporting in accordance with the provisions set out in the *Guidelines*.

Lao PDR

- g) The Standing Committee:
- i) welcomed the progress made by Lao PDR and agreed an overall rating of 'partial progress' in line with Step 4, paragraph e), of the *Guidelines*;
 - ii) encouraged Lao PDR to build upon the current momentum to ensure that urgent measures continue to be taken to progress NIAP implementation;
 - iii) requested Lao PDR if it, as indicated in its progress report to SC70, decides to revise and update its NIAP found to be adequate in 2015, to do so using the template for NIAP development available on the NIAP webpage and, if applicable, to provide justification for the removal of any actions which have not yet been achieved or substantially achieved in the NIAP originally found to be adequate, but removed from the revised and updated NIAP; and
 - iv) requested Lao PDR to submit any revised and updated NIAP to the Secretariat for assessment in accordance with Step 3 of the *Guidelines*.

Malawi

- h) The Standing Committee welcomed the progress made by Malawi in implementing its NIAP, and agreed an overall rating of 'partial progress' in line with Step 4, paragraph e), of the *Guidelines*.

Malaysia

- i) The Standing Committee:
- i) noted the revised and updated NIAP of Malaysia;
 - ii) agreed an overall rating of 'partial progress' in line with Step 4, paragraph e), of the *Guidelines*;
 - iii) requested Malaysia to pursue further capacity building activities to implement action 2.2 in its NIAP, and to reach out to the Secretariat for support in this regard, if needed; and

- iv) requested Malaysia to continue to progress the implementation of its revised and updated NIAP between SC70 and SC73, and to provide sufficiently detailed reporting to SC73, to justify progress ratings allocated to its NIAP actions, and to enable the Secretariat to fully assess the progress made.

Nigeria

j) The Standing Committee:

- i) noted that Nigeria successively did not submit its reports on progress with NIAP implementation in time for its progress to be assessed and reflected in the documents on NIAPs prepared by the Secretariat for SC66, SC67, SC69 and SC70;
- ii) noted the report on progress with NIAP implementation submitted by Nigeria on 11 September 2018, available as Annex 25 to document SC70 Doc. 27.4, that this report was not submitted 90 days in advance of the present meeting, as required by Step 4, paragraph a) of the Guidelines, and that the Secretariat was as a result, not able to evaluate the report prior to the present meeting, as required by Step 4, paragraph c), of the Guidelines;
- iii) noted the concerns regarding the escalation of illegal trade in ivory and other wildlife specimens from Nigeria, as detailed in paragraphs 82 to 85 of Annex 1 to document SC70 Doc. 27.4;
- iv) requested the Secretariat to evaluate the progress report received from Nigeria, available as Annex 25 to document SC70 Doc. 27.4;
- v) in the event that the Secretariat, in accordance with the provisions of Step 4, paragraph d), of the Guidelines, finds that the progress report does not provide sufficient detail of the activities delivered to justify allocated progress ratings, and does not confirm that progress has been made towards NIAP implementation, requested the Secretariat to, on behalf of the Committee, in accordance with Step 4, paragraph f), of the Guidelines, issue a Notification to the Parties recommending all Parties to suspend commercial trade in CITES-listed species with Nigeria; and
- vi) agreed that, if implemented, the recommendation to suspend commercial trade in CITES-listed species with Nigeria referred to in recommendation j) v) above, remain in place until Nigeria submits a progress report to the Secretariat, assessed by the Secretariat as providing sufficient detail of the activities delivered to justify allocated ratings, and confirming that progress has been made towards NIAP implementation.

Qatar

- k) The Standing Committee agreed an overall rating of 'partial progress', in line with Step 4 paragraph e) of the *Guidelines*.

Togo

- l) The Standing Committee, regarding Togo as Category A Party, noted that this Party did not submit a report on progress with NIAP implementation that allowed for its progress to be reflected in document SC70 Doc. 27.4;
- m) In the absence of any report or oral update on progress with NIAP implementation to SC70 by Togo, the Standing Committee requested the Secretariat in accordance with Step 4, paragraph f), of the *Guidelines*, on behalf of the Committee to:
 - i) issue a warning, requesting Togo to submit its NIAP progress report within 60 days of the conclusion of SC70 to the Secretariat; and
 - ii) if there is no satisfactory response by Togo, issue a Notification to the Parties recommending all Parties to suspend commercial trade in CITES-listed species with Togo until it submits a progress report to the Secretariat confirming that progress has been made towards NIAP implementation.

Viet Nam

- n) The Standing Committee:

- i) noted the NIRAP of Viet Nam and the report on progress with implementation prepared for the present meeting;
- ii) requested Viet Nam to continue to progress the implementation of its NIRAP between SC70 and SC73; and
- iii) requested Viet Nam to use the template for progress reports on NIAP implementation, available on the NIAP webpage, for future reporting on progress with NIRAP implementation.

Parties reporting to the present meeting that they have 'substantially achieved' their NIAPs

Ethiopia

- o) The Standing Committee:
 - i) welcomed the progress made by Ethiopia and agreed an overall rating of 'partial progress' in line with Step 4, paragraph e), of the *Guidelines*; and
 - ii) requested Ethiopia to continue to progress the implementation of its NIAP between SC70 and SC73.

Mozambique

- p) The Standing Committee:
 - i) agreed an overall rating of 'achieved' in line with Step 4, paragraph e), of the *Guidelines*, and commended Mozambique for achieving its NIRAP;
 - ii) encouraged Mozambique to complete the implementation of any NIRAP actions that have not yet been 'achieved';
 - iii) requested Mozambique to report to the 73rd meeting of the Standing Committee on any further measures and activities implemented to address poaching and illegal trade in ivory and rhinoceros horn as it affects Mozambique, with a particular focus on measures and activities implemented to:
 - A. further strengthen detection of illegal ivory and rhinoceros horn consignments at its ports;
 - B. strengthen efforts to gather intelligence about the criminal syndicates that continue to operate from Mozambique, to map out these criminal networks, and to initiate intelligence driven operations and investigations to address them; and
 - C. strengthen the implementation and impact of its amended national laws and regulations to combat poaching and ivory and rhinoceros horn trafficking;
 - iv) requested the Secretariat to make the report referred to in recommendation p) iii) above available to the Committee, together with any recommendations it may have; and
 - v) requested the Secretariat to continue to monitor progress in accordance with paragraph 9 of Resolution Conf. 10.10 (Rev. CoP17), and to bring any issues of concern that may arise to the attention of the Committee.
- q) The Standing Committee agreed that it will consider at SC73 whether Mozambique should revise and update its NIRAP, or exit the NIAP process, or if any other measures need to be taken, in accordance with Step 5, paragraph d), of the *Guidelines*.

United Republic of Tanzania

- r) The Standing Committee:
 - i) agreed an overall rating of 'achieved' in line with Step 4, paragraph e), of the *Guidelines*, and commended the United Republic of Tanzania for achieving its NIAP;
 - ii) encouraged the United Republic of Tanzania to complete the implementation of any NIAP actions that have not yet been 'achieved';

- iii) agreed that the United Republic of Tanzania exit the NIAP process in accordance with Step 5, paragraph d), of the *Guidelines*; and
- iv) requested the Secretariat to continue to monitor progress in accordance with paragraph 9 of Resolution Conf. 10.10 (Rev. CoP17), and to bring any matters of concern that may arise to the attention of the Committee.

Parties that 'substantially achieved' their NIAPs at previous meetings of the Standing Committee

China, Kenya, Philippines, Thailand and Uganda

- s) The Standing Committee:
 - i) commended China, Kenya, Philippines, Thailand and Uganda for 'achieving' their NIAPs and for the further measures taken to address illegal trade in ivory;
 - ii) agreed that China, Kenya, Philippines, Thailand and Uganda exit the NIAP process in accordance with Step 5 paragraph d) of the *Guidelines*; and
 - iii) requested the Secretariat to continue to monitor progress in accordance with paragraph 9 of Resolution Conf. 10.10 (Rev. CoP17), and to bring any matters of concern that may arise to the attention of the Committee.

Hong Kong SAR of China

- t) The Standing Committee:
 - i) commended Hong Kong SAR of China for implementing its NIAP, the additional measures and activities implemented to address illegal trade in ivory, and the firm commitment demonstrated to build upon the progress made to date;
 - ii) encouraged Hong Kong SAR of China to submit a comprehensive report to its 73rd meeting, on:
 - A. any further measures taken and activities implemented to combat illegal trade in ivory;
 - B. progress with the implementation of the three-step plan outlined in Notification to the Parties No. 2018/057 of 1 June 2018;
 - C. any measures and activities implemented to prevent the displacement of illegal trade in ivory to Hong Kong SAR, that may result from the closure of domestic ivory markets in mainland China; and
 - D. measures implemented to deter and detect worked ivory products moving out of Africa to Hong Kong SAR, and to penalize offenders involved;
 - iii) requested the Secretariat to continue to monitor progress in accordance with paragraph 9 of Resolution Conf. 10.10 (Rev. CoP17), and to bring any issues of concern that may arise to the attention of the Committee; and
 - iv) agreed that it will consider at SC73, whether Hong Kong SAR of China should exit the NIAP process, in accordance with Step 5, paragraph d), of the *Guidelines*.

Other matters

Actions recommended by the meeting of representatives of NIAP Parties

- u) The Standing Committee:
 - i) noted the actions agreed by participants in the meeting of representatives of Parties concerned with the development and implementation of NIAPs, presented under headings 1-5 in Annex 2 to document SC70 Doc. 27.4;
 - ii) requested the Secretariat to make the actions presented under headings 1-5 in Annex 2 to document SC70 Doc. 27.4 available on the NIAP webpage in English, French and Spanish, as

guidance for new and existing NIAP Parties to consider when developing and implementing their NIAPs; and

- iii) encouraged Parties to draw upon the actions concluded and agreed, as presented under headings 1-5 in Annex 2 to document SC70 Doc. 27.4, when developing and implementing their NIAPs.

Revision of the Annex to Resolution Conf. 14.3 on *CITES compliance procedures*

- v) The Standing Committee agreed to propose to CoP18 to include Resolution Conf. 10.10 (Rev CoP17) on *Trade in elephant specimens* in the footnote to paragraph 30 in the Annex to Resolution Conf. 14.3 on *CITES compliance procedures*.

35. Purpose codes on CITES permits and certificates: Report of the working group

The Standing Committee established an in-session working group with the mandate to clearly define purpose-of-transaction codes to encourage their consistent use, and consider the possible elimination of current codes or the inclusion of new ones, with the aim of adding these to the amendments to Resolution Conf. 12.3 (Rev. CoP17) on *Permits and certificates* in the Annex to document SC70 Doc. 35 for consideration at the 18th meeting of the Conference of the Parties; or, if no consensus is achieved, propose a draft decision to continue this discussion after the 18th meeting of the Conference of the Parties.

The membership of the working group was agreed as follows: Canada (Chair), Argentina, Australia, Belgium, Chad, China, European Union, Finland, France, Japan, Malaysia, Netherlands, South Africa, Spain and the United States of America; and Alliance of Marine Mammal Parks and Aquariums, Association of Zoos and Aquariums, Global Eye, Lewis and Clark – International Environmental Law Project, Pet Industry Joint Advisory Council, San Diego Zoo Global, Species Survival Network, TRAFFIC and Wold Association of Zoos and Aquariums.

45. European eels (*Anguilla anguilla*): Report of the Secretariat and of the Animals Committee

The Standing Committee requested the Secretariat to amend the *Guidelines for the preparation and submission of CITES annual reports* and the *Guidelines for the preparation and submission of CITES annual illegal trade reports* as proposed in paragraph 21 of document SC70 Doc. 45 for adoption at its 71st meeting (SC71, Colombo, May 2019) and to develop draft decisions on trade in European eels as outlined in paragraphs 22 and 23 of document SC70 Doc. 45 for consideration at the 18th meeting of the Conference of the Parties.

The Standing Committee established an in-session working group on European eels with the mandate to consider the information in relation to illegal trade in document SC70 Doc. 45 and its annexes and, taking into account any information coming from the Standing Committee's intersessional working group on European eels to develop further recommendations for adoption and draft decisions for the consideration of the Conference of the Parties at its 18th meeting, if appropriate.

The membership of the working group was agreed as follows: Spain (Chair), Belarus, Canada, China, European Union, France, India, Italy, Japan, Norway, Portugal, Republic of Korea, Romania, United Kingdom of Great Britain and Northern Ireland, and the United States of America; the United Nations Food and Agriculture Organization (FAO) and the International Union for Conservation of Nature (IUCN); and Association of Fish and Wildlife Agencies, Global Guardian Trust, IWMC-World Conservation Trust, Sustainable Eel Group, TRAFFIC, Zoological Society of London and OPES OCEANI.

50. Hawksbill turtle (*Eretmochelys imbricata*) and other marine turtles (Cheloniidae and Dermochelyidae): Report of the Secretariat

The Standing Committee agreed to propose to the Conference of the Parties at its 18th meeting the extension of Decisions 17.222 and 17.223.

52. Great apes (Hominidae spp.): Report of the Secretariat

The Standing Committee requested the Secretariat, in consultation with the Chair of the Standing Committee, the Great Apes Survival Partnership (GRASP) and the International Union for Conservation of Nature (IUCN), to review the current provisions in Resolution Conf. 13.4 (Rev. CoP16) on *Conservation of and trade in great apes*, and, taking account of recommendations emanating from the report in the Annex to document SC70 Doc. 52 and from the Standing Committee's intersessional working group on great apes,

propose as appropriate, amendments to the Resolution for consideration at the 18th meeting of the Conference of the Parties; and agreed that Decisions 17.232 and 17.233 have been fully implemented.