Doc. 9.45

Consideration of Proposals for Amendment of Appendices I and II

TEN–YEAR–REVIEW PROPOSALS

1. Background

   At the New Delhi meeting, 1981, the Conference of the Parties decided to carry out a "Ten–year Review of the Appendices", and to establish Regional Committees and a Secretariat Committee to effect the review, and a Central Committee to appraise and co–ordinate the original reviews (Resolution Conf. 3.20).

   At the Gaborone meeting, 1983, it became apparent that the "Ten–year Review" based on the work of regional committees would remain uncompleted, and that the envisaged goal, to achieve scientifically sound and effective appendices, could not be reached by this procedure. Therefore, the Conference of the Parties adopted Resolution Conf. 4.7 "Regulation of Trade in Appendix–II Wildlife", establishing thus an additional tool for the revision of the appendices.

   At the Buenos Aires meeting, 1985, the Conference of the Parties, by adopting Resolution Conf. 5.3, approved the procedure and timetable of the "Significant Trade in Appendix–II Species" project, as outlined in document Doc. 5.26, including a recommendation to the effect that Appendix–II taxa that have never been reported in trade should be considered for deletion from this appendix, unless they have been included in Appendix II or should remain there for look–alike reasons.

   In addition, the Conference of the Parties expressed its wish that the Ten–year–review Central Committee should continue its work and that the Chairman of this Committee, designated in 1982 (Switzerland), should stimulate the completion of the Review and co–ordinate the submissions of the regions (document Plen. 5.9).

   Following the Buenos Aires meeting, the Chairman of the Ten–year–review Central Committee compiled a list of Appendix–II species that had never been recorded in trade since their listing. This list included the countries of origin of the species and brief information on their CITES history.

   At its 13th meeting, in November 1985, the Standing Committee approved the steps taken by the Chairman of the Ten–year–review Central Committee. The Standing Committee decided also that for the species concerned a short, simple text was sufficient as a supporting statement.

   At the sixth meeting of the Conference of the Parties (Ottawa, 1987), Switzerland, on behalf of the Central Committee for the Ten–year Review (which consists of the Parties represented on the Standing Committee and of the Secretariat) submitted 61 proposals for the deletion from Appendix II of species not having been traded since their listing (see document Doc. 6.47 in Proceedings of the Sixth Meeting of the Conference of the Parties, pp. 851–861). The proposals were considered by Committee I which recommended the adoption of many of them, but some were withdrawn for various reasons, including the need for further consideration (see document Com.I. 6.11 in Proceedings of the Sixth Meeting of the Conference of the Parties, pp. 210–212). The Conference of the Parties adopted the recommendations of Committee I [see document Plen. 6.8 (Rev.) in Proceedings of the Sixth Meeting of the Conference of the Parties, p. 144].

   In 1987, the Animals Committee was established by the Conference of the Parties through Resolution Conf. 6.1 Annex 2, adopted in Ottawa, with the mandate, among other things, to continue the work entrusted to the Central Committee for the Ten–year Review. It reconsidered some of the species for which proposals had been withdrawn in Ottawa, and considered others. The Plants Committee, which has a similar mandate to that of the Animals Committee, did the same for some plant species. It must be noted, however, that some species of plants listed in Appendix I were also considered.

   At the seventh meeting of the Conference of the Parties (Lausanne, 1989), 28 proposals were submitted, in a way similar to that described for the sixth meeting, by Switzerland, the United States of America and Uruguay, on behalf of the Animals or Plants Committee. Several of the proposals were adopted as submitted, some were adopted after having been amended, and some were withdrawn for reasons similar to those taken into consideration at the sixth meeting.

   At the eighth meeting of the Conference of the Parties (Kyoto, 1992), 27 proposals were submitted, in a way similar to that described for the sixth and seventh meetings, by Germany, the Philippines, Switzerland and the United States of America, on behalf of the Animals or Plants Committee. Several of the proposals were adopted as submitted, some were adopted after having been amended, and some were withdrawn for reasons similar to those taken into consideration at the sixth and seventh meetings.

2. Proposals

   The attached proposals are formally submitted by Mexico, Switzerland and the United States of America, those of Mexico and Switzerland being submitted on behalf or with the approval of the Animals or Plants Committee. The list of the proposals follows the order used for Appendices I and II and is included in Annex 1 to this document.

The recommendations from the Secretariat are in Annex 2 to this document.

The comments from the Parties are in Annex 3 to this document.

Ten–year–review Proposals

Consideration of Proposals for Amendment of Appendices I and II

LIST OF PROPOSALS

1. Taxa are listed in the same order as in Appendices I and II. Supporting statements are arranged in corresponding order[1].
2. Code letters have the following meaning: CH (Switzerland), MX (Mexico), US (United States of America). These code letters indicate the proponent of each proposal. The number following each two–letter code corresponds to the number of each proposal as listed in the Notification to contracting or signatory States dated 4 July 1994 [see Doc. 9.47 (Rev.) Annex 1].

F A U N A				
MAMMALIA				
ARTIODACTYLA				
Bovidae	1.	Transfer from Appendix I to Appendix II of: except *Ovis vignei vignei*	*Ovis vignei*	US1
MOLLUSCA				
UNIONOIDA				
Unionidae	2.	Inclusion in Appendix II of: (+2aa meaning the North American populations, except *Amblema plicata, Ellipsaria, lineolata, Fusconaia ebena, Fusconaia flava, Ligumia recta, Megalonaias nervosa, Obliquaria reflexa, Pleurobema cordatum, Quadrula apiculata, Quadrula metanevra, Quadrula nodulata, Quadrula pustulosa, Quadrula quadrula* and *Trigonia verrucosa*)	Unionidae spp. +2aa	US2
	3.	Annotation as p.e. (possibly extinct) of:	*Epioblasma sampsoni*	US3
	4.	Transfer from Appendix I to Appendix II of:	*Epioblasma sulcata perobliqua*	US4
	5.	Transfer from Appendix I to Appendix II of:	*Lampsilis satura*	US5
F L O R A				
APOCYNACEAE	6.	Transfer from Appendix I to Appendix II of:	*Pachypodium namaquanum*	CH1
ARACEAE	7.	Deletion from Appendix II of:	*Alocasia sanderiana*	CH2
CACTACEAE	8.	Transfer from Appendix I to Appendix II of:	*Astrophytum asterias*	MX1/CH3
	9.	Transfer from Appendix I to Appendix II of:	*Leuchtenbergia principis*	MX2/CH4
	10.	Transfer from Appendix I to Appendix II of:	*Mammillaria plumosa*	MX3/CH5
LILIACEAE	11.	Deletion from Appendix II of:	*Aloe barbadensis (vera)*	CH6
ORCHIDACEAE	12.	Transfer from Appendix I to Appendix II of:	*Cattleya skinneri*	MX4/CH7
	13.	Transfer from Appendix I to Appendix II of:	*Didiciea cunninghamii*	CH8
	14.	Transfer from Appendix I to Appendix II of:	*Lycaste skinneri* var. *alba*	MX5/CH9
THEACEAE	15.	Deletion from Appendix II of:	*Camellia chrysantha*	CH10

[1] *As indicated in the "Foreword", these supporting documents are not reproduced in the Proceedings. (Note from the Secretariat.)*

Consideration of Proposals for Amendment of Appendices I and II

Ten–year–review Proposals

RECOMMENDATIONS FROM THE SECRETARIAT

1. The Secretariat's recommendations given below are provisional and may be changed on the basis of information that the Secretariat is expecting to receive from various sources, including Parties (range States in particular) and others.
2. The Secretariat fully supports the principle behind the proposals of deletion from Appendix II since the international trade does not threaten the species concerned. If these proposals are accepted this will result in:
   a) no detrimental effect on the species in the wild;
   b) a simplification and rationalization of the CITES appendices;
   c) an easier and more effective implementation of CITES; and
   d) a reduction in workload (training of enforcement officers, identification of specimens).
3. Consequently, the Secretariat recommends that proposals 7 on *Alocasia sanderiana* and 15 on *Camellia chrysantha* submitted by Switzerland be approved by the Conference of the Parties for the above–mentioned reasons. It is worthwhile to note that *A. sanderiana* was transferred from Appendix I to Appendix II at the eighth meeting of the Conference of the Parties.
4. Proposal 11 on *Aloe barbadensis (vera)*, submitted by Switzerland, is not submitted because of the absence of trade in it but because it might be extinct in the wild. All the trade, which is considerable, is in cultivated specimens, a number of which are in any case exempted from CITES provisions under annotation #6. The Secretariat recommends therefore that this proposal be approved by the Conference of the Parties, as recommended by the Plants Committee.
5. The other proposals concerning plants (6, 8, 9, 10, 12, 13 and 14 submitted by Mexico and/or Switzerland) ask for the transfer of species from Appendix I to Appendix II, essentially to favour their artificial propagation by a reduction of the paperwork necessary to trade in them. The Plants Committee supports these proposals and the Secretariat recommends that they be approved by the Conference of the Parties.
6. Proposal 1 on *Ovis vignei,* submitted by the United States of America, is intended to provide clarification of the listing of this species in the CITES appendices. The Secretariat is fully aware of the complexity of the taxonomy of the genus *Ovis* but it is not convinced that the proposed changes will reduce the confusion. In fact the contrary might result because, if the proposal is accepted, the species will be listed in Appendix II and a subspecies in Appendix I, without any indication of how this subspecies can be distinguished from the others. In addition, the proposal does not indicate why the other subspecies should be transferred to Appendix II while several of them are classified by IUCN as endangered, as indicated in the supporting statement. To recommend that such a proposal be approved by the Conference of the Parties, the Secretariat would need further clarification and evidence of its appropriateness. In addition, it would appear preferable to list national populations of the species in Appendix I rather than a subspecies.
7. In the CITES appendices, 32 taxa of Unionidae are listed. Proposal 2, on Unionidae spp., submitted by the United States of America, aims to include in Appendix II more than 200 additional species without providing the data usually required. Therefore, the Secretariat thinks that the proposal may not be considered as a Ten–year–review proposal. It should be treated as an "other proposal" subject to the Berne criteria which, obviously, it does not meet. This applies also to proposals 4 and 5, which ask for the transfer to Appendix II of two taxa of the same family. Consequently, the Secretariat recommends that these proposals be rejected by the Conference of the Parties. On the other hand, it recommends that proposal 3, which asks that *Epioblasma sampsoni* be annotated as p.e. (possibly extinct), be approved by the Conference of the Parties.

Consideration of Proposals for Amendment of Appendices I and II

Ten–year–review Proposals

COMMENTS FROM THE PARTIES

Comments from Japan

UNITED STATES OF AMERICA

Unionidae spp.

In discussing the possibility of listing a species in the CITES appendices, it is essential to base the decision on scientific evidence that it may become threatened with extinction unless the trade in the species is subject to strict regulation (in case of Appendix–II species) and trade control is necessary for the protection of the species (with respect to both appendices). No proposal for listing should be made for species for which there is not sufficient information to justify inclusion in the appendices, because this will merely increase the number of listed species and thus impose an additional administrative burden on the Management Authorities of the nations concerned. This will have an adverse impact on management and trade control for the species which truly require protection.

On the basis of the above position, the Governement of Japan believes that the proposal does not provide sufficient reasonable evidence to justify the amendments to the appendices for these species; therefore, without further information, the proposed amendments are not appropriate.

Comments from Liechtenstein and Switzerland

UNITED STATES OF AMERICA

Unionidae spp.

It is our understanding that in the context of the Ten–year Review only the status of species that are already listed may

be reviewed. Such species may either be transferred from one appendix to another, or be entirely removed from the appendices. The addition of new species under the Ten–year Review procedure is not allowable. The proposal submitted by the United States not only reviews the status of the currently listed species but also aims to add new species to Appendix II. It has therefore to be considered, at least in part, as an "other proposal" and must be fully documented.

The data provided are definitely inadequate to support the listing of 238 new species and some more subspecies. It is not quite intelligible why a total of 267 species have to be listed in the CITES appendices if only 32 species or subspecies are harvested. Neither population data nor information on the range of the individual species are provided. Information on national trade is lacking. Obviously most of the existing trade is in species that are not proposed for listing, but international trade is not documented at species level, although 31 species or subspecies have been listed in the CITES appendices since 1975. No evidence of illegal trade is given. Protection at the national level is lacking for 224 (!) species. The proposal should, in its present form, not be accepted, except for the changes suggested under 3., 4. and 5. regarding *Epioblasma sulcata, Lampsilis satura* and *Epioblasma sampsoni*.

Comments from the Russian Federation

UNITED STATES OF AMERICA

Ovis vignei

The Management Authority of the Russian Federation considers that the US proposal to transfer *Ovis vignei* from Appendix I to Appendix II (excluding *Ovis vignei vignei*) is in compliance with the position of the Russian Federation. However, the systematics of *Ovis vignei* and *Ovis ammon* needs special consideration by the Nomenclature Committee.

Doc. 9.46

Consideration of Proposals for Amendment of Appendices I and II

PROPOSALS CONCERNING EXPORT QUOTAS

Proposals Submitted and Recommendations from the Secretariat

1. No Party has submitted any amendment proposal in accordance with Resolution Conf. 7.14 "Special Criteria for the Transfer of Taxa from Appendix I to Appendix II". However, Indonesia has submitted a proposal to transfer its population of *Scleropages formosus* back to Appendix I, where it was listed before being transferred to Appendix II subject to export quotas. Currently, all trade in *Scleropages formosus* from Indonesia is in captive–bred specimens from one operation, subject to an export quota determined by the Conference of the Parties at its eighth meeting (Kyoto, 1992). If the Indonesian population of this fish were listed in Appendix I, Indonesia would be able to apply for the registration of the above–mentioned breeding operation and of others that are already producing captive–bred specimens but are not authorized to export them because of the existing annotation in the CITES appendices. The Secretariat recommends that this proposal be approved by the Conference of the Parties.

2. At its seventh meeting (Lausanne, 1989), the Conference of the Parties adopted Resolution Conf. 7.14 on Special Criteria for the Transfer of Taxa from Appendix I to Appendix II, under which it was recommended that "for those species for which an export quota under Resolution Conf. 5.21 was approved prior to the seventh meeting, such transfer should be for a maximum period of two intervals between regular meetings of the Conference of the Parties or one interval, should the usual interval become three years, ... after which the population should be transferred to Appendix I if it is not retained in Appendix II under the provisions of either Resolution Conf. 1.2, where applicable, or Resolution Conf. 3.15 adopted at the third meeting of the Conference of the Parties (New Delhi, 1981)".

   Therefore and taking into account the last paragraph of Resolution Conf. 7.14, the Secretariat asked the Depositary Government (Switzerland) to submit appropriate proposals for all species falling under the above recommendations. Consequently, Switzerland submitted the following proposals:

   - Transfer of the Malagasy and Somali populations of *Crocodylus niloticus* from Appendix II to Appendix I
   - Transfer of the Indonesian population of *Crocodylus porosus* from Appendix II to Appendix I
   - Transfer of the Indonesian population of *Scleropages formosus* from Appendix II to Appendix I.

   It is understood that the proposals concerning the population of Madagascar of *Crocodylus niloticus* and the population of Indonesia of *Crocodylus porosus* will be withdrawn if the ranching proposals submitted by those Parties are accepted by the Conference of the Parties (see document Doc. 9.44).

   The proposal on *Scleropages formosus* is redundant as Indonesia has made the same proposal.

   Regarding the Somali population of *Crocodylus niloticus*, the Secretariat can only recommend that the proposal from Switzerland be approved by the Conference of the Parties as the Secretariat has no data on the status of the species in Somalia and because it does not know whether CITES is implemented in that country.

3. At the eighth meeting of the Conference of the Parties, the Ugandan population of *Crocodylus niloticus* was transferred to Appendix II subject to an annual export quota of 2,500 specimens for 1992, 1993 and 1994.

   Uganda has not submitted a proposal for the renewal of its quota or a ranching proposal, although such a proposal was expected. However, according to Resolution Conf. 7.14, "if a Party with a quota approved at a regular meeting of the Conference of the Parties intends to keep its quota unchanged for the interval between the next two regular meetings this should be agreed to by the Conference of the Parties, but no supporting statement is required if the Party has fulfilled its reporting requirements in terms of this Resolution."

   As Uganda has provided the required report (see document Doc. 9.27), the Secretariat recommends that the annual export quota of 2500 specimens be maintained for 1995, 1996 and 1997, if Uganda so wishes.

4. The amendment proposals and supporting statement received were sent by the Secretariat to all Parties, in accordance with Resolution Conf. 7.14, through the Notification to contracting or signatory States of 4 July 1994 [see document Doc. 9.47 (Rev.) Annex 1].

Comments from the Parties

The Secretariat has received no comments from Parties concerning these proposals.

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CONSIDERATION OF PROPOSALS FOR AMENDMENT OF APPENDICES I AND II

1. In accordance with the provisions of sub-paragraph a) of paragraph 1 of Article XV of the Convention, any Party may propose an amendment to Appendix I or II for consideration at the next meeting of the Conference of the Parties. Any proposal for amendment shall be communicated to the Secretariat at least 150 days before the meeting of the Conference.
2. On 10 June 1994, i.e. 150 days before the opening date of the ninth meeting of the Conference of the Parties, 31 Parties communicated to the Secretariat their proposals for amendment of Appendices I and II, for consideration at the ninth meeting. These were Australia, Bangladesh, Belgium, Benin, Chile, Denmark, Ecuador, Egypt, France, Germany, Ghana, India, Indonesia, Italy, Kenya, Madagascar, Mexico, the Netherlands, New Zealand, Norway, Peru, the Philippines, South Africa, the Sudan, Switzerland, Thailand, the United Republic of Tanzania, the United Kingdom of Great Britain and Northern Ireland, the United States of America, Uruguay and Viet Nam. Most of the proposals were accompanied by supporting statements presented in the format recommended by the Conference of the Parties (Resolution Conf. 2.17 of the second meeting, San José, 1979).
3. All these proposals were communicated to contracting or signatory States of the Convention through a Notification dated 4 July 1994. The text of this Notification is attached to the present document (Annex 1).
4. The proposals may be divided into four categories:
   - proposals submitted pursuant to Resolution Conf. 3.15 on Ranching (see document Doc. 9.44);
   - Ten–year–review proposals (see document Doc. 9.45);
   - proposals concerning export quotas (see document Doc. 9.46); and
   - other proposals (see this document, Annex 2).
5. A list of all the "other proposals" for amendment has been compiled in the same taxonomic and alphabetical order as followed for the establishment of Appendices I and II of the Convention. This list is attached to the present document as Annex 2. Because of their size, the supporting statements, arrange in the same order, are being issued in several separate batches[1].
6. Recommendations from the Secretariat with respect to the "other" amendment proposals are attached to the present document as Annex 3.
7. In accordance with the provisions of Article XV, paragraph 1(a), of the Convention, the Secretariat communicates the comments on other amendment proposals received from the Parties. These comments constitute Annex 4 of the present document.
8. In accordance with the provisions of Article XV, paragraph 2(b), the Secretariat communicates the comments on other amendment proposals on marine species received from relevant inter–governmental bodies. These comments constitute Annex 5 of the present document.
9. The reports of the Panels of Experts on the African Elephants regarding the proposals from South Africa and the Sudan constitute Annexes 6 and 7 of the present document.

Doc. 9.47 (Rev.) Annex 1

NOTIFICATION

to contracting or signatory States of the Convention on International Trade in Endangered Species of Wild Fauna and Flora

AMENDMENTS TO APPENDICES I AND II OF THE CONVENTION

A. In accordance with the provision of Article XV, paragraph 1(a), of the Convention, Australia, Bangladesh, Belgium, Benin, Chile, Denmark, Ecuador, Egypt, France, Germany, Ghana, India, Indonesia, Italy, Kenya, Madagascar, Mexico, the Netherlands, New Zealand, Norway, Peru, the Philippines, South Africa, the Sudan, Switzerland, Thailand, the United Republic of Tanzania, the United Kingdom of Great Britain and Northern Ireland, the United States of America, Uruguay and Viet Nam, all Parties to the Convention, have communicated to the Secretariat the following proposals for amendment of Appendices I and II of the Convention. These proposals will be considered at the ninth meeting of the Conference of the Parties to the Convention, to be held at Fort Lauderdale (United States of America) from 7 to 18 November 1994.

Proposals Submitted Pursuant to Resolution on Ranching

Proposal from Ecuador

F A U N A

REPTILIA

CROCODYLIA

1.	Crocodylidae	*Melanosuchus niger*, transfer of the Ecuadorian population from Appendix I to Appendix II

[1] *As indicated in the "Foreword", these supporting documents are not reproduced in the Proceedings. (Note from the Secretariat.)*

Proposal from Indonesia

F A U N A

REPTILIA

CROCODYLIA

1.	Crocodylidae	*Crocodylus porosus*, maintenance of the Indonesian population in Appendix II

Proposal from Madagascar

F A U N A

REPTILIA

CROCODYLIA

1.	Crocodylidae	*Crocodylus niloticus*, maintenance of the Malagasy population in Appendix II

Proposal from South Africa

F A U N A

REPTILIA

CROCODYLIA

1.	Crocodylidae	*Crocodylus niloticus*, maintenance of the South African population in Appendix II

Ten–year–review Proposals

Proposals from Mexico

F L O R A

1.	CACTACEAE	*Astrophytum asterias*, transfer from Appendix I to Appendix II
2.		*Leuchtenbergia principis*, transfer from Appendix I to Appendix II
3.		*Mammillaria plumosa*, transfer from Appendix I to Appendix II
4.	ORCHIDACEAE	*Cattleya skinneri*, transfer from Appendix I to Appendix II
5.		*Lycaste skinneri* var. *alba*, transfer from Appendix I to Appendix II

Proposals from Switzerland

F L O R A

1.	APOCYNACEAE	*Pachypodium namaquanum*, transfer from Appendix I to Appendix II
2.	ARACEAE	*Alocasia sanderiana*, deletion from Appendix II
3.	CACTACEAE	*Astrophytum asterias*, transfer from Appendix I to Appendix II
4.		*Leuchtenbergia principis*, transfer from Appendix I to Appendix II
5.		*Mammillaria plumosa*, transfer from Appendix I to Appendix II
6.	LILIACEAE	*Aloe barbadensis (vera)*, deletion from Appendix II
7.	ORCHIDACEAE	*Cattleya skinneri*, transfer from Appendix I to Appendix II
8.		*Didiciea cunninghamii,* transfer from Appendix I to Appendix II
9.		*Lycaste skinneri* var. *alba*, transfer from Appendix I to Appendix II
10.	THEACEAE	*Camellia chrysantha*, deletion from Appendix II

Proposals from the United States of America

F A U N A

MAMMALIA

ARTIODACTYLA

1.	Bovidae	*Ovis vignei*, transfer from Appendix I to Appendix II, except *Ovis vignei vignei*

MOLLUSCA

UNIONOIDA

2.	Unionidae	Unionidae spp., inclusion of the North American populations in Appendix II, except *Amblema plicata, Ellipsaria lineolata, Fusconaia ebena, Fusconaia flava, Ligumia recta, Megalonaias nervosa, Obliquaria reflexa, Pleurobema cordatum, Quadrula apiculata, Quadrula metanevra, Quadrula nodulata, Quadrula pustulosa, Quadrula quadrula* and *Tritogonia verrucosa*
3.		*Epioblasma sampsoni*, annotation as p.e. (possibly extinct)
4.		*Epioblasma sulcata perobliqua*, transfer from Appendix I to Appendix II
5.		*Lampsilis satura*, transfer from Appendix I to Appendix II

Proposals Concerning Export Quotas

Proposal from Indonesia

F A U N A

PISCES

OSTEOGLOSSIFORMES

2.	Osteoglossidae	*Scleropages formosus*, transfer of the Indonesian population from Appendix II to Appendix I

Proposals from Switzerland

F A U N A

REPTILIA

CROCODYLIA

11.	Crocodylidae	*Crocodylus niloticus*, transfer of the populations of Madagascar and Somalia from Appendix II to Appendix I
12.		*Crocodylus porosus*, transfer of the Indonesian population from Appendix II to Appendix I

PISCES

OSTEOGLOSSIFORMES

13.	Osteoglossidae	*Scleropages formosus*, transfer of the Indonesian population from Appendix II to Appendix I

Other Proposals

Proposals from Australia

F A U N A

REPTILIA

CROCODYLIA

1.	Crocodylidae	*Crocodylus porosus,* maintenance of the Australian population in Appendix II

MOLLUSCA

GASTROPODA

2.	Ranellidae (Cymatiidae)	*Charonia tritonis*, inclusion in Appendix II

Proposals from Bangladesh

F A U N A

REPTILIA

SAURIA

1.	Varanidae	*Varanus bengalensis*, temporary transfer of the population of Bangladesh from Appendix I to Appendix II
2.		*Varanus flavescens*, temporary transfer of the population of Bangladesh from Appendix I to Appendix II

Proposal from Belgium

F A U N A

MAMMALIA

ARTIODACTYLA

1.	Hippopotamidae	*Hippopotamus amphibius*, inclusion in Appendix II

Proposal from Benin

F A U N A

MAMMALIA

ARTIODACTYLA

1.	Hippopotamidae	*Hippopotamus amphibius*, inclusion in Appendix II

Proposals from Chile

F A U N A

MAMMALIA

EDENTATA

1.	Dasypodidae	*Euphractus* spp., inclusion in Appendix II

Proposals from Chile (cont.)

RODENTIA

2.	Chinchillidae	*Chinchilla* spp., replacement of annotation +201 Population of South America (populations outside South America are not included in the appendices) by annotation °5XX Domesticated specimens are not subject to CITES provisions

CARNIVORA

3.	Mustelidae	*Conepatus* spp., inclusion in Appendix II

ARTIODACTYLA

4.	Camelidae	*Vicugna vicugna*, amendment to annotation °502 to allow also the trade in wool sheared from live vicuñas

REPTILIA

SAURIA

5.	Iguanidae (Tropiduridae)	*Phymaturus flagellifer*, inclusion in Appendix II
6.	(Polychridae)	*Pristidactylus alvarol,* inclusion in Appendix II
7.		*Pristidactylus torquatus,* inclusion in Appendix II
8.		*Pristidactylus valeriae,* inclusion in Appendix II
9.		*Pristidactylus volcanensis,* inclusion in Appendix II
10.		*Callopistes palluma*, inclusion in Appendix II

Proposals from Denmark

F A U N A

MAMMALIA

ARTIODACTYLA

1.	Bovidae	*Pseudoryx nghetinhensis*, inclusion in Appendix I

AVES

GALLIFORMES

2.	Phasianidae	*Xenoperdix udzungwensis,* inclusion in Appendix I

Proposal from Egypt

F A U N A

REPTILIA

TESTUDINATA

1.	Testudinidae	*Testudo kleinmanni*, transfer from Appendix II to Appendix I

Proposal from France

F A U N A

MAMMALIA

ARTIODACTYLA

1.	Hippopotamidae	*Hippopotamus amphibius*, inclusion in Appendix II

Proposals from Germany

F A U N A

AMPHIBIA

ANURA

1.	Ranidae	*Mantella aurantiaca*, inclusion in Appendix I[1]

F L O R A

2.		replacement of annotations #1b), #2b), #4b), #6b), #7b) and °504 by: "seedlings or tissue cultures obtained *in vitro* in sterile culture media, either liquid or solid, transported in containers commonly used for this type of culture, with different shapes and made of different materials"
3.	EBENACEAE	*Diospyros mun*, inclusion in Appendix II
4.	LEGUMINOSAE (FABACEAE)	*Dalbergia melanoxylon*, inclusion in Appendix II

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[1] *Germany proposed inclusion in Appendix II, not in Appendix I as indicated. (Note from the Secretariat.)*

Proposals from Germany (cont.)

5.	MELIACEAE	*Entandrophragma* spp., inclusion in Appendix II
6.		*Khaya* spp., inclusion in Appendix II

Proposals from Ghana

F A U N A

ARACHNIDA

SCORPIONES

1.	Scorpionidae	*Pandinus dictator*, inclusion in Appendix II
2.		*Pandinus gambiensis*, inclusion in Appendix II
3.		*Pandinus imperator*, inclusion in Appendix II

Proposals from India

F L O R A

1.	BERBERIDACEAE	*Berberis aristata*, inclusion in Appendix II
2.	GENTIANACEAE	*Gentiana kurroo*, inclusion in Appendix II
3.	LEGUMINOSAE (FABACEAE)	*Pterocarpus santalinus*, inclusion in Appendix II
4.	LILIACEAE	*Colchicum luteum*, inclusion in Appendix II
5.	ORCHIDACEAE	*Cypripedium cordigerum*, transfer from Appendix II to Appendix I
6.		*Cypripedium elegans*, transfer from Appendix II to Appendix I
7.		*Cypripedium himalaicum*, transfer from Appendix II to Appendix I
8.		*Cypripedium tibeticum*, transfer from Appendix II to Appendix I
9.	POLYGONACEAE	*Rheum australe*, inclusion in Appendix II
10.	RANUNCULACEAE	*Aconitum deinorrhizum*, inclusion in Appendix II
11.		*Aconitum ferox*, inclusion in Appendix II
12.		*Aconitum heterophyllum*, inclusion in Appendix II
13.		*Coptis teeta*, inclusion in Appendix II
14.	SCROPHULARIACEAE	*Picrorhiza kurrooa*, inclusion in Appendix II
15.	TAXACEAE	*Taxus wallichiana*, inclusion in Appendix II
16.	THYMELAEACEAE (AQUILARIACEAE)	*Aquilaria malaccensis*, inclusion in Appendix II
17.	VALERIANACEAE	*Nardostachys grandiflora*, inclusion in Appendix II

Proposals from Indonesia

F A U N A

AVES

PSITTACIFORMES

3.	Psittacidae	*Cacatua goffini*, transfer from Appendix I to Appendix II
4.		*Eos histrio*, transfer from Appendix II to Appendix I

Proposal from Italy

F A U N A

AVES

APODIFORMES

1.	Apodidae	*Collocalia* spp., inclusion in Appendix II

Proposals from Kenya

F L O R A

1.	LEGUMINOSAE (FABACEAE)	*Dalbergia melanoxylon*, inclusion in Appendix II
2.	ROSACEAE	*Prunus africana*, inclusion in Appendix II

Proposals from Madagascar

F L O R A

2.	APOCYNACEAE	*Pachypodium ambongense*, transfer from Appendix II to Appendix I
3.		*Pachypodium brevicaule,* transfer from Appendix I to Appendix II
4.	EUPHORBIACEAE	*Euphorbia cremersii*, transfer from Appendix II to Appendix I
5.		*Euphorbia primulifolia*, transfer from Appendix I to Appendix II
6.	LILIACEAE	*Aloe albiflora*, transfer from Appendix II to Appendix I
7.		*Aloe alfredii*, transfer from Appendix II to Appendix I

Proposals from Madagascar (cont.)

8.		*Aloe bakeri*, transfer from Appendix II to Appendix I
9.		*Aloe bellatula*, transfer from Appendix II to Appendix I
10.		*Aloe calcairophila*, transfer from Appendix II to Appendix I
11.		*Aloe compressa* (inc. var. *rugosquamosa* and *schistophila*), transfer from Appendix II to Appendix I
12.		*Aloe delphinensis*, transfer from Appendix II to Appendix I
13.		*Aloe descoingsii*, transfer from Appendix II to Appendix I
14.		*Aloe fragilis*, transfer from Appendix II to Appendix I
15.		*Aloe haworthioides* (inc. var. *aurantiaca*), transfer from Appendix II to Appendix I
16.		*Aloe helenae*, transfer from Appendix II to Appendix I
17.		*Aloe laeta* (inc. var. *maniensis*), transfer from Appendix II to Appendix I
18.		*Aloe parallelifolia*, transfer from Appendix II to Appendix I
19.		*Aloe parvula*, transfer from Appendix II to Appendix I
20.		*Aloe rauhii*, transfer from Appendix II to Appendix I
21.		*Aloe suzannae*, transfer from Appendix II to Appendix I
22.		*Aloe versicolor*, transfer from Appendix II to Appendix I

Proposals from the Netherlands

F A U N A

MAMMALIA

CARNIVORA

1.	Procyonidae	*Ailurus fulgens*, transfer from Appendix II to Appendix I

AVES

GRUIFORMES

2.	Gruidae	*Balearica pavonina*, transfer from Appendix II to Appendix I

CUCULIFORMES

3.	Musophagidae	Musophagidae spp., inclusion in Appendix II

REPTILIA

TESTUDINATA

4.	Emydidae	*Terrapene* spp., inclusion in Appendix II

AMPHIBIA

ANURA

5.	Bufonidae	*Bufo periglenes,* inclusion in Appendix I
6.	Ranidae	*Mantella aurantiaca*, inclusion in Appendix I

INSECTA

COLEOPTERA

7.	Lucanidae	*Colophon* spp., inclusion in Appendix I

F L O R A

8.	MELIACEAE	*Swietenia* spp., inclusion in Appendix II

Proposals from New Zealand

F A U N A

AVES

APTERYGIFORMES

1.	Apterygidae	*Apteryx* spp., inclusion in Appendix I

ANSERIFORMES

2.	Anatidae	*Anas aucklandica* (currently listed as *Anas aucklandica aucklandica*), transfer from Appendix II to Appendix I
3.		*Anas chlorotis* (currently listed as *Anas aucklandica chlorotis*), transfer from Appendix II to Appendix I
4.		*Anas nesiotis*, inclusion in Appendix I in lieu of *Anas aucklandica nesiotis*

PSITTACIFORMES

5.	Psittacidae	*Cyanoramphus malherbi*, transfer from Appendix II to Appendix I
6.		*Cyanoramphus novaezelandiae*, transfer from Appendix I to Appendix II

REPTILIA

RHYNCHOCEPHALIA

7.	Sphenodontidae	*Sphenodon* spp., inclusion in Appendix I

Proposals from New Zealand (cont.)

MOLLUSCA

STYLOMMATOPHORA

8.	Bulimulidae	*Placostylus* spp., inclusion of the populations of New Zealand in Appendix II
9.	Rhytididae	*Powelliphanta* spp., inclusion of the populations of New Zealand in Appendix II

F L O R A

10.	BALANOPHORACEAE	*Dactylanthus taylorii*, inclusion in Appendix I

Proposal from Norway

F A U N A

MAMMALIA

CETACEA

1.	Balaenopteridae	*Balaenoptera acutorostrata*, transfer of the Northeast Atlantic and the North Atlantic central stocks from Appendix I to Appendix II

Proposal from Peru

F A U N A

MAMMALIA

ARTIODACTYLA

1.	Camelidae	*Vicugna vicugna*, transfer of the Peruvian populations remaining in Appendix I to Appendix II and amendment to the annotation °502 to allow also the trade in wool sheared from live vicuñas and in the extant stock of wool

Proposals from the Philippines

F A U N A

MAMMALIA

CHIROPTERA

1.	Pteropodidae	*Acerodon jubatus*, transfer from Appendix II to Appendix I
2.		*Acerodon lucifer*, transfer from Appendix II to Appendix I

Proposals from South Africa

F A U N A

MAMMALIA

PROBOSCIDEA

2.	Elephantidae	*Loxodonta africana*, transfer of the South African population from Appendix I to Appendix II

PERISSODACTYLA

3.	Rhinocerotidae	*Ceratotherium simum simum*, transfer of the South African population from Appendix I to Appendix II

Proposal from the Sudan

F A U N A

MAMMALIA

PROBOSCIDEA

1.	Elephantidae	*Loxodonta africana*, transfer of the Sudanese population from Appendix I to Appendix II

Proposals from Switzerland

F A U N A

MAMMALIA

PHOLIDOTA

14.	Manidae	*Manis* spp., inclusion in Appendix II
15.		*Manis temminckii*, transfer from Appendix I to Appendix II

CARNIVORA

16.	Hyaenidae	*Hyaena brunnea*, transfer from Appendix I to Appendix II
17.	Felidae	*Felis bengalensis bengalensis*, transfer from Appendix I to Appendix II

Proposals from Switzerland (cont.)

REPTILIA

TESTUDINATA

18.	Trionychidae	*Lissemys punctata*, inclusion in Appendix II
19.		*Lissemys punctata punctata*, transfer from Appendix I to Appendix II[1]

F L O R A

20.	APOCYNACEAE	*Pachypodium ambongense*, transfer from Appendix II to Appendix I
21.		*Pachypodium brevicaule,* transfer from Appendix I to Appendix II
22.	EUPHORBIACEAE	*Euphorbia cremersii*, transfer from Appendix II to Appendix I
23.		*Euphorbia primulifolia*, transfer from Appendix I to Appendix II
24.	LILIACEAE	*Aloe albiflora*, transfer from Appendix II to Appendix I
25.		*Aloe alfredii*, transfer from Appendix II to Appendix I
26.		*Aloe bakeri*, transfer from Appendix II to Appendix I
27.		*Aloe bellatula*, transfer from Appendix II to Appendix I
28.		*Aloe calcairophila*, transfer from Appendix II to Appendix I
29.		*Aloe compressa* (inc. var. *rugosquamosa* and *schistophila*), transfer from Appendix II to Appendix I
30.		*Aloe delphinensis*, transfer from Appendix II to Appendix I
31.		*Aloe descoingsii*, transfer from Appendix II to Appendix I
32.		*Aloe fragilis*, transfer from Appendix II to Appendix I
33.		*Aloe haworthioides* (inc. var. *aurantiaca*), transfer from Appendix II to Appendix I
34.		*Aloe helenae*, transfer from Appendix II to Appendix I
35.		*Aloe laeta* (inc. var. *maniensis*), transfer from Appendix II to Appendix I
36.		*Aloe parallelifolia*, transfer from Appendix II to Appendix I
37.		*Aloe parvula*, transfer from Appendix II to Appendix I
38.		*Aloe rauhii*, transfer from Appendix II to Appendix I
39.		*Aloe suzannae*, transfer from Appendix II to Appendix I
40.		*Aloe versicolor*, transfer from Appendix II to Appendix I

Proposal from Thailand

F L O R A

1.	ORCHIDACEAE	*Dendrobium cruentum*, transfer from Appendix II to Appendix I

Proposal from the United Republic of Tanzania

F A U N A

REPTILIA

CROCODYLIA

1.	Crocodylidae	*Crocodylus niloticus*, maintenance of the Tanzanian population in Appendix II

Proposals from the United Kingdom of Great Britain and Northern Ireland

F A U N A

AVES

PSITTACIFORMES

1.	Psittacidae	*Psittacus erithacus*, inclusion of the population of Sao Tome and Principe in Appendix I in lieu of *Psittacus erithacus princeps*
2.		*Psittacus erithacus princeps*, transfer from Appendix I to Appendix II

Proposals from the United States of America

F A U N A

MAMMALIA

ARTIODACTYLA

6.	Bovidae	*Saiga tatarica*, inclusion in Appendix II, except the Mongolian population
7.		*Saiga tatarica*, inclusion of the Mongolian population in Appendix I

REPTILIA

TESTUDINATA

8.	Emydidae	*Terrapene* spp., inclusion in Appendix II

[1] *Switzerland proposed deletion from Appendix I, not transfer from Appendix I to Appendix II. (Note from the Secretariat.)*

Proposals from the United States of America (cont.)

ARACHNIDA

ARANEAE

9.	Theraphosidae	*Brachypelma* spp., inclusion in Appendix II

Proposals from Uruguay

F A U N A

AVES

TINAMIFORMES

1.[1]	Tinamidae	*Rhynchotus rufescens maculicollis*, deletion from Appendix II
2.[1]		*Rhynchotus rufescens pallescens*, deletion from Appendix II
3.[1]		*Rhynchotus rufescens rufescens*, deletion from Appendix II

PASSERIFORMES

4.	Icteridae	*Agelaius flavus*, inclusion in Appendix I

Proposal from Viet Nam

F A U N A

MAMMALIA

ARTIODACTYLA

1.	Cervidae	*Megamuntiacus vuquanghensis*, inclusion in Appendix I

B. In accordance with Resolution Conf. 2.17, adopted by the Conference of the Parties at its second meeting (San José, 1979), most of the above–mentioned proposals for amendment were accompanied by supporting statements presented in the agreed format. Taking into account the volume of the documentation received and in order to avoid too long delays for communicating the proposals for amendment, supporting statements will be transmitted in their original form to the Management Authorities of the Parties[2]. Final documents for the meeting of the Conference of the Parties will be communicated at a later stage.

C. In accordance with the provisions of paragraphs 1(a), 2(b) and 2(c) of Article XV of the Convention, the above proposals are communicated to the Parties for comments. Since the responses have to be communicated to all Parties not later than 30 days before the meeting of the Conference, the Secretariat would appreciate receiving responses from the Parties, if any, as soon as possible and not later than 15 August 1994.

D. The present Notification is being sent for information to the signatory States that are not party to the Convention. They will also receive the results of the considerations that will take place during the ninth meeting of the Conference of the Parties.

E. The Secretariat would appreciate the contents of the present Notification being transmitted to the competent national authorities.

Geneva, 4 July 1994

Doc. 9.47 (Rev.) Annex 2

Consideration of Proposals for Amendment of Appendices I and II

LIST OF THE OTHER PROPOSALS FOR AMENDMENT

1. Taxa are listed in the same order as in Appendices I and II. Supporting statements are also arranged in that order[2].

2. Code letters have the following meaning: AU (Australia), BD (Bangladesh), BE (Belgium), BJ (Benin), CH (Switzerland), CL (Chile), DE (Germany), DK (Denmark), EG (Egypt), FR (France), GB (United Kingdom of Great Britain and Northern Ireland), GH (Ghana), ID (Indonesia), IN (India), IT (Italy), KE (Kenya), MG (Madagascar), NL (Netherlands), NO (Norway), NZ (New Zealand), PE (Peru), PH (Philippines), SD (Sudan), TH (Thailand), TZ (United Republic of Tanzania), US (United States of America), UY (Uruguay), VN (Viet Nam) and ZA (South Africa). These code letters indicate the proponent of each proposal. The number following each two–letter code corresponds to the number of each proposal as listed in the Notification to contracting or signatory States dated 4 July 1994 [see Doc. 9.47 (Rev.) Annex 1].

[1] *Should be listed as a "Ten-year-review proposal". (Note from the Secretariat.)*

[2] *As indicated in the "Foreword", these supporting statements are not reproduced in the Proceedigns. (Note from the Secretariat.)*

F A U N A

MAMMALIA				
CHIROPTERA				
Pteropodidae	1.	Transfer from Appendix II to Appendix I of:	*Acerodon jubatus*	PH1
	2.	Transfer from Appendix II to Appendix I of:	*Acerodon lucifer*	PH2
EDENTATA				
Dasypodidae	3.	Inclusion in Appendix II of	*Chaetophractus* (Euphractus) nationi	CL1
	4.	Inclusion in Appendix II of:	*Chaetophractus* (Euphractus) vellerosus	CL1
	5.	Inclusion in Appendix II of:	*Chaetophractus* (Euphractus) villosus	CL1
	6.	Inclusion in Appendix II of:	*Zaedyus (Euphractus) pichiy*	CL1
PHOLIDOTA				
Manidae	7.	Inclusion in Appendix II of:	*Manis* spp.	CH14
	8.	Transfer from Appendix I to Appendix II of:	*Manis temminckii*	CH15
RODENTIA				
Chinchillidae	9.	Replacement of annotation +201 Population of South America (populations outside South America are not included in the appendices) placed against:by annotation °5XX Domesticated specimens are not subject to CITES provisions	*Chinchilla* spp.	CL2
CETACEA				
Balaenopteridae	10.	Transfer from Appendix I to Appendix II of: (+2aa means the Northeastern Atlantic and the North Atlantic central stocks)	*Balaenoptera* acutorostrata +2aa	NO1
CARNIVORA				
Procyonidae	11.	Transfer from Appendix II to Appendix I of:	*Ailurus fulgens*	NL1
Mustelidae	12.	Inclusion in Appendix II of:	*Conepatus* spp.	CL3
Hyaenidae	13.	Transfer from Appendix I to Appendix II of:	*Hyaena brunnea*	CH16
Felidae	14.	Transfer from Appendix I to Appendix II of:	*Felis bengalensis bengalensis*	CH17
PROBOSCIDEA				
Elephantidae	15.	Transfer from Appendix I to Appendix II of: (+2ab meaning the population of South Africa)	*Loxodonta africana* +2ab	ZA2
	16.	Transfer from Appendix I to Appendix II of: (+2ac meaning the population of the Sudan)	*Loxodonta africana* +2ac	SD1
PERISSODACTYLA				
Rhinocerotidae	17.	Transfer from Appendix I to Appendix II of: (+2ab meaning the population of South Africa)	Ceratotherium simum *simum* +2ab	ZA3

ARTIODACTYLA				
Hippopotamidae	18.	Inclusion in Appendix II of:	*Hippopotamus amphibius*	BE1/BJ1/FR1
Camelidae	19.	Transfer from Appendix I to Appendix II of: (+2ad meaning the populations of Peru remaining in Appendix I) and amendment to the annotation °502 to allow also the trade in wool sheared from live vicuñas and in the extant stock of wool	*Vicugna vicugna* +2ad	PE1
	20.	Amendment to the annotation °502 placed against: to allow also the trade in wool sheared from live vicuñas	*Vicugna vicugna*	CL4
Cervidae	21.	Inclusion in Appendix I of:	*Megamuntiacus vuquanghensis*	VN1
Bovidae	22.	Inclusion in Appendix I of:	*Pseudoryx nghetinhensis*	DK1
	23.	Inclusion in Appendix II of: (–1aa meaning except the population of Mongolia)	*Saiga tatarica* –1aa	US6
	24.	Inclusion in Appendix I of: (+2ae meaning the population of Mongolia)	*Saiga tatarica* +2ae	US7
AVES				
APTERYGIFORMES				
Apterygidae	25.	Inclusion in Appendix I of:	*Apteryx* spp.	NZ1
TINAMIFORMES				
Tinamidae	26.[1]	Deletion from Appendix II of:	*Rhynchotus rufescens maculicollis*	UY1
	27.[1]	Deletion from Appendix II of:	*Rhynchotus rufescens pallescens*	UY2
	28.[1]	Deletion from Appendix II of:	*Rhynchotus rufescens rufescens*	UY3
ANSERIFORMES				
Anatidae	29.	Transfer from Appendix II to Appendix I of: currently listed as *Anas aucklandica aucklandica*	*Anas aucklandica*	NZ2
	30.	Transfer from Appendix II to Appendix I of: currently listed as *Anas aucklandica chlorotis*	*Anas chlorotis*	NZ3
	31.	Inclusion in Appendix I of: in lieu of *Anas aucklandica nesiotis*	*Anas nesiotis*	NZ4
GALLIFORMES				
Phasianidae	32.	Inclusion in Appendix I of:	*Xenoperdix udzungwensis*	DK2
GRUIFORMES				
Gruidae	33.	Transfer from Appendix II to Appendix I of:	*Balearica pavonina*	NL2
PSITTACIFORMES				
Psittacidae	34.	Transfer from Appendix I to Appendix II of:	*Cacatua goffini*	ID3
	35.	Transfer from Appendix II to Appendix I of:	*Cyanoramphus malherbi*	NZ5
	36.	Transfer from Appendix I to Appendix II of:	*Cyanoramphus novaezelandiae*	NZ6

[1] *Should be listed as a "Ten-year-review proposal". (Note from the Secretariat.)*

	37.	Transfer from Appendix II to Appendix I of:	*Eos histrio*	ID4
	38.	Inclusion in Appendix I of: (+2af meaning the population of Sao Tome and Principe) in lieu of *Psittacus erithacus princeps*	*Psittacus erithacus* +2af	GB1
	or			
	39.	Transfer from Appendix I to Appendix II of:	*Psittacus erithacus princeps*	GB2
CUCULIFORMES				
Musophagidae	40.	Inclusion in Appendix II of:	Musophagidae spp.	NL3
APODIFORMES				
Apodidae	41.	Inclusion in Appendix II of:	*Collocalia* spp.	IT1
PASSERIFORMES				
Icteridae	42.	Inclusion in Appendix I of:	*Agelaius flavus*	UY4
REPTILIA				
TESTUDINATA				
Emydidae	43.	Inclusion in Appendix II of:	*Terrapene* spp.	NL4/US8
Testudinidae	44.	Transfer from Appendix II to Appendix I of:	*Testudo kleinmanni*	EG1
Trionychidae	45.	Inclusion in Appendix II of:	*Lissemys punctata*	CH18
	46.	Deletion from Appendix In of:	*Lissemys punctata punctata*	CH19
CROCODYLIA				
Crocodylidae	47.	Maintenance in Appendix II of: (+2ag meaning the population of the United Republic of Tanzania)	*Crocodylus niloticus* +2ag	TZ1
	48.	Maintenance in Appendix II of: (+2ah meaning the population of Australia)	*Crocodylus porosus* +2ah	AU1
RHYNCHOCEPHALIA				
Sphenodontidae	49.	Inclusion in Appendix I of:	*Sphenodon* spp.	NZ7
SAURIA				
Iguanidae				
(Tropiduridae)	50.	Inclusion in Appendix II of:	*Phymaturus flagellifer*	CL5
(Polychridae)	51.	Inclusion in Appendix II of:	*Pristidactylus alvarol*	CL6
	52.	Inclusion in Appendix II of:	*Pristidactylus torquatus*	CL7
	53.	Inclusion in Appendix II of:	*Pristidactylus valeriae*	CL8
	54.	Inclusion in Appendix II of:	*Pristidactylus volcanensis*	CL9
	55.	Inclusion in Appendix II of:	*Callopistes palluma*	CL10
Varanidae	56.	Temporary transfer from Appendix I to Appendix II of: (+2ai meaning the population of Bangladesh)	*Varanus bengalensis* +2ai	BD1
	57.	Temporary transfer from Appendix I to Appendix II of: (+2ai meaning the population of Bangladesh)	*Varanus flavescens* +2ai	BD2
AMPHIBIA				
ANURA				
Bufonidae	58.	Inclusion in Appendix I of:	*Bufo periglenes*	NL5
Ranidae	59.	Inclusion in Appendix I of:	*Mantella aurantiaca*	NL6
	(If 59. is approved, 60. is redundant)			
	60.	Inclusion in Appendix II of:	*Mantella aurantiaca*	DE1
INSECTA				
COLEOPTERA				
Lucanidae	61.	Inclusion in Appendix I of:	*Colophon* spp.	NL7

ARACHNIDA				
SCORPIONES				
Scorpionidae	62.	Inclusion in Appendix II of:	*Pandinus dictator*	GH1
	63.	Inclusion in Appendix II of:	*Pandinus gambiensis*	GH2
	64.	Inclusion in Appendix II of:	*Pandinus imperator*	GH3
ARANEAE				
Theraphosidae	65.	Inclusion in Appendix II of:	*Brachypelma* spp.	US9
MOLLUSCA				
STYLOMMATOPHORA				
Bulimulidae	66.	Inclusion in Appendix II of: (+2aj meaning the populations of New Zealand)	*Placostylus* spp. +2aj	NZ8
Rhytididae	67.	Inclusion in Appendix II of: (+2aj meaning the populations of New Zealand)	*Powelliphanta* spp. +2aj	NZ9
GASTROPODA				
Ranellidae				
(Cymatiidae)	68.	Inclusion in Appendix II of:	*Charonia tritonis*	AU2
F L O R A				
	69.	Replacement of annotations #1b), #2b), #4b), #6b), #7b) and °504 by: "seedlings or tissue cultures obtained *in vitro* in sterile culture media, either liquid or solid, transported in containers commonly used for this type of culture, with different shapes and made of different materials"		DE2
APOCYNACEAE	70.	Transfer from Appendix II to Appendix I of:	*Pachypodium ambongense*	CH20/MG2
	71.	Transfer from Appendix I to Appendix II of:	*Pachypodium brevicaule*	CH21/MG3
BALANOPHORACEAE	72.	Inclusion in Appendix I of:	*Dactylanthus taylorii*	NZ10
BERBERIDACEAE	73.	Inclusion in Appendix II of:	*Berberis aristata*	IN1
EBENACEAE	74.	Inclusion in Appendix II of:	*Diospyros mun*	DE3
EUPHORBIACEAE	75.	Transfer from Appendix II to Appendix I of:	*Euphorbia cremersii*	CH22/MG4
	76.	Transfer from Appendix I to Appendix II of:	*Euphorbia primulifolia*	CH23/MG5
GENTIANACEAE	77.	Inclusion in Appendix II of:	*Gentiana kurroo*	IN2
LEGUMINOSAE				
(FABACEAE)	78.	Inclusion in Appendix II of:	*Dalbergia melanoxylon*	DE4/KE1
	79.	Inclusion in Appendix II of:	*Pterocarpus santalinus*	IN3
LILIACEAE	80.	Transfer from Appendix II to Appendix I of:	*Aloe albiflora*	CH24/MG6
	81.	Transfer from Appendix II to Appendix I of:	*Aloe alfredii*	CH25/MG7
	82.	Transfer from Appendix II to Appendix I of:	*Aloe bakeri*	CH26/MG8
	83.	Transfer from Appendix II to Appendix I of:	*Aloe bellatula*	CH27/MG9
	84.	Transfer from Appendix II to Appendix I of:	*Aloe calcairophila*	CH28/MG10
	85.	Transfer from Appendix II to Appendix I of:	*Aloe compressa* (inc. var. *rugosquamosa* and *schistophila*)	CH29/MG11
	86.	Transfer from Appendix II to Appendix I of:	*Aloe delphinensis*	CH30/MG12
	87.	Transfer from Appendix II to Appendix I of:	Aloe descoingsii	CH31/MG13

	88. Transfer from Appendix II to Appendix I of:	Aloe fragilis	CH32/MG14
	89. Transfer from Appendix II to Appendix I of:	*Aloe haworthioides* (inc. var. *aurantiaca*)	CH33/MG15
	90. Transfer from Appendix II to Appendix I of:	*Aloe helenae*	CH34/MG16
	91. Transfer from Appendix II to Appendix I of:	*Aloe laeta* (inc. var. *maniensis*)	CH35/MG17
	92. Transfer from Appendix II to Appendix I of:	*Aloe parallelifolia*	CH36/MG18
	93. Transfer from Appendix II to Appendix I of:	*Aloe parvula*	CH37/MG19
	94. Transfer from Appendix II to Appendix I of:	*Aloe rauhii*	CH38/MG20
	95. Transfer from Appendix II to Appendix I of:	*Aloe suzannae*	CH39/MG21
	96. Transfer from Appendix II to Appendix I of:	*Aloe versicolor*	CH40/MG22
	97. Inclusion in Appendix II of:	*Colchicum luteum*	IN4
MELIACEAE	98. Inclusion in Appendix II of:	*Entandrophragma* spp.	DE5
	99. Inclusion in Appendix II of:	*Khaya* spp.	DE6
	100. Inclusion in Appendix II of:	*Swietenia* spp.	NL8
ORCHIDACEAE	101. Transfer from Appendix II to Appendix I of:	*Cypripedium cordigerum*	IN5
	102. Transfer from Appendix II to Appendix I of:	*Cypripedium elegans*	IN6
	103. Transfer from Appendix II to Appendix I of:	*Cypripedium himalaicum*	IN7
	104. Transfer from Appendix II to Appendix I of:	*Cypripedium tibeticum*	IN8
	105. Transfer from Appendix II to Appendix I of:	*Dendrobium cruentum*	TH1
POLYGONACEAE	106. Inclusion in Appendix II of:	*Rheum australe*	IN9
RANUNCULACEAE	107. Inclusion in Appendix II of:	*Aconitum deinorrhizum*	IN10
	108. Inclusion in Appendix II of:	*Aconitum ferox*	IN11
	109. Inclusion in Appendix II of:	*Aconitum heterophyllum*	IN12
	110. Inclusion in Appendix II of:	*Coptis teeta*	IN13
ROSACEAE	111. Inclusion in Appendix II of:	*Prunus africana*	KE2
SCROPHULARIACEAE	112. Inclusion in Appendix II of:	*Picrorhiza kurrooa*	IN14
TAXACEAE	113. Inclusion in Appendix II of:	*Taxus wallichiana*	IN15
THYMELAEACEAE (AQUILARIACEAE)	114. Inclusion in Appendix II of:	*Aquilaria malaccensis*	IN16
VALERIANACEAE	115. Inclusion in Appendix II of:	*Nardostachys grandiflora*	IN17

Doc. 9.47 Annex 3

Consideration of Proposals for Amendment of Appendices I and II

Other Proposals

RECOMMENDATIONS FROM THE SECRETARIAT

In preparing these recommendations, the Secretariat has taken into consideration the comments, advice and information received from a variety of sources, including IUCN/SSC, WCMC, TRAFFIC offices and, of course, the Parties. The Secretariat has also made every effort to follow the guidelines established in Resolution Conf. 5.20.

It must be emphasized that the "Berne criteria" are guidelines and, as evidenced by many decisions of the Conference of the Parties, may be overridden for a variety of reasons. However, the Secretariat has attempted to assess the proposals in accordance with the recommendations in those guidelines, bearing in mind that they are imprecise. Where a species appears to meet the criteria and yet the Secretariat has recommended against acceptance of the proposal, or vice versa, the reasons for this are clearly stated.

At its eighth meeting (Kyoto, 1992), the Conference of the Parties adopted Resolution Conf. 8.21 on Consultation with Range States on Proposals to Amend Appendices I and II, which suggested alternative procedures for such consultation. At the eighth meeting, immediately after the adoption of this Resolution, the Secretariat stated clearly that, in its opinion, the Parties should refuse to consider a proposal submitted without consultation of the range States when such consultation was appropriate.

The proposals mentioned below follow the same numbering as in the list in Annex 2 of this document.

MAMMALIA

1
–2. *Acerodon jubatus* and *Acerodon lucifer*, transfer from Appendix II to Appendix I:

Acerodon jubatus is considered by IUCN as endangered. Its range is decreasing and all large roosts are severely threatened. The population estimates range from 5,000 to 100,000 specimens but, according to the information received, it is drastically declining because of deforestation, subsistence, sport hunting and commerce and because in some places it is considered harmful to crops.

Acerodon lucifer, as indicated in the supporting statement, is endemic to a single island and is thought to be extinct. Several taxonomists have expressed their doubts about the validity of *A. lucifer* as a species, believing it to be a variation of *A. jubatus*. The fact that it is considered extinct indicates that, even if the species were rediscovered, the population would be so small and fragmented that it would be unable to withstand any exploitation.

The species meet the Berne criteria for transfer to Appendix I.

Secretariat's recommendation: Accept.

3
–6. *Chaetophractus (=Euphractus) nationi, Chaetophractus (=Euphractus) vellerosus, Chaetophractus (=Euphractus) villosus* and *Zaedyus (=Euphractus) pichiy*, inclusion in Appendix II:

The proponent has recognized, in a letter to the Secretariat, that the name of the genus used in the proposals (*Euphractus*) was wrong, and has asked the Secretariat to substitute the names *Chaetophractus* and *Zaedyus*. Although there is no available information on the conservation status of these species, according to the information received, none of them is threatened with extinction. The information available on the distribution of the species is incomplete and it is not possible to determine any trend. The species are hunted for meat in some areas and some of them have a limited use in traditional medicine (blood and fat). In Chile the species are considered as threatened, although the supporting statement says that no reliable data exist on the national status of the population. Argentina and Paraguay do not consider the species as threatened in their countries. There is little information on the international trade. The trade restrictions already established in the range States seem adequate to prevent unsustainable commerce. The species do not satisfy the Berne criteria for inclusion in Appendix II.

Secretariat's recommendation: Reject; the range States should establish a regional action plan for the species.

7
–8. *Manis gigantea, Manis tetradactyla* and *Manis tricuspis*, inclusion in Appendix II; *Manis temminckii*, transfer from Appendix I to Appendix II:

Although the three African species of pangolins are heavily used in Africa, there is little evidence of international trade. In 1975, the three species were included in Appendix III by Ghana and *M. temminckii* was included in Appendix I. However, the generally poor implementation of CITES provisions for Appendix–III species may conceal an unrecorded international trade. Furthermore, the nature of the trade in pangolins (scales and other parts) makes it more difficult to control the international trade. The supporting statement says that an illegal trade exists between some African countries for use in traditional medicine.

Bearing in mind the wide use of the three Appendix–III species in several African countries, there is a potential for international trade. In addition, there is a problem of distinguishing parts and derivatives from all *Manis* species, including the three Asian *Manis* species currently included in Appendix II. *M. gigantea, M. tetradactyla* and *M. tricuspis* therefore meet the Berne criteria for inclusion in Appendix II.

Regarding *Manis temminckii*, it should be noted that a proposal for deletion of the species from Appendix I was presented at the eighth meeting of the Conference of the Parties, but was withdrawn. Currently the species does not seem to be threatened with extinction by international trade or by any other factor. It should therefore be included in Appendix II with the other species of *Manis*.

Finally it should be noted that the proposals are supported by the Animals Committee.

Secretariat's recommendation: Accept.

9. *Chinchilla* spp., replacement of annotation +201 Population of South America (populations outside South America are not included in the appendices) by annotation °5xx Domesticated specimens are not subject to CITES provisions:

The intent of the proposal is to treat the domesticated chinchillas bred in South America in the same way as those bred outside South America. Since 1987 the latter have been clearly excluded from the provisions of the Convention.

Fur from animals of the domesticated form are available in large quantities from both range and non–range States. The supporting statement of Chile, and the scientific reports sent to the Secretariat by Argentina, which supports the proposal, show that the domesticated chinchillas are genetically and morphologically different from wild specimens.

Secretariat's recommendation: Accept.

10. *Balaenoptera acutorostrata*, transfer of two populations from Appendix I to Appendix II:

Resolution Conf 2.9 recommends that the Parties not issue any import or export permit or certificate of introduction from the sea for primarily commercial purposes for any specimen of a species or stock protected from commercial whaling by the International Convention for the Regulation of Whaling. The species was transferred to Appendix I at the fourth meeting. Because of Resolution Conf. 2.9 the population should be retained in Appendix I.

Secretariat's recommendation: Reject.

11. *Ailurus fulgens*, transfer from Appendix II to Appendix I:

According to the supporting statement, the population estimates for this species are not available for all range States. The species is hunted for skins, which are traded both locally and internationally. Live animals are captured for internal trade and also exported for zoos and as pets. There is some evidence that an illegal trade exists within and from several range States.

The species is classified as vulnerable by IUCN and the harvest for local use and international trade in fur and live animals is believed to be among the causes of its decline, together with habitat destruction. Specialists have questioned whether all specimens exported are bred in captivity. The species satisfies the Berne criteria for inclusion in Appendix I.

Secretariat's recommendation: Accept.

12. *Conepatus* spp., inclusion in Appendix II:

Conepatus humboldtii was included in Appendix II at the second meeting of the Conference of the Parties. Concern was raised when it was realised that trade in skins from this species from Argentina might be unrecorded because the skins were wrongly identified as being from other *Conepatus* species that are not included in Appendix II. There is confusion regarding the systematics of *Conepatus*; some authorities recognize seven species, some four, and others only one, with several subspecies. The confusion is exacerbated by a high level of intraspecific variation.

At the eighth meeting of the Conference of the Parties, a proposal to include *Conepatus* spp. in Appendix II was presented by Argentina but withdrawn before discussion. The Animals Committee was asked, however, to look into this matter. It has not yet done so.

Although there seems to be an argument for including the genus to solve a look–alike problem, trade in the listed species from the main exporting country, Argentina, has drastically declined since 1988, when export of *Conepatus* spp. was prohibited. There is therefore apparently no trade threat and so the genus can not be included in accordance with Article II.2.(b).

Secretariat's recommendation: Reject.

13. *Hyaena brunnea*, transfer from Appendix I to Appendix II:

The Secretariat agrees with the supporting statement that the species has no commercial value except for specimens for zoos. The inclusion of this species in the CITES appendices can not solve the problem that it may be shot or poisoned as vermin. It would seem appropriate for the countries in which this species occurs to make an effort to re–evaluate the important role this species plays in the ecosystem.

Secretariat's recommendation: Accept.

14. *Felis bengalensis bengalensis*, transfer from Appendix I to Appendix II:

The subspecies *F. b. bengalensis* was included in Appendix I in 1975 and the population of China was transferred to Appendix II at the fifth meeting of the Conference of the Parties. The taxonomy and distribution of the subspecies of *Felis bengalensis* are uncertain and in some countries there are subspecies in Appendix I and Appendix II. Moreover there are problems of identification of the subspecies. As a result there are problems in the implementation of the Convention. In view of these facts, the CITES Animals Committee recommended, in 1992, that either the subspecies listing be amended to specify the populations of the range States concerned or the subspecies be transferred to Appendix II. The Secretariat, at the request of the Animals Committee consulted all range States of *F. bengalensis*. All of those that responded, except India, agreed that *Felis bengalensis bengalensis* should be transferred to Appendix II. The Animals Committee therefore agreed to recommend the transfer of the Appendix–I populations to Appendix II.

Secretariat's recommendation: Accept.

15. *Loxodonta africana*, transfer of the South African population from Appendix I to Appendix II:

At its seventh meeting, in 1989, the Conference of the Parties agreed that any proposal to transfer a population to Appendix II would be subject to review by a Panel of Experts, who would advise the Parties. The preamble of Resolution Conf. 7.9 states that the Conference of the Parties is aware that populations of elephants of certain African States may not meet the Berne criteria for transfer to Appendix I.

The supporting statement of South Africa explains the intention to transfer its African elephant population to Appendix II for trade in specimens other than ivory. It clearly states that South Africa has no intention to trade commercially in ivory until such trade is approved by a future meeting of the Conference of the Parties. The proponent has also stated its intention to restrict trade to non–ivory specimens taken from Kruger National Park, where the elephant population is estimated at 7,000 – 7,500 animals. South Africa has also stated that its reservation on the listing in Appendix I will be withdrawn if the proposal is adopted, and has agreed to the creation of a mechanism by which its elephant population would be automatically transferred back to Appendix I if the Government allowed any trade in ivory before approval of a trade control system by the Conference of the Parties.

During the last 25 years, the elephant population of Kruger National Park has been subject to an annual census and contains almost 85 per cent of the South African population. The proponent wishes to obtain economic benefit from the export of elephant hides to help the increasing cost of conserving its National Parks system. There is no evidence that elephants have ever been poached for hides. Because of the logistical problems of such poaching, it can not represent a serious threat to the species, unlike poaching for ivory.

The Panel of Experts [see Doc. 9.47 (Rev.) Annex 6] concluded that the proposal met the criteria for the transfer of elephant populations to Appendix II, as specified in Resolution Conf. 7.9, with an appropriate annotation to limit trade to specimens other than ivory.

However it should be clear that the trade in ivory would not be subject to more stringent provisions than apply to specimens of species in Appendix I.

Secretariat's recommendation: Accept, if the population is annotated as follows: "For the exclusive purpose of allowing trade in specimens other than ivory. All ivory specimens shall be deemed to be specimens of species included in Appendix I and trade in them shall be regulated accordingly." ("accordingly" could be replaced by "in accordance with the provisions of Article III or VII of the Convention".)

16. *Loxodonta africana*, transfer of the population of the Sudan from Appendix I to Appendix II:

The proponent wishes to transfer its elephant population to Appendix II subject to a quota. The proposal does not satisfy the criteria established by Resolution Conf. 7.9. The country is facing civil unrest in the area where most of the elephants occur. Furthermore, the fundamental aim of the proposal is to dispose of the ivory stockpiles, a problem shared

by several African countries. According to information received from WWF/TRAFFIC, ivory is accumulating at the rate of 1–6 tonnes a year in range States in east and southern Africa.

Secretariat's recommendation: Reject.

17. *Ceratotherium simum simum*, transfer from Appendix I to Appendix II:

Without any doubt, the population trend of South Africa's white rhinoceroses can be considered as the unique exception to the continued downward trend in rhinoceros populations. The intention of the proposal is apparently to allow trade only in specimens other than horn, although this is not very clearly stated in the supporting statement. If this condition were not clearly agreed, adoption of the proposal could have unforeseen detrimental consequences.

The main reason why the population has increased in South Africa is because it has been given good protection there. However, it is important to note that the budget of the National Parks Board is being reduced and that it is supplemented by the sale and export of live rhinoceroses, the income being used to reinforce the anti–poaching measures in protected areas. The exports are generally to zoos, safari parks and private land–owners setting up breeding groups. There are many potential importers who would use animals for exhibition, whose purpose of import would be clearly commercial. However, they would be able to import animals only if the species were transferred to Appendix II.

Secretariat's recommendation: Reject the proposal as it stands. It should be accepted if the population in Appendix II is annotated as follows: "For the exclusive purpose of allowing trade in live animals. All other specimens shall be deemed to be specimens of species included in Appendix I and trade in them shall be regulated accordingly." ("accordingly" could be replaced by "in accordance with the provisions of Article III or VII of the Convention".)

18. *Hippopotamus amphibius*, inclusion in Appendix II:

The total population of the species is estimated as 160,000 and is declining. The species is vulnerable due to hunting pressures. Since 1990, the international trade in specimens of this species (mainly raw ivory teeth) seems to have increased drastically and could threaten the survival of the species if control is not established. In 1975, the species was listed in Appendix III by Ghana, but the provisions of the Convention relating to Appendix III are poorly implemented. The species meets the Berne criteria for inclusion in Appendix II.

Secretariat's recommendation: Accept.

19. *Vicugna vicugna*, transfer from Appendix I to Appendix II of the remaining Peruvian population included in Appendix I; amend annotation °502 to allow also the trade in wool sheared from live vicunas and disposal of remaining stockpiles held by the Peruvian Government:

The Peruvian proposal contains three components.

1. Transfer from Appendix I to Appendix II of the remaining population included in Appendix I: Taking into account the proximity, in Peru, of Appendix I and Appendix II vicuna populations and the commitments of the current Peruvian administration on the vicuna issue, the split listing within the country is no longer appropriate. On the contrary, it could be detrimental because of the difficulty in explaining to the rural communities why a vicuna population on their lands is in Appendix I while another population very close to them is in Appendix II and can be sheared and traded. Peru has not been able to export any vicuna cloth because of the civil unrest in the country for eight years. The pacification of the country is evident and the Secretariat has twice been able to visit regions that, two years ago, were impossible to reach because of the war.

   A new census was recently finished, by direct counting of live animals rather than by extrapolation of population estimates as was done in the past. It has revealed that the vicuna population in Peru is over 66,000 animals, spread over six million hectares. The census was made in close co–operation with the IUCN/SSC South American Camelid Specialist Group and the Secretariat. The supporting statement indicates that the Peruvian authorities have drafted a conservation and management plan for the species. In addition, new legislation should be passed very soon, incorporating severe penalties for poaching vicuna.

2. Amendment to annotation °502 to allow also the trade in wool sheared from live vicunas: Although Peru has at least two manufacturers capable of producing cloth of internationally acceptable standard, the rural communities fear that a monopoly might be established and that the prices will be fixed by the two manufacturers, knowing that CITES allows only the export of cloth. If proper controls on the movement and export of wool are established, including mechanisms to mark wool in trade, this proposal does not threaten the vicuna. Furthermore, a clear association between the manufacturers and the rural communities shearing the vicunas must be established as it is essential in order that the benefits which come back to those communities ensure the conservation of the species.

3. The third component of the Peruvian proposal concerns the disposal of stockpiles of wool held by the Peruvian Government: This part of the proposal remains problematic because it does not clarify whether the wool was obtained from the shearing of live animals. With the present annotation in the appendices, international trade in confiscated wool of dead animals for commercial purposes is not allowed.

The Peruvian proposal is supported by all vicuna range States, members of the *Convenio sobre la Conservación y Manejo de la Vicuña*, 1979 (Argentina, Bolivia, Chile, Ecuador and Peru).

Secretariat's recommendations:

1. Accept the transfer to Appendix II of all Peruvian vicuna populations remaining in Appendix I;

2. Accept the amendment of annotation °502 in order to allow also the export of vicuna wool, provided that the Secretariat is informed of the mechanisms to control and mark the wool in trade from the moment the animal is sheared to the export;

3. Reject the disposal of the stockpile, unless the Government of Peru informs the Secretariat of the amount of wool stocked and whether it can separate from the stockpile the wool obtained from shearing live animals.

The Secretariat takes this opportunity to recall its request to importing countries to inform the Secretariat of the amount of wool or cloth they may have. Two European countries that are known to have pre–Convention stocks have not yet provided information.

20. *Vicugna vicugna*, amendment to annotation °502 to allow also trade in wool sheared from live vicunas:

The proposal aims to modify annotation °502 because no vicuna products have legally been exported from Chile since 1987, when the major vicuna population was transferred to Appendix II.

The sole reason is because Chile lacks adequate technology to manufacture in the country cloth of a quality suitable for the international market.

The conservation status of the Chilean vicuna population is good and is the result of a well designed conservation and management plan. A census done in 1993 indicated that the population of vicuna was stable, with about 26,500 animals in the Province of Parinacota, which holds 95 per cent of the vicuna population of Chile. If this proposal is adopted, it will be possible for Chile to encourage the rural communities to conserve the vicuna because they will have an income from the sale and export of wool.

The Chilean proposal is supported by all vicuna range States, members of the *Convenio sobre la Conservación y Manejo de la Vicuña*, 1979 (Argentina, Bolivia, Chile, Ecuador and Peru).

Secretariat's recommendation: Accept the amendment to annotation °502 to allow also the export of vicuna wool, provided that the Secretariat is informed of the mechanisms to control and mark the wool in trade from the moment the animal is sheared to the export.

21. *Megamuntiacus vuquanghensis*, inclusion in Appendix I:

The species was recently discovered and its status is not yet well known. No population data are available. The species has a very limited range, in the Lao People's Democratic Republic and Viet Nam. Hunting pressure within this range is intense and consequently the species could be threatened with extinction. However, there is no evidence of international demand and, as the species is killed for meat, inclusion in the CITES appendices would not help its conservation.

Secretariat's recommendation: Reject.

22. *Pseudoryx nghetinhensis*, inclusion in Appendix I:

This species was recently discovered too and occurs in the same limited range as the previous species. The habitat is declining because of deforestation. The population seems to be very small. The Lao P.D.R. and Viet Nam do not have adequate legislation to protect the species. There is much hunting pressure on large mammals in both countries. Specimens have been exported to museum and zoological collections and others have been found in taxidermy shops in Viet Nam. According to the information available, the population is severely threatened with extinction. The species satisfies the Berne criteria for inclusion in Appendix I and the criteria in Resolution Conf. 2.19 on Criteria for Addition of Extremely Rare Species to Appendix I.

Secretariat's recommendation: Accept.

23. *Saiga tatarica*, inclusion in Appendix II, except the population of Mongolia:

The supporting statement clearly indicates that the saiga has been used for decades, the meat for food and the horn for medicines, and to a lesser extent, as a sport–hunting trophy. According to the supporting statement, when the border between China and the Russian Federation were opened, in 1989, and less money was available for wildlife management in Kalmykia and Kazakhstan, the illegal hunting heavily increased.

Saiga horns are exported to east Asia in large numbers. However, the exports seem to have decreased because of a saturation of the markets. Most of the horn exported is obtained from poaching and is traded illegally. The species satisfies the Berne criteria for inclusion in Appendix II.

Secretariat's recommendation: Accept.

24. *Saiga tatarica*, inclusion of the Mongolian population in Appendix I:

Illegal hunting is also a problem in Mongolia. The population there is fully protected although there are no patrols or designated protected areas. The population is very small and its status in not clear but there is concern that it is declining and is threatened by hunting for meat and horn. However, if this population were included in Appendix I and the others in Appendix II, the difficulty of distinguishing the specimens would create enforcement problems.

Secretariat's recommendation: Accept the inclusion of the population in Appendix II.

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25. *Apteryx* spp., inclusion in Appendix I:

The genus is fully protected in New Zealand, where the main problem for the species is loss of habitat and predation by introduced mammals. There is a very limited international demand for live or dead specimens, which does not constitute a threat to the species. The species do not satisfy the Berne criteria for inclusion in Appendix I.

Secretariat's recommendation: Reject.

26–28. *Rhynchotus rufescens maculicollis, Rhynchotus rufescens pallescens* and *Rhynchotus rufescens rufescens*, deletion from Appendix II:

The Secretariat inadvertently listed these proposals under "Other proposals" but recognizes that they should be considered under "Ten–year–review" proposals.

Long ago, the CITES Animals Committee discussed the status of this species under the Ten–year–review process and suggested that Uruguay should present a proposal for deletion at the seventh meeting of the Conference of the Parties. When the proposal was discussed, the delegation of Argentina, the other range State of the species, requested that the proposal be rejected, so as to give more time to study the status of the species in their country. In due course, Argentina agreed with the Animals Committee's view and Uruguay presented the proposal again for consideration at the eighth meeting of the Conference of the Parties. The proposal for that meeting reached the Secretariat after the deadline established by the Convention, and was therefore refused by the Secretariat.

Only one specimen, a skeleton, has been reported in international trade since 1989. There is no evidence

that any of the subspecies is threatened or traded internationally.

Secretariat's recommendation: Accept.

29–31. *Anas aucklandica* and *Anas chlorotis* (currently listed as *Anas aucklandica chlorotis*), transfer from Appendix II to Appendix I; *Anas nesiotis*, inclusion in Appendix I (in lieu of *Anas aucklandica nesiotis*):

The proposals aim to revise the listing of the subspecies of *Anas aucklandica* to take into account recent taxonomic work. Since 1975 *A. aucklandica nesiotis* has been in Appendix I, and *A. a. aucklandica* and *A. a. chlorotis* in Appendix II. As stated in the supporting statement, these are now considered to be three separate species: *A. aucklandica, A. chlorotis* and *A. nesiotis*.

The populations of all three species are very small and declining. Although the main threat is predation by introduced animals and loss of habitat, there is an indication of trade demand. Any increase in trade could seriously affect the survival of the species.

Secretariat's recommendation: Accept.

32. *Xenoperdix udzungwensis*, inclusion in Appendix I:

The species was discovered very recently. No population data are available and the ecology of the species is unknown. No information exists that the species has appeared in international trade. Two similar species were listed in Appendix II in 1975 but were deleted in 1989 because the listing served no useful purpose.

Secretariat recommendation: Reject.

33. *Balearica pavonina*, transfer from Appendix II to Appendix I:

The primary threat to this species is loss of habitat and use of pesticides rather than collection for international trade. The trade reported in annual reports concerns specimens exported from the United Republic of Tanzania, which is not a range State for this species. The United Republic of Tanzania has confirmed that the birds exported were in fact specimens of *Balearica regulorum*, wrongly recorded because of misidentification.

Secretariat's recommendation: Reject.

34. *Cacatua goffini*, transfer from Appendix I to Appendix II:

This species was transferred from Appendix II to Appendix I at the eighth meeting of the Conference of the Parties, 1992, because it was heavily traded. It had been recently classified by ICBP (now Birdlife International) as threatened, in its 1988 book, "Birds to Watch". The supporting statement says that the species was transferred to Appendix I misapplying the Berne criteria, but it does not explain how they were misapplied.

The proposal seeks the transfer of the species back to Appendix II, invoking Resolutions Conf. 1.2 and Conf. 7.14. A draft report of a population survey joined to the proposal provides data that indicate that a limited harvest would be possible, but it provides no information on population trends. Even though a zero quota was established by the proponent at the eighth meeting, the capture of live animals still continues. The lack of control over capture and trade remains a point of concern.

Secretariat's recommendation: Reject unless an acceptably low export quota is established.

35. *Cyanoramphus malherbi*, transfer from Appendix II to Appendix I:

The supporting statement indicates that this species occurs on several islands of New Zealand and on other groups of islands in the region. However, some disagreement exists as to whether it is a true species and this should be discussed first. The standard nomenclature for bird species adopted by the Conference of the Parties says that *C. malherbi* is "now known to be a colour morph of *C. auriceps*". Recent genetic analysis has reportedly been inclonclusive. CITES Parties have not reported any trade in *C. malherbi*, although specimens were advertised for sale in the United States in 1992. The population is declining.

Secretariat's recommendation: Reject, but refer to the Nomenclature Committee and reconsider if appropriate at the tenth meeting.

36. *Cyanoramphus novaezelandiae*, transfer from Appendix I to Appendix II:

This proposal was withdrawn on 11 October 1994.

37. *Eos histrio*, transfer from Appendix II to Appendix I:

The species is particularly subject to threats owing to its limited insular range. It is believed to be declining in numbers and distribution because of human factors (habitat destruction and, more recently, collection for trade). Without any doubt the species is currently endangered. The species satisfies the Berne criteria for inclusion in Appendix I.

Secretariat's recommendation: Accept.

38–39. *Psittacus erithacus*, inclusion of the population of Sao Tomé and Principe in Appendix I in lieu of *Psittacus erithacus princeps* or transfer *Psittacus erithacus princeps* from Appendix I to Appendix II:

Psittacus erithacus princeps is not considered a valid taxon. Specimens from this "subspecies" are not distinguishable from the nominate subspecies. The species is not considered to be threatened with extinction but could become so if trade levels increased to former levels, as is said in the supporting statement. The population of Sao Tomé and Principe is not threatened.

Secretariat's recommendation: Accept the transfer of *Psittacus erithacus princeps* to Appendix II; reject the inclusion in Appendix I of the population of *Psittacus erithacus* of Sao Tomé and Principe in lieu of *Psittacus erithacus princeps* unless the other proposal is rejected.

40. Musophagidae spp., inclusion in Appendix II:

The intention of the proposal is unclear. The supporting statement only provides information for 10 of the 16 species of Musophagidae not currently included in Appendix II (seven species are included). There are few trade data because, while some of these species are included in Appendix III, the others are not listed in the appendices.

The biological and trade information do not justify the inclusion of all the species in Appendix II. However, as *Tauraco fischeri* is considered threatened and is already included in Appendix II, it would be justifiable to include in Appendix II the species of the genus *Tauraco* not already listed, in accordance with Article II.2.(b).

Secretariat's recommendation: Reject the inclusion of the family Musophagidae in Appendix II, but accept the inclusion of the genus *Tauraco* in this appendix.

41. *Collocalia* spp., inclusion in Appendix II:

The nests of these swiftlets are made of saliva, totally or partially. Saliva is obviously a derivative of the birds, which is produced not as a waste product but to help digestion and, more remarkably, to build nests, essential for the birds' survival. The nests are extremely valuable in international trade, being used for production of bird's–nest soup and other products. Since the nests contain derivatives from the swiftlets, they would clearly fall under the definition of "specimen" in Article I of the Convention.

Harvest pressure is intense in many countries and the measures established to manage the production have proven difficult to enforce. Although no comprehensive population surveys have been carried out, some reports indicate a decline in the nesting colonies because of excessive harvest levels and destructive collection practices. Several species are considered to be globally threatened.

The trade in nests represents an enormous business, which is increasing in volume. At least 150 tonnes were sold worldwide in 1989 and demand appears to exceed supply. As the international trade is the primary incentive for nest collection, the threatened species seem to satisfy the Berne criteria for inclusion in Appendix II in accordance with Article II.2.(a). The difficulty in identifying the birds and parts and derivatives argues for the inclusion of the remaining species of the genus in accordance with Article II.2.b.

However it would be extremely difficult to determine which species produced any particular nest in trade, and this means there would be a big enforcement problem.

Secretariat's recommendation: Reject unless a way is found to identify the specimens in trade.

42. *Agelaius flavus*, inclusion in Appendix I:

In 1975 this species was included in Appendix III by Uruguay (as *Xanthopsar flavus*). The total world population is less than 5,000 specimens. Specimens are captured alive for the pet trade. International trade has been recorded between Argentina and Uruguay. Taking into account the low population, the decreasing range and trade demand, the species satisfies the Berne criteria for inclusion in Appendix I.

Secretariat's recommendation: Accept.

REPTILIA

43. *Terrapene* spp., inclusion in Appendix II:

The decline in the *Terrapene* populations is mainly the result of habitat destruction and fragmentation. In addition, some populations of the genus are exploited for the domestic pet trade and recently for the international market. Because of late sexual maturity and low recruitment rates, some populations can not afford to be harvested.

The species are facing an important threat. Therefore, taking into account their status in the wild, they satisfy the Berne criteria for inclusion in Appendix II.

Secretariat's recommendation: Accept.

44. *Testudo kleinmanni*, transfer from Appendix II to Appendix I:

The species is restricted to desert environments within 90 km of the Mediterranean coast in Egypt, Israel and the Libyan Arab Jamahiriya (not a CITES Party). Human activities are mainly responsible for the dramatic decline in the population in Egypt and Israel; the population also seems to be declining in the Libyan Arab Jamahiriya.

The species has been virtually exterminated in Egypt, having suffered intensive collecting for export, and only small isolated populations are thought to survive. The proposal does not mention whether Israel was consulted. The species satisfies the Berne criteria for inclusion in Appendix I.

Secretariat's recommendation: Accept.

45–46. *Lissemys punctata punctata*, deletion from Appendix I; *Lissemys punctata*, inclusion in Appendix II:

The supporting statement recalls that *Lissemys punctata punctata* was listed in Appendix I in 1975, apparently as a result of taxonomic confusion with the subspecies *L. p. andersoni*. There is little international trade recorded, although the subspecies is common in markets in India and Bangladesh. In the information received from various sources, there is nothing to indicate that this subspecies should be maintained in Appendix I.

Regarding *Lissemys punctata*, there is no evidence that the international trade is a threat to the species, and it does not satisfy the Berne criteria for inclusion in Appendix II.

Secretariat's recommendation: Accept transfer of *Lissemys punctata punctata* from Appendix I to Appendix II; reject inclusion of *Lissemys punctata* in Appendix II.

47. *Crocodylus niloticus*, maintenance of the Tanzanian population in Appendix II in accordance with Resolution Conf. 7.14:

Subject to an export quota, and in accordance with Resolution Conf. 5.21, the population of *Crocodylus niloticus* of the United Republic of Tanzania was transferred to Appendix II in 1985. A proposal to maintain this population in Appendix II in accordance with Resolution Conf. 3.15 was approved at the eighth meeting of the Conference of the Parties, in 1992. Export quotas for problem animals were agreed.

The supporting statement indicates that *Crocodylus niloticus* appears to be widespread and common in the United Republic of Tanzania. The population has been estimated to be between 74,000 and 76,000 animals. The United Republic of Tanzania has adopted a crocodile management plan. The supporting statement indicates that there are serious conflicts between humans and crocodiles, which in fact is the main reason for requesting an increased export quota for wild specimens. According to information received, the management programme for ranching is not properly implemented. Fewer than 250 problem specimens were killed from 1990 to 1993, while it is proposed to export a total of 12,000 wild–collected specimens from 1995 to 1997. The supporting statement does not indicate the population monitoring and control measures that will be implemented in the event that such export is authorized.

Secretariat's recommendation: Reject.

48. *Crocodylus porosus*, maintenance of the Australian population in Appendix II in accordance with Resolution Conf. 1.2:

The Australian population of *Crocodylus porosus* was transferred to Appendix II in 1985, in accordance with

Resolution Conf. 3.15. In accepting this transfer, the Parties approved the management programme for the species presented by Australia. The present proposal has been submitted recognizing the improvements in the status of *C. porosus* in Australia, as well as the effectiveness of the management programme implemented for the species.

The species has recovered throughout most of its range while at the same time being subject to a harvest of wild eggs, hatchlings and some juveniles and adult specimens. The destruction of the habitat and the capture through fishing operations do not seem to jeopardize the recovery of *Crocodylus porosus* in Australia.

Secretariat's recommendation: Accept.

49. *Sphenodon* spp., inclusion in Appendix I:

Tuataras are scarce. *Sphenodon punctatus* was included in Appendix I of CITES in 1975. Recently a second species was described and is much less numerous than *S. punctatus*. The proposal aims to give maximum protection to this genus, which is endemic to New Zealand. CITES annual reports record low numbers of live specimens exported to zoos and scientific institutions. However, there is evidence that the species are in demand for private collections. The proposal is supported by the CITES Nomenclature Committee because, if it were adopted, any new species of the genus would automatically be covered. The known species in the genus satisfy the Berne criteria for inclusion in Appendix I.

Secretariat's recommendation: Accept.

50. *Phymaturus flagellifer*, inclusion in Appendix II:

This species is the only representative of the genus *Phymaturus* in Chile. Other species occur in Argentina. The species has been subject to commercial trade in the past, however Chile has banned export of this species since 1993. There is no evidence of trade from Argentina.

The species does not appear to be declining and international trade does not constitute a threat. The inclusion of this species in Appendix II is not necessary.

Secretariat's recommendation: Reject.

51–54. *Pristidactylus alvarol, P. torquatus, P. valeriae* and *P. volcanensis*, inclusion in Appendix II:

These four species are endemic to Chile. Four additional species occur in Argentina. Three of the Chilean species are considered as rare and one as vulnerable. Chile has prohibited trade in these species since 1993 and there is no evidence of illegal trade. Despite the small range of these taxa, trade does not appear to be a threat. The species do not meet the Berne criteria for inclusion in Appendix II.

Secretariat's recommendation: Reject.

55. *Callopistes palluma*, inclusion in Appendix II:

Callopistes palluma is endemic to Chile. Its range has declined because of habitat destruction. It occurs naturally at low densities and is classified as vulnerable in the Chilean Red List. Chile has established a 20–year hunting moratorium, starting in 1993, and export is no longer permitted. The species does not satisfy the Berne criteria for inclusion in Appendix II.

Secretariat's recommendation: Reject.

56–57. *Varanus bengalensis* and *V. flavescens*, temporary transfer from Appendix I to Appendix II:

The fundamental principles in Article II of the Convention require species to be listed in accordance with certain conditions relating to biology and trade. If a species meets the criteria for inclusion in one of the appendices, it would be contrary to the fundamental principles of the Convention to transfer it temporarily to the other appendix.

However, these species were included in Appendix I in 1975, before the adoption of the Berne criteria, and the Animals Committee should review their status.

Secretariat's recommendation: Reject.

AMPHIBIA

58. *Bufo periglenes*, inclusion in Appendix I:

This species is endemic to northern Costa Rica and is almost entirely restricted to an area of about 4 km^2 in a national reserve. The species is fully protected in Costa Rica. It is extremely rare, if not already extinct, and any trade in the species would further threaten its survival. The species satisfies the Berne criteria for inclusion in Appendix I and the criteria in Resolution Conf. 2.19 on Criteria for Addition of Extremely Rare Species to Appendix I.

Secretariat's recommendation: Accept.

59–60. *Mantella aurantiaca*, inclusion in Appendix I; *Mantella aurantiaca*, inclusion in Appendix II:

Two proposals were presented by two proponents, but the supporting statements were the same. *M. aurantiaca* is one of eight species of the genus. There is some taxonomic confusion and the genus should be reviewed. *M. aurantiaca* is restricted to an area of 50 km^2 in the rainforest of eastern Madagascar. The species is threatened because of logging, drainage and other human activities.

There is no information on local use, but live specimens have been collected and exported in large numbers in recent years for the pet trade. Present trade levels and the vulnerability of its habitat create some concern. The currently available information is not sufficient to support the inclusion of the species in Appendix I. However *M. aurantiaca*, and probably other species of *Mantella*, satisfy the Berne criteria for inclusion in Appendix II.

Secretariat's recommendation: Reject inclusion in Appendix I; accept inclusion in Appendix II.

INSECTA

61. *Colophon* spp., inclusion in Appendix I:

The genus is endemic to the mountains of south–western Cape Province, South Africa. According to information received, there is agreement that all *Colophon* species have highly restricted ranges. However, it is agreed that the current ranges are probably quite stable. There is no information on trade volumes. All collection and export, other than that permitted for scientific purposes, is illegal under the legislation of Cape Province.

International trade is a potential threat to these species, but there is not enough information to indicate that the genus is threatened with extinction.

The species satisfy the Berne criteria for inclusion in Appendix II but not those for inclusion in Appendix I.

Secretariat's recommendation: Reject inclusion in Appendix I; accept inclusion in Appendix II.

ARACHNIDA

62–64. *Pandinus dictator, P. gambiensis* and *P. imperator*, inclusion in Appendix II:

Three West African scorpion species of the genus *Pandinus* are covered by the proposals. Little is known of the distribution and status of these species. Available information indicates that their biology may not allow rapid recovery if the species are subject to excessive collection. Ghana and Togo are the major suppliers of the international trade, which amounts to more than 10,000 specimens a year. It is not clear which species are involved but information received suggests that *P. imperator* is the most common species in trade.

On the basis of the data available, *P. imperator* satisfies the Berne criteria for inclusion in Appendix II and the other two species should also be included because of similarity.

Secretariat's recommendation: Accept.

65. *Brachypelma* spp., inclusion in Appendix II:

The proposal aims to include in Appendix II ten tarantula species of the genus *Brachypelma*. This genus includes *B. smithi*, which was included in Appendix II at the fifth meeting of the Conference of the Parties, in 1985. According to specialists, it is difficult to differentiate *Brachypelma* species. It seems that the genus ranges from Mexico to Central America. The sizes of the populations are unknown but some of the species have a limited range. All species are under pressure because of habitat destruction and collection for trade. Mexico has established a ban on exports of these species. However, there is evidence of illegal trade from this and other countries where the species occur.

The control of trade in *B. smithi* has failed because of the problem of distinguishing young specimens of this species from those of other species in the genus. The species meet the Berne criteria for inclusion in Appendix II in accordance with either Article II.2.(a) or Article II.2.(b).

Secretariat's recommendation: Accept.

MOLLUSCA

66. *Placostylus* spp., inclusion in Appendix II of the population of New Zealand:

67. *Powelliphanta* spp., inclusion in Appendix II of the population of New Zealand:

These proposals were withdrawn on 11 October 1994.

68. *Charonia tritonis*, inclusion in Appendix II:

The species was classified as rare in the IUCN Invertebrate Red Data Book but is not currently listed by IUCN as threatened. The supporting statement provides a comprehensive summary of the wide distribution of this attractive gastropod. There are indications that *C. tritonis* is declining in Israel, the Philippines, Papua New Guinea and Thailand. The species is not common but, because of its wide distribution and the lack of reliable information regarding the population size and trade, it does not meet the criteria for inclusion in Appendix II.

Secretariat's recommendation: Reject.

FLORA

The Government of India has proposed a number of species, important in the medicinal plant trade, to be included in Appendix II. Before commenting in detail on these proposals, the Secretariat would like to make a number of general observations applicable to all these proposals.

- All the species concerned occur outside India, some even having a very wide distribution. However, none of the supporting statements contains information regarding population status and trade outside India nor comments from the other countries where the species occur. In fact, the proposals contain precariously little information, making it almost impossible for the Parties to make an adequate assessment of the status of the species concerned.
- Products derived from all the species proposed for inclusion are widely used in India, but the supporting statements do not contain any indication or estimate of the volume used nationally. Therefore, it is not possible to determine what share of the total trade volume enters international trade nor, consequently, to what extent inclusion in the appendices would contribute to the conservation of the remaining populations.
- Drafts of a number of supporting statements were discussed in some detail by the Plants Committee at its fifth meeting (San Miguel de Allende, May 1994). However, the Committee did not support any of the proposals, because of a lack of information on trade and current population status. India was recommended to add these data but hardly any relevant additional information was added after the meeting of the Committee.
- The export of all species proposed for inclusion has, either for several years, or only recently, been prohibited. However, the export of derivatives of several of them is permitted as Not Essentially Specified products. That is why they are advertised for export by Indian trading companies. None of the supporting statements refers specifically to the parts and derivatives that must be controlled. However, it is clear that what is exported is in most instances the extracted drugs, and not the plants or readily recognizable parts thereof. The inclusion of any of these species in the appendices would therefore create serious implementation problems. One can not expect Customs officers of an importing country to be able to determine whether a particular extract contains components derived from the species concerned. This point was already the subject of discussions at the seventh meeting of the Conference of the Parties. The solution chosen then was specifically to exclude chemical derivatives from CITES controls for *Rauvolfia serpentina* and *Podophyllum hexandrum*. But, to exclude from controls the main substance in international trade would make the CITES listing futile.

Secretariat's Recommendation: The Plants Committee should study the problems related to the control of plant products traded internationally, in particular those with medicinal properties, and make recommendations for consideration at the tenth meeting of the Conference of the

Parties regarding the inclusion in the appendices of species from which the principal products in trade are chemical derivatives.

73. *Berberis aristata*, inclusion in Appendix II:

The trade data provided refer to the export of the principal extract in trade, berberine hydrochloride, but several other species of *Berberis* are also used for the extraction of berberine, thus creating an identification problem. Exports of parts and derivatives are prohibited under the Export (Control) Act of 1988, but the supporting statement provides data on the exports for 1991–1993, which were presumably in contravention of this ban. There is some concern about over–harvesting of the Indian population, but the species has a good regeneration capacity. The export figures given refer to the export of derivatives of several species, and if the export prohibition is adequately implemented, should not refer to *B. aristata* at all.

Secretariat's recommendation: Reject.

77. *Gentiana kurroo*, inclusion in Appendix II:

Proposals to include this species, as well as *Aconitum deinorrhizum* and *Nardostachys grandiflora*, in Appendix II were presented to the seventh meeting of the Conference of the Parties. The current proposals differ only in a minor way from those of 1989 and do not provide any additional information. In 1989 India withdrew these proposals, because the lack of data prevented the Parties from making an adequate assessment of the status of these species. These reasons still apply.

Secretariat's Recommendation: Reject.

97. *Colchicum luteum*, inclusion in Appendix II:

The inclusion of *Colchicum luteum* in the CITES appendices for the purpose of controlling trade in bulbs would create serious implementation problems. This species and at least five others and many hybrids are traded worldwide as ornamental garden plants, most of them artificially propagated. It will, at the least, be extremely difficult to differentiate the bulbs of *C. luteum* from those of the other species of this genus. *C. luteum* may be threatened in India because of habitat destruction and over–exploitation, but it is still common elsewhere.

Secretariat's Recommendation: Reject.

106. *Rheum australe*, inclusion in Appendix II:

This species has a very wide range, and although threatened in India by habitat destruction and over–exploitation, it is not threatened over its whole range. The proposal does not specify whether the trade from India is in derivatives or in roots.

Secretariat's Recommendation: Reject.

107
–109. *Aconitum deinorrhizum, A. ferox, A. heterophyllum*, inclusion in Appendix II:

There is a special problem regarding the control of the trade in extracts of the three species of *Aconitum*. Their derivatives are components of a drug called 'Indian aconite' which is apparently exported. However, similar extracts from other species of this genus may also be included in Indian aconite. As a consequence it will be impossible to control adequately any trade in the species proposed for listing. (See also under proposal 77.)

Secretariat's Recommendation: Reject.

110. *Coptis teeta*, inclusion in Appendix II:

This and other species of *Coptis* are successfully propagated in India, the Republic of Korea and China. Although some collecting from the wild still occurs, this does not seem to have a detrimental effect since at least part of the exploited populations seems to have recovered.

Secretariat's Recommendation: Reject.

112. *Picrorhiza kurrooa*, inclusion in Appendix II:

Information regarding the status of the species is insufficient. It may be threatened in India, but it is not endangered throughout its entire range.

Secretariat's Recommendation: Reject.

113. *Taxus wallichiana*, inclusion in Appendix II:

The taxonomic status of the species proposed needs to be clarified since, in most of the recent publications on this genus, *T. wallichiana* is either included in *T. baccata* or regarded as a variety of the latter. The proposal indicates that only recently all export of plant parts and derivatives was prohibited. However, the species mentioned in the list of plants of which exports is prohibited is *Taxus baccata*, and not *Taxus wallichiana*. Identification of parts traded (leaves) will create serious implementation problems since it is not possible to differentiate between the leaves of the species in this genus.

Trade in this species has only recently become of interest. The proposal expresses concern about the large numbers of specimens that are currently collected and about the destructive way in which this is done. However, it also states that all collecting is strictly regulated. Despite the export prohibition permits have been issued for export via Madras. It seems that the problem is more one of internal controls. In addition, there is a problem of implementation regarding the trade in the extract, taxol. Several companies in India produce this extract, the export of which is not controlled.

Secretariat's recommendation: Reject.

Proposals on Timber Species

A number of species currently in trade for their timber are proposed for inclusion in Appendix II. As happened before the eighth meeting of the Conference of the Parties, these proposals have given rise to discussions in and comments from other fora dealing with the timber trade. Again it has been suggested that CITES might not be an appropriate instrument to deal with the timber trade. The Secretariat has made an effort to seek co–operation with the International Tropical Timber Organization (ITTO), as requested at the eighth meeting of the Conference of the Parties. It regrets that this organization has responded rather negatively to the Secretariat's efforts to establish a working relationship.

The CITES Secretariat clearly recognizes the importance of internationally traded timber for the economies of the exporting countries. Adequate implementation of CITES for species deemed by the Parties to warrant inclusion in Appendix II may even help to further curtail illegal trade, as reported by TRAFFIC (Illegal Tropical Timber Trade: Asia–Pacific, November 1992), thus improving the economic benefits to the exporting countries, and may assist these countries to achieve optimal sustainable use of their natural resources. A thorough discussion of documents Doc. 9.52 and Doc. 9.53 should take place before the proposals concerned are decided upon.

74. *Diospyros mun*, inclusion in Appendix II:

The supporting statement refers only to use of the species for production of chopsticks, which may be used nationally only, and to its value for craft work (a general reference that may apply to any ebony species). The species seems well protected under national legislation. If the species were to be included in the appendices it would be necessary to know how the wood can be differentiated from the other 20 or so species that may be significant as a commercial source of ebony, and how many of these enter international trade. No information is provided to show that international trade might threaten the species.

Secretariat's Recommendation: Reject.

78. *Dalbergia melanoxylon*, inclusion in Appendix II:

The information provided in the supporting statement does not fully justify the species inclusion in Appendix II. Declines have been observed in parts of its range only. Regeneration seems secured in areas not subjected to habitat destruction, because seed production starts before the tree reaches a harvestable size. The Plants Committee strongly supports this proposal. However, the main trade seems to be in carvings and as parts for musical instruments, there is relatively little trade in timber logs or sawn wood. This will create considerable implementation problems, because many of the carved objects are sold as tourist souvenirs. The Parties must therefore carefully consider the consequences of accepting this proposal. The wood has been extensively used for the production of woodwind instruments. In order to avoid problems with the issuance of pre–Convention certificates (as was the case after the inclusion of *Dalbergia nigra* in Appendix I), the Secretariat would like to suggest that musical instruments be specifically excluded.

Secretariat's Recommendation: Accept. Exporting countries that do not regulate the export of souvenirs made of wood of this species, should inform the Secretariat about this, so that this information can be communicated to the Parties. Musical instruments, wholly or partly made of wood of this species, should also be exempted from CITES controls.

98. *Entandrophragma* spp., inclusion in Appendix II:

The information on distribution and status is not complete. The information provided indicates that several of the species are heavily traded and over–exploited in at least part of their range. Population size of some of the species is decreasing due to regeneration problems but not all are threatened. Conservation measures taken by some of the range States would be enhanced by acceptance of the proposal. Listing of all species is justifiable because of similarities between the species of this genus and those of *Khaya*. This proposal is supported by the Plants Committee.

Secretariat's Recommendation: Accept, with the annotation that CITES controls are restricted to saw logs, sawn wood and veneer.

99. *Khaya* spp., inclusion in Appendix II:

Status information for the species of this genus is incomplete but it is evident that the populations are declining in at least part of their range. Some species could become threatened by continuing trade but the only justification for inclusion of the whole genus would be because of difficulties in identification, since the wood of the species of this genus and that of species of *Entandrophragma* is very similar. The proposal is supported by the Plants Committee.

Secretariat's Recommendation: Accept, with the annotation that CITES controls are restricted to saw logs, sawn wood and veneer.

100. *Swietenia* spp., inclusion in Appendix II:

This proposal is intended to amend the current listing to cover all species and natural hybrids of *Swietenia*. Although *S. macrophylla* may currently not be threatened with extinction, the populations in certain parts of its range have been seriously depleted. Selective logging also negatively effects the regeneration of this species because of its adaptation to natural forest disruption (fire and heavy storms) for seed germination. The wood of this species is a desirable commodity and traded internationally in large volumes. Inclusion in Appendix II is justified and would assist existing conservation measures. The proposal is supported by the Plants Committee.

Secretariat's Recommendation: Accept, with the annotation that CITES controls are restricted to saw logs, sawn wood and veneer.

Other Proposals

69. Annotation of FLORA spp.:

This proposes an amendment to the current annotation, to include references to the recent developments in propagation techniques under sterile conditions and materials used.

Secretariat's Recommendation: Accept, but the Secretariat suggest to amend the proposed text to read as follows:

> "seedling or tissue cultures in solid or liquid culture media, transported in sterile, glass or synthetic containers".

70. *Pachypodium ambongense*, transfer from Appendix II to Appendix I:

This proposal is based on the findings of field surveys undertaken in Madagascar in 1992 and 1993 (CITES Project S–52).

Secretariat's Recommendation: Accept.

71. *Pachypodium brevicaule*, transfer from Appendix I to Appendix II:

This proposal is based on the findings of field surveys undertaken in Madagascar in 1992 and 1993 (CITES Project S–52).

Secretariat's Recommendation: Accept, but Madagascar should establish annual export quotas for wild-collected specimens.

72. *Dactylanthus taylorii*, inclusion in Appendix II:

This parasite induces tuberous shaped outgrowths of the roots of the host, that are composed of a mixture of parasite and host tissue. By boiling these tubers, the parasite tissue is removed and only the host plant tissue remains. This has the form of a fluted disk, commonly known as the "wood–rose". Consequently, the specimen in trade is NOT *Dactylanthus taylorii*, but a part of the host (species of *Nothofagus, Pittosporum* or *Schefflera*). CITES would provide no legal basis for the Parties to control the trade in "wood-roses" when these are not even a part or derivative of the species proposed.

Secretariat's Recommendation: Reject.

75. *Euphorbia cremersii*, transfer from Appendix II to Appendix I:

This species has only recently been described and belongs to the same taxonomic group as the other species of *Euphorbia* currently listed in Appendix I. The findings of field surveys undertaken in Madagascar in 1992 and 1993 (CITES Project S–52) justify its inclusion in Appendix I.

Secretariat's Recommendation: Accept.

76. *Euphorbia primulifolia*, transfer from Appendix I to Appendix II:

The findings of field surveys undertaken in Madagascar in 1992 and 1993 (CITES Project S-52) indicate that the species is not as rare as was believed when the Parties agreed to its inclusion in Appendix I. The Secretariat concurs with the observation that this species can relatively easily be distinguished from the others currently in Appendix I.

Secretariat's Recommendation: Accept, but Madagascar should establish annual export quotas for wild-collected specimens.

79. *Pterocarpus santalinus*, inclusion in Appendix II:

Although the supporting statement mentions the species as being threatened in India, no specific information is provided on the current population status. The major problem with implementation will be the fact that most of the exported wood is in the form of chips or powder, to be used for the extraction of the dye, for medicine and for cosmetics. Once the wood is powdered, identification is no longer possible. It will also be difficult to differentiate between the timber of *P. santalinus* and *P. dalbergioides*, also prohibited for export.

Secretariat's recommendation: Reject.

80–96. 15 dwarf species of *Aloe*, and *Aloe helenae* and *Aloe suzannae*, transfer from Appendix II to Appendix I:

These proposals are all based on the findings of field surveys undertaken in Madagascar in 1992 and 1993 (CITES Project S–52).

Secretariat's Recommendation: Accept.

101–104. *Cypripedium cordigerum, C. elegans, C. himalaicum* and *C. tibeticum*, transfer from Appendix II to Appendix I:

Information on the current population status of the species concerned is insufficient, although they could be threatened by habitat destruction. They are not threatened by international trade. The information provided in the supporting statement indicates that they have not been traded in large numbers since 1987, and that the trade before that year was recorded as artificially propagated. Under its current legislation, India strictly forbids the export of any wild–collected specimens of Orchidaceae. Specimens of *Cypripedium* are normally traded in their dormant phase, as rhizomes without leaves or flowers. Differentiation between these four and the other thirty species in this genus is not possible in this phase. These proposals were withdrawn by India from the discussion by the Plants Committee because the Chairman explained the inadequacies of the proposals. The status of the species and the absence of any international trade does not justify the transfer to Appendix I.

Secretariat's Recommendation: Reject.

105. *Dendrobium cruentum*, transfer from Appendix II to Appendix I:

This species is one of about 30 species belonging to the section *Formasae* of the genus *Dendrobium*. As illustrated in the proposal, there is a rather great diversity in morphology within this section, although several species are very similar to *D. cruentum*. In addition, there are many more species of *Dendrobium* that are very similar in vegetative morphology to *D. cruentum* and that can not be differentiated from it when not in flower. Effective implementation is therefore not possible.

Information on the current status of the wild populations is not provided, although the species is believed to be seriously threatened. The supporting statement also refers to a considerable national demand. Apparently the number of plants annually available on the national market has been constant for the past years and is certainly much higher than the number of plants exported. National trade, being higher than the international trade, needs to be adequately controlled before an Appendix–I listing could be effective.

Secretariat's Recommendation: Reject.

111. *Prunus africana*, inclusion in Appendix II:

Although the species has a wide distribution, the proposal indicates clear concern about over-collection in some parts of its range, resulting in increasing genetic erosion. The species is heavily traded and if the demand remains (because the chemical derivatives can not be synthesized), the trade might move to as yet unexploited regions. The synonym *Pygmeum africanum* should be included in the synonym references in the Interpretation to Appendices I and II, because the species is frequently traded under this name.

Secretariat's Recommendation: Accept, on the condition that the parts traded (bark) can be identified.

114. *Aquilaria malaccensis*, inclusion in Appendix II:

It seems clear that this species is seriously over–exploited throughout its range, in particular since many healthy trees are felled in search of the very valuable infected wood. It is also clear that a considerable quantity is traded internationally. There is a difference between sections 33 and 34 in the quantities reported as exported in 1991. Export data for Malaysia and Indonesia should not have been recorded under illegal trade. Unfortunately the proposal does not provide any information regarding the amounts of agarwood–oil exported. Several states have a rather large number of distilleries, all apparently working for the export market. The Secretariat also has some concern about the current export controls. The species certainly warrants inclusion in Appendix II, since it meets the Berne criteria. However, there is an enforcement problem, because much of the international trade may either be as chips or as oil, which are difficult to identify.

Secretariat's Recommendation: Reject, unless adequate means for identification of the specimens in trade are available.

115. *Nardostachys grandiflora*, inclusion in Appendix II:

See comments under proposal 77.

Secretariat's Recommendation: Reject.

Consideration of Proposals for Amendment of Appendices I and II

Other Proposals

COMMENTS FROM THE PARTIES

I Comments from the Congo

BELGIUM, BENIN AND FRANCE

Hippopotamus amphibius

Hippopotamus amphibius is fully protected in our country and has been for almost twenty years. The number of specimens of this species has grown steadily to a significant level at which an annual harvest quota could be determined.

GERMANY

Entandrophragma spp. and *Khaya* spp.

Introduction

The German Government thought it necessary to propose the inclusion in Appendix II of CITES of Meliaceae of the genera *Entandrophragma* and *Khaya*, which among so many other timber species, are a priori threatened with extinction.

Under Article II of the Convention, Appendix II includes:

a) all species which although not necessarily now threatened with extinction may become so unless trade in specimens of such species is subject to strict regulation in order to avoid utilization incompatible with their survival; and

b) other species which must be subject to regulation in order that trade in specimens of certain species referred to in sub–paragraph (a) of this paragraph may be brought under effective control.

In the opinion of the above–mentioned government, the populations of *Entandrophragma* and *Khaya*, the range of which is the trans–equatorial region from Guinea to Angola and Uganda, through the big reserve of the Congo Basin, are currently subject to a level of exploitation incompatible with their survival!

To support this, proponent mentions reports that have been issued from time to time by FAO, ITTO or the World Bank which, although expressing some concerns about the control and monitoring of the developments promoted by the legislation and regulation currently in force in our country, do not provide practical results of any technical surveys to evaluate the resources concerned. The proposal to include such species in Appendix II of the Convention calls for too important a decision to be only the expression of a theoretical and speculative intellectual exercise.

Without prejudging the real importance of the technical and trade data, which support this concern, probably legitimate from the country concerned, it seems necessary that we explore together the status of the species using parameters more or less understandable by all.

Current Status of the Congolese Meliaceae Forests

1. Covering slightly more than 60% of the national territory, the Congolese forests cover more than 20 million ha, of which more than 30% are considered as productive against 20% of forested savannahs, marshes and broken relief.

2. Three main areas share these ecosystems with a biodiversity typically Equato–Guinean, with almost 300 timber species, of which only about 30 are currently subject to exploitation and trade:

   – the Massif of Kouilou Mayombe with 1.4 million ha
   – the Massif of Chaillu–Niari with 3.5 million ha
   – the Massif of Nord with 15 million ha.

3. The poorly significant inventories and surveys in each of these areas has been made on a scale that is hardly significant but confirms the occurrence and the relative abundance of Meliaceae, which reach a rather significant proportion in the northern sector where most of the tradable timber is composed of species of that family, with 3 to 5 harvestable plants per hectare.

   If, after 50 years of continued exploitation, the forest of the southern sector still provides a sustained production of more than 400,000 m^3 of timber each year, of which 18 to 20% is Meliaceae timber, the northern sector, which is the main reserve of these species, is just in its first years of exploitation with an annual production of not more than 300,000 m^3 out of a potential estimated at 1,200,000 m^3 a year.

4. The genera *Entandrophragma* and *Khaya* constitute the main current production of the northern sector, these species being the only ones which cover the exploitation costs in a particularly selective market. The species are notably:

   – *Entandrophragma congoense* (Tiama)
   – *Entandrophragma utile* (Sipo)
   – *Entandrophragma cylindricum* (Sapelli)
   – *Entandrophragma candolci* (Kossipo)
   – *Khaya anthoteca* (Acajou)
   – *Khaya grandifolia* (Acajou).

   The evolution level of the oldest layers (upper layers) is so advanced at the climax stage that the regeneration and development (and therefore sustainability) process will from now on depend on the management and forestry practices that are applied to them.

5. In the primary forests of the Sangha, as well as in those of the Likouala, which extend into the large reserve of south–central Africa and north Zaire, the development of the regeneration depends in fact on the silviculture operations of which methodic exploitation is surely a form because of the effect of the sun on the lower layers and the expansion of the microbial flora, which stimulate the soils and natural regeneration itself.

   This phenomenon is so evident that a comparative study of the undergrowth in pristine primary forest and in primary forest undergoing exploitation by rotation for the first time prompts urgent extraction of the harvestable trees.

6. Exploitation in the reserves of the north has started again recently and concerns close to 15% of the area. None of the companies working there has completed its first rotation yet. The development of these forests is carried out in accordance with the development plan and the regulations in force.

As an indication, here are some basic data about the scheme for exploitation of these forests:

- forests are subdivided into development forestry units (DFU);
- an annual maximum volume (AMV) for the main species is determined, estimated at 100,000 m^3 for each DFU;
- rotation cuts vary between 20 and 40 years depending on the DFU;
- minimum diameter cut (MDC) is over or equal to 80 cm;
- exploitation is strictly limited to the terms of an annual cutting plan duly controlled and granted by the *Administration des Eaux et Forêts* (systematic inventory, main and secondary roads, various buildings); and
- it is prohibited in forestry to cut, mutilate, burn or damage trees and young plants of various species, including in particular the Meliaceae, etc.

7. For more than 50% of the productive forests of the Congo no authorization is currently granted to allow forestry exploitation, without taking into account 7 million ha of so called unproductive forests, which include significant potential for these species and many others that can not be considered as threatened with extinction without exaggeration. The results of the inventories undertaken to date indicate clearly, in spite of their relatively marginal character, the extent of the richness of these forests in these species, compared with the annual harvests largely below their potential.

   At the same time, the Congo, within its policy of conservation of the forest ecosystems, has classified as integral reserves areas which will soon exceed 10% of the whole forested area of the country, i.e. more than 1.7 million ha (reserves and national parks).

8. The main current area of exploitation of these species is essentially the less–inhabited part of the country, with a population density of about 0.3 inhabitants/km^2, mainly occupied by nomadic populations of pygmies linked with the forest and, therefore, not willing to destroy their own habitat. The establishment of forestry companies is obviously accompanied by some impact on the immediate environment, in particular the effects of collecting (firewood and hunting) and shifting agriculture (forest fires), but the current regulatory framework limits perfectly all these actions, which, incidentally, are not at all neglected. In any case, such anthropic actions can not be presented as causes for the possible extinction of the species in question or of a management incompatible with their survival.

Views of the Congo

The current circumstances show that the Congo has significant potential in forest resources and especially in Meliaceae species that constitute the main reserve of the northern sector of the country.

The primary forests in these areas, currently at the climax stage, present the double risk of a decline of the timber resources (rotting) and of poor regeneration.

The national legislation and regulation regarding conservation and sustainable management of the forests constitute a real guarantee of perpetuation of these resources. Naturally, the strict implementation of this policy will raise some problems of various types that the country is trying to grasp and progressively overcome.

The current production of the country is in practice marginal compared to the real potential of our forests, even if a possible danger might come from the environmental effects and not from the quantitative production. But, here too, the low population density of people in these areas and the way of life of the inhabitants mean that we should not exaggerate their effect.

It is likely that the status of these species is fundamentally precarious in the countries of South Sahel in the Sudanese or Sudano–Guinean ecological areas. On the other hand, most of them have deliberately implemented, since long ago, development policies that provoke intensive deforestation due to both the timber trade and industrial agriculture.

However, except in rare cases, the areas subject to such activities have never constituted, in the recent past of their biological evolution, significant reserves for these species, the potential of which would have been depleted by an unwise exploitation and trade. On the other hand, what does represent the actual portion of the export volume of these countries for these species within the structure of the timber trade in the producer countries of the region? The countries concerned are free to propose the inclusion of their populations in Appendix III in order not to confuse the forest and the savannah (Article III, paragraph 3).

Finally, it is worthwhile to note that, in its decision 3 (XVI) of 23 May 1994 in Cartagena de Indias (Colombia), the sixteenth meeting of the International Council of Tropical Timber, of which Germany is a member, strongly condemned the discriminatory steps and conflicting approaches between ITTO and CITES. All proposals for the inclusion of any timber species in the CITES appendices should have been previously considered within the ICTT on the basis of an appropriate scientific analysis.

It would have been more objective and convincing if such a step had been preceded by a detailed survey (inventory) with reliable statistic data, an action possible and in conformity with the objectives of CITES.

As we can see, the present proposals are not based on any scientific data and are very close to a deliberate sabotage of the trade in these species.

Regarding the other species proposed for inclusion in the appendices, the Congo might decide in one direction or the other depending on the technical data provided, as those submitted in the document of the proponent are insufficient and fragmentary. In the Congo, they are not subject to significant exploitation, most of them being used for handicrafts.

Conclusion and Announcement of Reservation

Accordingly and in accordance with the provisions of Article XV, paragraph 2(d), Article XVI, paragraph 4, and Article XXIII, paragraph 3, of CITES, and considering that the Meliaceae of the Congo, in particular the four *Entandrophragma* (*congoense, cylindricum, utile* and *candollei*) and the three *Khaya* (*ivoriensis, anthoteca* and *grandifolia*) have never been subject to domestic regulation through inclusion in Appendix III to prevent or limit their exploitation and to benefit from the co-operation of the other Parties to control the trade (Article II, paragraph 3) because they are falsely considered as threatened.

The Congo rejects any proposal to include its Meliaceae in CITES Appendix II and, therefore, enters its reservation with regard to such listing.

LIECHTENSTEIN AND SWITZERLAND

Manis spp.

The species occurring in our country is obviously looked after, while the populations are becoming scare in the main habitats of the country.

II Comments from Japan

AUSTRALIA

Charonia tritonis

In discussing the possibility of listing a species in the CITES appendices, it is essential to base the decision on scientific evidence that it may become threatened with extinction unless the trade in the species is subject to strict regulation (in the case of Appendix–II species) and trade control is necessary for the protection of the species (with respect to both appendices). No proposal for listing should be made for species for which there is not sufficient information to justify inclusion in the appendices, because this will merely increase the number of listed species and thus impose an additional administrative burden on the Management Authorities of the nations concerned. This will have an adverse impact on management and trade control for the species that truly require protection.

On the basis of the above position, the Government of Japan believes that the proposal does not contain sufficient reasonable evidence to justify the amendment to the appendices for this species; therefore, without further information, the proposed amendment is not appropriate.

GERMANY

Diospyros mun

This proposal needs to be considered carefully on the basis of comments from countries of origin. Submission to the Secretariat of comments from countries of origin that have not made any so far (except Kenya) may be necessary.

Entandrophragma spp.

This proposal needs to be considered carefully on the basis of comments from countries of origin. Submission to the Secretariat of comments from countries of origin that have not made any so far (except Botswana, Burundi, Liberia, Malawi and the Congo) may be necessary.

Khaya spp.

This proposal needs to be considered carefully on the basis of comments from countries of origin. Submission to the Secretariat of comments from countries of origin that have not made any so far (except Gambia, Liberia, Malawi and Senegal) may be necessary.

GERMANY AND KENYA

Dalbergia melanoxylon

This proposal needs to be considered carefully on the basis of comments from countries of origin. Submission to the Secretariat of comments from countries of origin that have not made any so far (except Malawi, South Africa, Uganda and Zimbabwe) may be necessary.

INDIA

Gentiana kurroo, *Colchicum luteum*, *Rheum australe*, *Aconitum deinorrhizum*, *Aconitum ferox*, *Aconitum heterophyllum*, *Coptis teeta*, *Picrorhiza kurrooa* and *Nardostachys grandiflora*

These proposals need to be considered carefully on the basis of comments from countries of origin. Submission to the Secretariat of comments from countries of origin that have not made any so far (except India) may be necessary.

Even when these species are listed in Appendix II, it is indispensable to make footnotes specifying that their parts and derivatives (e.g. seeds, pollen, artificially propagated plants, etc.) are excluded as is done for some other plants in Appendix II.

Berberis aristata, *Taxus wallichiana* and *Aquilaria malaccensis*

These proposals need to be considered carefully on the basis of comments from countries of origin. Submission to the Secretariat of comments from countries of origin that have not made any so far (except India) may be necessary.

KENYA

Prunus africana

This proposal needs to be considered carefully on the basis of comments from countries of origin. Submission to the Secretariat of comments from countries of origin that have not made any so far (except Kenya) may be necessary.

NETHERLANDS

Swietenia spp.

This proposal needs to be considered carefully on the basis of comments from countries of origin. Submission to the Secretariat of comments from countries of origin may be necessary.

NORWAY

Balaenoptera acutorostrata

The Basic View

Scientific evidence is essential for the management of whale stocks to achieve the principle of sustainable utilization of marine living resources including whales. The International Whaling Commission (IWC) is recognized as an international body responsible for conservation and management of large whale stocks and has scientific data on world whale populations. Japan, as one of the member nations of the IWC, believes that the scientific evaluation of the IWC Scientific Committee should be fully taken account of.

Recent Discussions at the IWC

The Scientific Committee of the IWC has provided evidence that the Northeastern and the Central stocks of minke whales are abundant enough to support the Norwegian proposal. Recently the Committee has intensively reviewed the population status of the minke whales based on the newest available survey data. For the Northeastern stock of the North Atlantic minke whale, it concluded that "the estimates of abundance given in SC/44/NAB12 (86,736 animals: 95% confidence interval 60,736–117,449) represented the best currently available estimates of abundance for minke whales in the Northeastern North Atlantic" (Rep. Int. Whal. Commn 43:118, also 43:65) and, for the

Central stock of the North Atlantic minke whales, it reported that "the Committee accepted as the best estimate of the number of minke whales in the Central stock area the estimate of 28,000 with approximate 95% confidence interval of 21,600–31,400" (Rep. Int. Whal. Commn 41:66).

As part of its vigorous testing process in the development of the Revised Management Scheme for commercial whaling, the IWC has also assessed the current status of these populations. Various ranges of possible scenarios were examined (Rep. Int. Whal. Commn 43:166–185). Most scientists supported the scenario that Northeastern and Central stocks were at respectively 63.2% and 87.0% of their initial levels.

Further, the IWC has developed a management procedure to ensure the conservative and sustainable use of baleen whale stocks such as minke whales (Rep. Int. Whal. Commn 44:145–152), i.e. "the risk of extinction of a stock is not seriously increased by exploitation" (Rep. Int. Whal. Commn 42:237). The IWC unanimously endorsed this as the scientific component of its Revised Management Scheme at its annual meeting in Puerto Vallarta, Mexico, in May this year.

Judging from the above, it can be reasonably concluded that the two stocks are not anywhere near being "threatened with extinction" at present, nor could they become so under future catch levels set in accordance with the IWC Revised Management Scheme.

Past Discussions of the CITES Conference

Aside from the current discussions at the IWC, the listing of minke whales in Appendix I was not scientifically justified from the beginning. At the fourth meeting of the Conference of the Parties, held in Botswana from 19 to 30 April 1983, Seychelles proposed that the entire population of minke whales all over the world be transferred from Appendix II to Appendix I. Responding to the proposal, the CITES Secretariat provided a recommendation which read: "None of the proposals (concerning the large cetacean species) for transfer to Appendix I appears to meet either the Berne criteria or the provisions of the Convention. The Secretariat Committee for the Ten–year Review of Appendices proposed no changes for cetaceans, and this was approved by the Central Committee. The IUCN/SSC is of this opinion. The Secretariat recommends, therefore, that these proposals be rejected." (Doc. 4.40 Annex 3).

Although the minke whale was eventually listed in Appendix I at that meeting, it can be argued that the current position (Appendix I) of this species itself contradicts both the Berne criteria and the provisions of the Convention and, therefore, this listing needs to be revised.

SWITZERLAND

Lissemys punctata

This proposal is an attempt to rectify the taxonomic confusion that allows trade in *Lissemys punctata andersoni*, the really endangered subspecies, without CITES controls. Therefore, Japan, as a country that can not control the trade in *L. p. andersoni*, fully supports this proposal.

III Comments from Liechtenstein and Switzerland

BANGLADESH

Varanus bengalensis and *Varanus flavescens*

The Swiss Management Authority has found that it is impossible to market even pre–Convention *Varanus* skins stockpiled in Switzerland since 1975 or earlier, as long as the species are listed in Appendix I. A temporary down–listing would, therefore, probably not solve the problem of Bangladesh, as it may be difficult to find a buyer for the skins.

Switzerland suggested, already on earlier occasions, a review of the biological status of the three Asian monitor species listed in Appendix I, as it is unlikely that species of which periodically hundreds of thousands of skins are either confiscated or taken from animals that, allegedly, have died in floods would qualify for Appendix–I listing.

We would appreciate some information on the period of time during which the 101,954 lizard skins have been collected or confiscated.

BELGIUM, BENIN AND FRANCE

Hippopotamus amphibius

Only 11 of the 39 range countries have commented on the proposal. We would appreciate having some more input from the countries of origin. It would be of interest to have the study referred to under heading 71. available when discussing the proposal. The argument that hippo ivory is similar in appearance to elephant ivory is not pertinent, the structure of elephant ivory being completely different. If there is a look–alike problem, it is rather between hippo ivory and cattle bones!

CHILE

Chaetophractus nationi, C. vellerosus, C. villosus and *Zaedyus pichiy (Euphractus* spp.)

The taxonomy used in this proposal is not consistent with the standard reference book of CITES, Honacki's Mammal Species of the World, which recognizes only one *Euphractus* species, namely *Euphractus sexcinctus*. The proposal is not adequately documented, providing neither population nor trade data, and containing no comments from the other range States. It fails to demonstrate that the species concerned are threatened by international trade or may become so unless trade is regulated under CITES. The local consumption of meat from the four taxa is a domestic problem (if any) that is not addressed by the legal framework of CITES. It might be worthwhile to withdraw the proposal and to ask the Animals Committee to look into the issue. Such a review could eventually result in a better documented proposal to be submitted at COP10.

Conepatus spp.

Comments from the other range States would be appreciated. It would also be of interest to have at hand some information on trends of international trade in *Conepatus* furs over a series of years. If one or several *Conepatus* species were to meet the biological criteria for CITES listing (which is not evident from the proposal) the listing of the entire genus certainly would be preferable to the listing of only one species, as the identification of the furs poses certain look–alike problems.

Phymaturus flagellifer, *Pristidactylus* (4 species) and *Callopistes palluma*

The lizards proposed for inclusion in Appendix II will pose a look–alike problem, as there are dozens of other species that resemble them very closely. None of the proposals contains population data. The trade data provided do not refer to the species covered by the proposals, but to any species of "lagartijas" or "lagartos". In the case of *Pristidactylus* and *Phymaturus*, the proposals state that there is no international trade at all. Illegal trade is obviously limited to the placing of *Callopistes palluma* on the national Chilean market, something which will not be addressed by a CITES listing. The taxonomic status of *Callopistes palluma* is not very clear to us [identity same as *Phymatura palluma* (Molina, 1782) ?] and would require some discussion by the Conference. In summary we conclude that it does not appear from the supporting statements that the proposals meet the Berne criteria.

DENMARK

Pseudoryx nghetinhensis

The proposal is rather poorly documented as far as trade data are concerned (it should be known how many specimens of a large mammal species that was first described in 1993 have been exported to museums!), and it does not include any comments from the country of origin. It is rather unlikely that importations by zoos will pose a major threat to the species, as the import into Europe or North America of cloven–hoofed animals from Viet Nam is subject to severe veterinary restrictions. We agree, however, that there could be a demand from natural history museums.

Xenoperdix udzungwensis

We would like to recall that, already in 1975, two rare African francolin species were listed in the CITES appendices, that these listings proved to have no positive effect whatsoever for the species concerned and that they finally were removed from the appendices in the context of the Ten–year Review. We guess that this will also be the final fate of this proposal if it were adopted by the Parties.

EGYPT

Testudo kleinmanni

Comments from the other range State (Israel) would be appreciated.

GERMANY AND THE NETHERLANDS

Mantella aurantiaca

Comments from the range State (Madagascar) would be appreciated.

GHANA

Pandinus (3 species)

There are no population data and it is difficult to assess whether the export of a few thousand animals per range State really can have a negative impact on the populations. The proposal does not contain any comments from the other range States.

INDIA

Various plant proposals

All the proposals are inadequately documented. Population data are missing, as are, in most cases, trade data. The proposals relating to *Cypripedium* species provide trade data, but fail to indicate whether the plants traded have been taken from the wild or whether they have been artificially propagated. Species rated as "rare" or "vulnerable" are proposed for inclusion in Appendix I, although Article II of the Convention reserves Appendix I for species that are "threatened with extinction". Many species are traded as roots, bulbs, sawdust, or other parts or derivatives that are impossible to identify at border controls. In one species (*Taxus wallichiana*) the situation is further complicated by a taxonomic problem (may be traded as *Taxus baccata*, a common tree of the palearctic region). The distribution of most species includes countries other than India. None of the proposals contains, however, comments from these other range States. It is indicated, for several species, that population monitoring will be undertaken. We suggest therefore that all the proposals should be withdrawn for the time being and that they eventually could be resubmitted if the results of the population surveys suggests that CITES listing is essential for the species.

ITALY

Collocalia spp.

Are bird nests covered by the definition of "specimen" provided in Article I of CITES?

NETHERLANDS

Ailurus fulgens

It is not obvious that the species meets the criteria for Appendix–I listing, and it is not evident that the volume of international trade is negatively affecting the species. The data on captive populations are somewhat misleading, as it is not specified how many of the animals are captive bred (although the Red Panda Studbook is kept by a Dutch zoo !), and as the 111 pandas kept by Chinese zoos would not be affected by a change of CITES listing. The following information is taken from the studbook section of the International Zoo Yearbook, Vol. 29 to 32:

A. f. fulgens

Year	Born in Captivity	Died in Captivity	Imported From the Wild	Reported Captive Population
1991	50	33	0	212
1990	58	33	0	192
1989	39	29	1	183
1988	28	19	0	167
1987	33	32	0	157 *
Total	208	146	1	

A. f. styani

Year	Born in Captivity	Died in Captivity	Imported From the Wild	Reported Captive Population
1991	46	23	6	266
1990	16	13	13	146 *
1989	17	9	11	127 *
1988	17	15	17	107 *
1987	9	2	6	52 *
Total	105	62	53	

* excluding some in Chinese and other Asian zoos

According to the proposal, an annual average of less than 18 specimens has been internationally traded from 1985 to 1992. The proposal, however, fails to demonstrate that these exports were unsustainable or that they negatively affected the species. It also does not demonstrate that the species "is threatened with extinction" which is the prerequisite for including a species in Appendix I (Article II of the Convention).

Musophagidae spp.

The supporting statement does not cover the entire family but only the species of three genera, the genus *Crinifer* with four species has been omitted. The proposal has to be changed accordingly.

Bufo periglenes

The proposal does not contain any comments from the country of origin. If our interpretation of the supporting statement is correct, there has never been commercial international trade, and the current risk of illegal trade is very low.

NEW ZEALAND

Apteryx spp.

The total zoo population outside of New Zealand, according to the International Zoo Yearbook Vol. 32, is 31 *Apteryx australis mantelli*. Twenty of these are captive bred. No other kiwi species were reported from zoos outside New Zealand. The proposal states that there is no documented illegal trade. Obviously, no kiwi species is currently affected by trade.

Dactylanthus taylorii

If we understand this proposal correctly, trade is not in the species that is proposed for inclusion in Appendix I, but in its host species. We do not believe that this situation is covered by the definition of "specimen" given in Article I of the Convention.

PHILIPPINES

Acerodon jubatus and *Acerodon lucifer*

Although we sympathize with these proposals, we doubt whether their adoption will contribute to the survival of the species, as the Parties having proposed the listing of fruit bats at previous meetings of the Conference have failed to submit data sheets for the Identification Manual.

UNITED STATES OF AMERICA

Brachypelma spp.

Information on the distribution of the individual species is rather vague. The proposal does not contain any relevant population data. We agree that Theraphosidae regularly show up in the pet trade, but the proposal fails to demonstrate that the nine species concerned are affected by trade.

VIET NAM

Megamuntiacus vuquangensis

It is not clear to us whether the antlers of this species are used in oriental medicine and, if this is the case, whether CITES listing can be enforced. Obviously the proposal is no remedy against deliberate or incidental killing by local people using snares. An eventual CITES listing should, therefore, not prevent Viet Nam from taking all appropriate steps to ensure the *in situ* protection of the species.

IV Comments from Namibia

SWITZERLAND

Hyaena brunnea

Namibia, in a letter to the Management Authority of Switzerland agreed to co–sponsor the proposal, but it never informed the Secretariat and, therefore, it was not possible to recognize it as a co–sponsor. Namibia is however supporting the proposal as the species does not appear in international trade and should not be in CITES Appendix I.

V Comments from Peru

NETHERLANDS

Swietenia spp.

The Management Authority of Peru considers that *Swietenia macrophylla* should not be listed in CITES Appendix II for the following reasons:

1. This species in Peru is not threatened with extinction since, if it is exploited in various places of its natural range, there are also other areas where the species is naturally protected due to inaccessibility or distance from processing centres.

   In addition, the species is protected within the *Sistema Nacional de Areas Naturales Protegidas por el Estado* (SINANPE), mainly in Manu National Park the area of which is 1,532,806 ha. SINANPE was finally strengthened by the establishment of the *Fondo Nacional para las Areas Naturales Protegidas* (FONANPE).

2. This species has a good natural regeneration and its propagation is possible if adequate sylvicultural technics are implemented.

3. Through the joint efforts of the public and private sectors, with the support of international technical co–operation, the implementation of management plans has been promoted to ensure the sustainability of exploitation of the forestry resources, including of this species amongst those that are managed. The project "*Manejo Forestal del Bosque Nacional Alexander Von Humboldt*, executed by INRENA on an area of 105,000 ha of natural forest, with the technical and financial co–operation of the International Tropical Timber Organization (ITTO) is of particular importance.

   Within this context, we consider that for the achievement of the conservation of this species, better results will be gained from the management of the forest than merely from restrictive and control measures.

4. The current national legislation is adequate to progressively impose the obligation to include practical management in all contracts of forest exploitation, whatever the importance of them may be. This is fully recognized in the new draft of the forestry law under preparation.

5. In addition, the diversification of the exploitation of the timber species is promoted in the country, as well as the distribution of these species in the national and international markets. At the present time, the volume of *S. macrophylla* exported is not significant.

VI Comments from the Russian Federation

NORWAY

Balaenoptera acutorostrata

The Russian Federation supports the proposal to transfer the species to Appendix II.

UNITED STATES OF AMERICA

Saiga tatarica

The Russian Management Authority considers the proposals to include the saiga in the CITES appendices reasonable, taking into account the status of the population of this endangered species in the Russian territory.

VII Comments from the United Republic of Tanzania

DENMARK

Xenoperdix udzungwensis

The Management Authority of the United Republic of Tanzania supports the proposal.

VIII Comments from the United Kingdom of Great Britain and Northern Ireland

The following comments are offered for information purposes only. They should not be taken as an indication of likely support, or otherwise, of any of the proposals concerned at the ninth meeting of the Conference of the Parties.

CHILE

Chaetophractus nationi, C. vellerosus, C. villosus and *Zaedyus pichiy (Euphractus* spp.)

Importation of these species into the United Kingdom has been regulated under licence for some years in the recent past. There have been no recorded imports of any of them during the period 1980–1991.

Callopistes palluma

Importation of this species into the United Kingdom has been regulated under licence for some years in the recent past. Applications have been refused because of some concern about the status of the species in Chile.

Phymaturus flagellifer

Importation of this species into the United Kingdom has been regulated under licence for some years in the recent past. Applications have been refused because of some concern about the status of the species in Chile.

Pristidactylus spp.

Importation of these species into the United Kingdom has been regulated under licence for some years in the recent past. The number of specimens recorded as imported in the United Kingdom is as follows:

	1980–1987	**1988**	**1989**	**1990**	**1991**
Pristidactylus alvarol	0	0	0	0	0
Pristidactylus torquatus	0	19	525	219	331
Pristidactylus valeriae	0	20	50	0	0
Pristidactylus volcanensis	0	0	0	0	0

NEW ZEALAND

Anas aucklandica

In 1993, there were a minimum of 31 specimens (including 10 fertile females) of this species held by 9 keepers in the United Kingdom.

Cyanoramphus novaezelandiae

Minimum numbers bred in captivity in the United Kingdom:

	1987	1988–1989	1990	1991	1992
'Natural' specimens	613	Not recorded	595	592	560
Mutations and colour varieties	0	Not recorded	80	129	243

There is not believed to be any demand for wild–taken specimens in the United Kingdom.

Consideration of Proposals for Amendment of Appendices I and II

Other Proposals

COMMENTS FROM INTERGOVERNMENTAL ORGANIZATIONS

Comments from the International Whaling Commission

NORWAY

Balaenoptera acutorostrata

Our major method of estimating whale population abundance is through sighting surveys. There is now a well developed and agreed methodology for carrying out such surveys and analysing the results (e.g. Hiby, A.R. and Hammond, P.S. *Survey techniques for estimating abundance of cetaceans. Rep. Int. Whal. Commn* Special Issue 11:47–80, 1989).

Sighting surveys to estimate abundance of minke whales and other species have been conducted extensively in the North Atlantic in recent years. In particular, major international surveys were undertaken in 1987 (NASS–87, 8 survey vessels and 2 aircraft) and 1989 (NASS–85, 15 survey vessels and 2 aircraft) (*Rep. Int. Whal. Commn* 41:64).

A critical factor to consider when applying line transect methodology to whale populations is the estimation of the proportion of whales that are detected on the transect line, g(0). During the last 10 years or more the Scientific Committee of the IWC has discussed this problem at length and proposed several analytical and experimental ways of approaching it. In the context of the North Atlantic minke whales, the Scientific Committee has agreed that g(0) is substantially less than one (*Rep. Int. Whal. Commn* 41:64–5).

At its 1990 meeting, the Scientific Committee accepted as the best estimate of the number of minke whales in the Central stock area the estimate of 28,000 with approximate 95% confidence interval 21,600–31,400 (as calculated in *Rep. Int. Whal. Commn* 41:132–171).

At its 1991 meeting, the Scientific Committee agreed that the best available estimate for the Northeastern Atlantic minke whales on the basis of current information was 68,447. This was derived from a g(0) value of 0.51. However, the Scientific Committee was unable to calculate appropriate confidence intervals for this estimate (*Rep. Int. Whal. Commn* 42:58–9).

The following year (1992), a new estimate of abundance for minke whales in the Northeastern North Atlantic was reported from results of sighting surveys and experiments conducted by Norway between 1988 and 1989 and a new g(0) estimate of 0.360. After extensive discussions, and considering previous discussions, the Scientific Committee agreed that the estimates of g(0) and the abundance estimate of 87,000 with 95% confidence interval of 61,000–117,000 were the best currently available from the 1988 and 1989 shipboard surveys of the Northeastern North Atlantic, and accepted them as such (*Rep. Int. Whal. Commn* 43:65).

However, at this year's (1994) meeting, the Scientific Committee received a paper containing a re–analysis of some of the data, which gave an estimate of g(0) of 0.587. The Scientific Committee reviewed in detail the source of the difference in the estimates of g(0) and identified five potential factors that might contribute to the differences in the estimates. A complete evaluation of how each of the differences contributed to the overall difference in g(0) was not possible at the meeting. The underlying causes of the differences raise a number of important issues and the Scientific Committee agreed that these matters should be fully addressed at next year's meeting (in May 1995). An intersessional Working Group was established with an extensive list of tasks to be undertaken (*Report of the Scientific Committee* 1994, IWC/46/4, item 9.3.1, pp. 26–7).

The implications of this new value for g(0) were raised in the 46th Annual Meeting of the Commission. During the course of the plenary discussion, the Commissioner for the Netherlands referred to the two different estimates for g(0) and concluded "that the most important issue was the consequential effect on the estimate of abundance for Northeastern Atlantic minke whales". The Irish Commissioner asked: "Just for clarification, can the Chairman of the Scientific Committee confirm that if the alternative value of g(0) is correct, the number of minke whales in the Northeast Atlantic, the estimate, would be reduced dramatically?" The Chairman of the Scientific Committee responded: "As I understand the question, it's: if the value presented this year was confirmed by intersessional work, would the resulting estimate of abundance be lower than 87,000? The answer is yes". At a later intervention he went on to explain: "I think that it's appropriate to say that we have one estimate of g(0) from two years ago. We have an analysis presented this year that arrived at a different estimate. At the meeting this year we weren't able to resolve the cause of that difference. We didn't take the next step and apply that to estimating abundance. That's clear from the record. It wasn't deemed appropriate in the Scientific Committee to proceed and make a new estimate of abundance when we're uncertain about which value of g(0) we should use, and that's what we're attempting to do now – to clarify which g(0) is most appropriate – and it's not that it's a choice of those two. It could be something entirely different from those two when this Working Group is finished".

The situation for the Northeast Atlantic minke whale estimate is therefore in some doubt at this time, but this is the current state of affairs.

Report of the CITES Panel of Experts on the African Elephant on the Proposal of South Africa to transfer the population of *Loxodonta africana* of South Africa from CITES Appendix I to Appendix II

1. Terms of reference of the Panel

   The task of the Panel of Experts, as laid out in Resolution Conf. 7.9, is to evaluate the proposal of South Africa to transfer the population of *Loxodonta africana* of that country from CITES Appendix I to II, taking into account the following:

11. with respect to the status and management of the elephant population concerned:

i) the viability and sustainability of the population and potential risks;

ii) South Africa's demonstrated ability to monitor the subject population; and

iii) the effectiveness of current anti–poaching measures; and

12. with respect to South Africa's ability to control trade in ivory from African elephants:

i) whether total levels of offtake from both legal and illegal killing are sustainable;

ii) whether control of ivory stocks is adequate to prevent the mixing of legal and illegal ivory;

iii) whether law enforcement is effective; and

iv) whether enforcement and controls are sufficient to ensure that no significant amounts of ivory taken or traded illegally from other countries are traded within or through the territory of South Africa.

Resolution Conf. 7.9 was clearly drafted for the purpose of reviewing proposals to reopen trade in ivory. Although the present proposal does not aim at resuming commercial trade in ivory, the Panel of Experts has followed the terms of reference contained in the Resolution. It felt, however, that its terms of reference were not entirely appropriate. If it is the wish of the Conference of the Parties to continue to use a Panel of Experts for reviewing all proposals to transfer populations of African elephants to Appendix II, the Conference should consider revising the terms of reference of the Panel.

2. Composition of the Panel

At its 31st meeting, held from 21 to 25 March 1994 in Geneva, the Standing Committee decided to appoint the following Panel members who had already reviewed the proposal South Africa had submitted for consideration at COP8:

- Jonathan Barzdo, CITES Secretariat, Geneva, Switzerland;
- Richard Bell, Department of Wildlife and National Parks, Maun, Botswana;
- Peter Dollinger, Swiss Federal Veterinary Office, Liebefeld–Berne, Switzerland;
- Richard Luxmoore, World Conservation Monitoring Centre, Cambridge, U.K.

The Government of South Africa appointed:

- Robbie Robinson, National Parks Board, Pretoria, South Africa.

The Panel was chaired by Richard Bell.

3. Summary report on the Panel's activities

Upon receipt, each Panel member reviewed the original supporting statement individually and sent preliminary comments to the Secretariat; these were circulated to the other members.

As the Panel, when reviewing South Africa's previous proposal, had carried out a fact–finding mission to Pretoria and Skukuza, during which it had been provided with opportunities to meet a broad range of officials and representatives of interested non–governmental organisations, and had received insight in the vegetation monitoring, elephant censusing, culling, slaughtering, processing and marking methods, and the storing of ivory and skins at Kruger National Park, it was not felt necessary to send the full Panel to South Africa.

Two members (Barzdo and Dollinger) met on 4 August at Liebefeld, Switzerland, and three members (Bell, Dollinger and Robinson) held meetings from 8 to 11 August 1994 in Pretoria, South Africa. A drafting meeting was held on 4 and 5 October 1994 at Liebefeld–Berne, Switzerland. The remaining work was done by correspondence.

Prior to and during the meetings in South Africa members were given the opportunity to visit Marakele National Park and Loskop Dam Nature Reserve where elephants may be introduced in the future. One Panel member (Dollinger) had visited, on private travels during 1993 and 1994, Addo Elephant National Park, Kruger National Park, Tembe Elephant Park (original populations), Pilanesberg National Park, Mabula Game Farm, Itala Game Reserve (reintroduced elephant populations), Mkuze Game Reserve, Ndumo Game Reserve and Loskop Dam Nature Reserve (identified for elephant introduction).

Following discussion with the Panel, South Africa revised its supporting statement, reformulating its commitment not to allow international commercial trade in ivory, including worked ivory, until a control system for such trade is approved by the Conference of the Parties.

The remainder of this report refers to the revised supporting statement dated September 1994.

The Panel is satisfied that no information was withheld from it.

4. Request for additional information

The Panel requested that the original supporting statement be updated to take into account 1993/94 data on elephant populations and trends, distribution, illegal killing, trade, ivory and skin stocks, and information on the impact on policy, administrative structures and legislation of the political changes following the general elections in April 1994.

5. Implications of the adoption of the proposal

If the proposal were adopted, all ivory of South African origin, wherever it is currently held, would be considered as from a species in Appendix II. The undertaking of South Africa referred to in paragraph 1 of Section 7 of the supporting statement would not be binding on Parties other than South Africa.

The Panel, therefore, recommends that, if the proposal is adopted, the new listing should be annotated "only for trade in commodities other than ivory", as suggested in paragraph 2 of the same Section.

Concerns have been raised with the Panel that the adoption of the present proposal might signal an early resumption of international trade in ivory and thereby stimulate poaching activities. The Panel noted that the retention of stockpiles of ivory by other Governments could have a similar effect. The relative impact of these factors is a matter of speculation and is outside the terms of reference of the Panel.

6. Status and management of South Africa's elephant population

61. Viability and sustainability of the population, and potential risks

611. Viability and sustainability

On the basis of the supporting statement and additional information received, the Panel found no reason to doubt, in broad terms, the estimates of elephant numbers (9,667 in 1993/94) and trends as presented.

Compared with 1990/91, the population had grown by 10 per cent, the number of localities where elephants are found had risen from 33 to 49 and the total elephant range had increased from 2,606,916 ha to 2,955,217 ha, i.e. by 13 per cent.

Both the removal of the fence between Kruger National Park and several adjoining private Nature Reserves to the west during 1993 and the enlargement of Addo Elephant National Park by 34 per cent in 1991 are expected to have a positive effect on the viability of the elephant populations concerned.

Using the criteria of Frankel and Soulé (1981) about 90 per cent of the elephants in South Africa occur in populations which are genetically viable. This percentage is likely to increase as the newly established populations increase and in some cases are linked by new acquisitions of land for conservation and by the removal of intervening fences.

612. Potential risks

In 1991, the Panel identified two areas of concern with respect to the possible future risks to South Africa's elephant populations:

- the internal conflicts in the country, which it was thought could lead to a breakdown of law and order; and
- the political changes that were taking place in South Africa were likely to lead to a change of government, raising questions about the possible wildlife conservation policies of any future regime.

When reviewing the present situation, the Panel noted:

- that the political transition had taken place more peacefully than many had expected in 1991;
- that the legal and administrative systems are currently subject to a major reorganisation (see Section 723), including the establishment of nine provincial administrations in place of the previous four Provinces, four Independent States and six National States (homelands); and
- that the policy statement, obtained from the African National Congress (ANC) in 1991, which contained the principle of sustainable use for the benefit of conservation and for economic development with emphasis on local communities, is now in the process of being refined and becoming Government policy. The same principle has been adopted by the National Parks Board and by the provincial governments.

The Panel is satisfied that, if South Africa permits the export of elephant leather, this will not stimulate additional illegal killing of elephants in South Africa or elsewhere, for the following reasons:

- There is no recorded instance of skins from illegally killed elephants entering the international trade. When CITES established the Ivory Control Unit in 1989, it was not felt necessary to establish special controls on skin trade.
- The Conference of the Parties agreed, in Resolution Conf. 7.9, that the Panel of Experts should evaluate the range State's ability to control trade in ivory. In the same Resolution it agreed that, for the purpose of deciding on the transfer of a population of the African elephant from Appendix I to Appendix II, the Parties should take into account the range State's ability to control trade in ivory. However, the Conference of the Parties said nothing about the need to consider trade in other elephant products, presumably because this was not considered a threat to elephants.
- Unlike ivory, elephant skin is not a durable commodity. In order to meet quality standards for international trade, it must be removed in large panels and immediately subjected to an elaborate, long lasting procedure (described under Section 8). This procedure with its associated logistics, would be very difficult to carry out undetected in the presence of even a minimal law enforcement capability.
- Unlike ivory, elephant skin is a relatively bulky and easily identifiable commodity; it can not be cut into small pieces and disguised while retaining its commercial value; illegal transport would be easier to detect.
- Elephant skin at its 1989 value (approximately USD 20 per kg), is a relatively low value commodity per unit weight or volume, and is unlikely to be attractive to the illegal trade in view of the logistical difficulties and risk of detection such an illegal trade would face.

Although the above points convey a positive picture with respect to potential risks, the Panel notes with concern reports of wide availability of firearms and ammunition largely originating in a neighbouring State. The presence of these firearms represents a significant risk to the conservation of elephant and rhino in the event of weakening of the conservation authorities' ability to take effective anti–poaching measures. The Panel was informed that the South African Government takes this problem seriously and has initiated diplomatic steps in the country concerned to alleviate the problem.

Effective enforcement efforts could be compromised if the budgets of the Nature Conservation Agencies continued to decline, especially in the light of the stated South African Government policy of phasing out State funding to the National Parks Board. It is likely that the revenue generated by the sale of elephant products would help to offset the shortfall.The Panel noted in this context that the sustainable revenue from the sale of elephant skins is expected to represent about 15 per cent of Kruger National Park's conservation budget, and would be the second largest component of revenue after tourism.

There is also a risk that public opinion might turn against elephant conservation. The stated policy of using revenues from the sale of elephant products to benefit the economies of rural communities adjacent to protected areas would help to alleviate this.

62. Sustainability of total levels of offtake

Since 1974, the boundary between the Kruger National Park and Mozambique has been elephant–proof and no immigration of elephants has been possible. Monitoring shows that the resident elephant population has remained stable throughout this period as a result of the legal offtake of culled and live animals inside the Park, shooting of elephants for crop protection outside the Park and limited safari hunting in adjoining areas. The known illegal offtake over the period 1974 to 1993 amounted to 268 elephants, most of which were taken during the period 1981–1983. All illegally killed animals were counted as part of the allocated culling quota. The stability of the population in response to the regulated offtake since 1974 is confirmed by monitoring data. If the total

offtake remains at present levels, therefore, it is sustainable in the long term.

The Panel is satisfied with the evidence that there has been no illegal offtake in any other South African elephant population for at least 20 years.

63. South Africa's ability to monitor its elephant population

Various methods of elephant censusing are used in different parts of South Africa, but the most significant population, and therefore the most important census technique used, is that in Kruger National Park. In 1991, the Panel was given a demonstration of this method and came to the conclusion that the method is likely to result in a slight underestimate of the population. The Panel agreed, however, that there can be little doubt that the method provides a reliable and repeatable index of relative numbers between years. Following the removal of part of the western boundary fence, the Kruger National Park counts have been extended to the neighbouring nature reserves.

It is important to note that aerial census of most of South Africa's elephant populations is relatively accurate because of the open nature of the vegetation and good visibility in most areas.

The interaction with a range of academic institutions involved in wildlife research of a high quality and the large resources available to Kruger National Park and some of the provincial administrations are further reasons for having confidence in South Africa`s ability to monitor its elephant populations.

64. Effectiveness of current law enforcement measures

The figures on resources and expenditure densities in South Africa are considerably in excess of comparable figures for other African countries, and exceed, by a wide margin, the figure of USD 200/km²/yr generally considered the requirement for effective management of an African conservation area.

The effectiveness of law enforcement effort in relation to illegal killing of elephant within South Africa is indicated by the figure of 268 elephants reported killed illegally within South Africa over the 19 years from 1974 to 1993. Of these, 184 were killed in Kruger National Park in the period 1981–1983. Most of the remaining illegally killed elephants were shot between 1989 and 1993.

The Panel was informed that the recent increase in poaching appeared to be due to the availability of firearms and ammunition from the civil war in Mozambique and to the presence of large numbers of unemployed, armed, demobilised former combattants. Most of the individuals involved in these incidents have been arrested, their weapons confiscated, and that the majority of the ivory has been recovered.

Investigation units specializing in endangered species protection have been established by the Transvaal, Kwazulu/Natal and Northwest Provinces, while, in 1992, National Parks Board created a full–time anti–poaching unit in the Kruger National Park. In August 1994 the agents of the various units established an association with the purpose of improving their co–operation, liaison and training.

7. South Africa's ability to control trade in ivory from African elephants

71. Control of ivory stocks

The Panel was informed that:

- since 1991, no changes have been made regarding the control of ivory stocks, including the marking, registration and storage of raw ivory at Skukuza;
- the determination of the source of ivory by the use of isotope analysis has been pursued further;
- additional new technology, known as Neutron Activation Analysis, which is based on the detection of trace elements is being developed;
- there have been no changes in the registering and marking by the Provincial Administrations of government and privately owned raw and worked ivory since 1991.

As the present proposal explicitly excludes commercial international trade in ivory from South Africa, the control of ivory stocks is essentially a process of recording and securing an accumulating stockpile. This is much simpler than recording continual acquisitions and sales of ivory, and the existing measures are fully adequate for this purpose. Any proposal to allow commercial exports of ivory submitted for the 10th or a later meeting of the Conference of the Parties will have to be critically reviewed at the appropriate time.

72. Legal provisions regulating international and domestic trade in ivory

721. Reservation

South Africa still holds a reservation regarding the transfer of *Loxodonta africana* from Appendix II to Appendix I, and could, therefore, theoretically resume ivory trade at any time. If its proposal is accepted, South Africa has committed itself to withdraw the reservation, and to implement all consequent legislation. The Panel has been assured that this will include provisions to remove worked ivory from curio outlets at international airports.

722. Moratorium

The Panel was informed by the Management Authorities that the moratorium on import and export of ivory for commercial purposes continued to be respected. The Nature Conservation Authorities and the Veterinary Services stated that they had not issued any permits or certificates for the import or export of ivory since the moratorium was promulgated in 1990, except for the export of live specimens, specimens for research or exhibitions, hunting trophies and personal or household effects.

723. Nature conservation legislation

The Panel was informed by the Department of Environmental Affairs and Tourism that an amendment to the Environmental Conservation Act, giving competence to the Minister to make regulations for implementing international treaties will be submitted to Parliament in 1994. In addition, a draft for a specific Endangered Species Act is being prepared and will be sent to the provinces for comments in the near future, and subsequently to public hearings.

At the provincial level, the old legislation will remain in force until such time as new legislation has been enacted. As a consequence, most of the new Provinces have to implement in parallel the legislation of their component former entities. This procedure is expected to last not less than two years.

All but one of the former jurisdictional entities within the current boundaries of South Africa (Cape Province, Natal, Orange Free State, Transvaal, Gazankulu, KanGwane, KwaNdebele, KwaZulu, Lebowa, Bophuthatswana, Ciskei, Transkei and Venda) list the African elephant in their schedules as specially protected or even as endangered species. There are penalties for the illegal killing of elephants in these territories, or for illegal trade in ivory, but they vary considerably. The legislation of one territory, Qwa Qwa, does not specifically refer to elephants or ivory, but there have never been any elephants there. As Qwa Qwa now falls within the Orange Free State province, it remains to be tested in a court of law whether the legislation of that province could be applied in Qwa Qwa.

While the existing legislation subjects the possession, conveyance etc., of raw ivory almost everywhere to licensing and registration procedures, this is not always the case with regard to manufactured articles.

724. Veterinary legislation

The veterinary sector continues to be regulated by national legislation, i.e. veterinary import and transit permits will still be issued in the future by the Pretoria office.

The Panel was informed that liaison between the import licensing procedures of Nature Conservation Authorities and Veterinary Services has been formalized as suggested in the Panel's 1991 report.

725. Customs legislation

Customs will continue to operate under national legislation. The Panel was informed that, as suggested in its 1991 report, worked ivory has been included in the "Consolidated list of restricted and prohibited goods". This list is available at the Customs offices, and Customs officers also have computer access to the list.

726. Customs Union

Customs Union matters, as presented in the 1991 report of the Panel, have been simplified by the fact that the four "Independent States" (Bophuthatswana, Venda, Transkei, Ciskei) were reincorporated into South Africa in April 1994.

727. Transit

Since the review of the 1991 proposal, South Africa has complied with the recommendations of Resolution Conf. 7.4 on Control of Transit in relation to raw or simply prepared ivory. Heading 3.13.08 A of the Customs and Excise Regulation stipulates that the transit of such ivory through the Republic is prohibited unless covered by a permit issued for that purpose by the controlling body in the country of export. There is no corresponding provision for worked ivory.

73. Effectiveness of law enforcement

731. External trade

As already noted in the Panel's 1991 report, the Customs services require an import or export permit, as appropriate, to be presented for all raw ivory entering or leaving South Africa except if it originates in or is destined for one of the other countries of the Customs Union: Botswana, Lesotho, Namibia and Swaziland. However, there is no such requirement with respect to worked ivory. Customs do not assess the validity of CITES documentation accompanying a shipment. They detain, upon importation or exportation, ivory shipments until they have been cleared or seized by the provincial Management Authority concerned.

The Panel was informed that the previously almost non–existent border controls between South Africa and Namibia have been reinforced. The problems related to Walvis Bay no longer exist, because this area has been handed over to Namibia.

The Panel noted the emphasis placed on investigations, as opposed to field patrols, as the mainstay of the law enforcement effort. This has been considerably strengthened since 1989 by the establishment of the Endangered Species Protection Unit of the South African Police. The Panel was informed by the Unit that the number of confiscations and arrests had considerably increased since 1990. This increase was reported to be due to greater effort, more staff, better intelligence and the growing ease of regional co–operation across national borders.

It was clarified that, of the figures contained in Table 20 of the supporting statement, more than 95 per cent referred to ivory and rhino horn originating outside South Africa, i.e. illegal imports.

732. Internal trade

See 1991 report.

74. Evidence of illegal trade through South Africa

The Endangered Species Protection Unit of the South African Police has continued to make seizures of ivory since 1991 (see Table 20 of revised supporting statement). The Panel was informed that the smuggling techniques have become more sophisticated. Very often ivory is now transported in small blocks, which sometimes are stained to resemble tropical hardwood. These can easily be transported as passenger baggage.

To supplement the information presented in the proposal, the Panel asked TRAFFIC and the Environmental Investigation Agency to supply evidence of illegal trade in ivory and other elephant products passing through South Africa. TRAFFIC provided information on seizures of ivory outside South Africa in 1992 and 1993, involving 36 small consignments of worked ivory, 1 shipment of 27 whole tusks, and 2 shipments totalling 13572 ivory blocks, all originating in or exported from South Africa. Although EIA urged the Panel to make the fullest examination of illegal ivory trade through South Africa, they declined to provide any information.

TRAFFIC stated that they were not aware of any illegal trade in non–ivory elephant products originating in or transiting through South Africa.

8. Proposed marketing arrangements

Although the Panel had no specific mandate to review how South Africa intends to market other commodities than ivory, some information was sought regarding the skin trade, which will make up the bulk of exports resulting from the present proposal.

- Elephants are skinned at the Skukuza by–products plant. After salting, the skins are stored in a secure warehouse at Skukuza until shipment for processing.

- As the Panel verified in 1991, records are kept on the number and weight of panels in different categories (trunk, ears, feet, body panels, tail).
- The National Parks Board indicated to the Panel that it intends to sell the skins treated as above to the single processor EXOTAN of Port Elizabeth, where they will be processed into leather. This facility has experience in handling skins from CITES listed species, such as crocodiles and pythons.
- EXOTAN delivered to the Panel statistics about its purchases of raw elephant hide from 1984/85 to 1989/90, i.e. the last year when they acquired elephant skins. For all hide purchases, totalling 64 consignments, the weight, price and source were indicated. This seems to demonstrate that the firm has an adequate record keeping capability.

9. Conclusions

a) Is the population viable and sustainable and are there particular risks to the population?

The main South African population of African elephant (i.e. Kruger National Park and adjoining areas) is both genetically viable and numerically stable, being held at a level determined by ecological management practices.

The rest of the national herd is increasing in numbers and in range. Efforts are being made to enlarge existing protected areas to support viable elephant populations (Addo ENP / Zuurberg NP; Tembe Elephant Park / Ndumo GR; Marakele NP/Welgevonden NR). Some of the areas identified for future introduction have the potential for supporting genetically viable elephant populations (Greater St. Lucia Park / Mkuze GR / Phinda Resource Area; Sam Knott NR/ Andries Vosloo NR/ Double Drift NR).

There is currently no threat to the status of the South African population. Indeed, it is evident that this is one of the populations referred to in the third paragraph of the preamble of Resolution Conf. 7.9, as not meeting the Berne criteria for inclusion in Appendix I of CITES.

b) Has the range State demonstrated its ability to monitor its population of African elephant ?

South Africa has a long–running programme for monitoring the elephant population of Kruger National Park, which contains about 80 per cent of the elephants in the country. This is one of the best–monitored populations on the African continent. The monitoring system gives a good index of population size and trends. This system was extended to other protected areas adjacent to Kruger National Park in 1993.

The other populations are relatively small and, with the exception of Tembe Elephant Park, relatively easy to monitor.

c) Are the current anti–poaching measures effective?

The resources and measures deployed to combat illegal killing of elephants in South Africa appear to have been extremely effective. Although the supporting statement refers to a recent increase in poaching activities, these nonetheless remain at very low levels.

d) Is the total level of offtake from both legal and illegal killing sustainable?

The Panel accepts the statement of the National Parks Board that the number of elephant removed legally from Kruger National Park each year, through culling and live capture, is adjusted to take account of illegal killing, in order to maintain a stable population. This is confirmed by the data from the population monitoring operations. Offtake in other areas is negligible.

e) Is the control of ivory stocks adequate to prevent the mixing of legal and illegal ivory?

Taking into account that the present proposal explicitly excludes commercial international trade in ivory from South Africa, the existing measures are adequate to prevent the mixing of legal stocks of ivory with ivory illegally in trade.

f) Is law enforcement effective?

South Africa has already demonstrated a good level of enforcement, and this has been improved by the strengthening of existing enforcement units, the establishment of new units by the provinces and the National Parks Board, and by improved internal and international liaison.

g) Are enforcement and controls sufficient to ensure that no significant amounts of ivory taken or traded illegally from other countries are traded within or through the territory of the affected range State?

The Panel is aware of a continuing illegal trade in ivory passing through South Africa. The information available to the Panel suggests, however, that this trade is at a relatively low level. Recent interceptions of cut blocks of ivory may indicate a change in the preferred method of smuggling.

The apparent motivation for including question g) in the terms of reference of the Panel was to ensure that populations of elephants in other countries would not be adversely affected by the adoption of a proposal. If the present proposal were adopted with the annotation suggested, there would be no opportunity of laundering ivory through South Africa. Furthermore, as there would be no legal source, any commercial shipment of ivory could be identified by the importing country as being illegal.

In view of the above, the Panel suggests that the amount of illegal trade in ivory passing through South Africa can not be considered to be significant in the context of the proposal.

In Summary

The Panel considers that the biological criteria specified in paragraph h) of Resolution Conf. 7.9 are met.

The present proposal is not intended to permit commercial international trade in raw and worked ivory. Any proposal to allow commercial exports of ivory submitted for the 10th or a later meeting of the Conference of the Parties will have to be critically reviewed at the appropriate time. Trade in non–ivory elephant commodities has potential for improving the conservation status of South Africa's elephant population. This trade is not perceived as a threat to the status of the South African or any other elephant population.

As an additional safeguard, the Panel recommends that the South African CITES Authorities should not issue any export permits for raw elephant skin or for elephant leather unless the individual pieces are tagged in the same way as crocodile skins.

The key question is whether the adoption of the proposal would provide opportunities for illegal ivory trade. The Panel believes that this would not be the case if the population in Apendix II were annotated "only for trade in commodities other than ivory". Such an annotation would be comparable

with the annotation °502 of the appendices concerning *Vicugna vicugna*.

Moreover, as South Africa has offered to withdraw its reservation regarding the listing of *Loxodonta africana* in Appendix I, this will strengthen CITES controls.

The Panel concludes that the proposal would meet the criteria for the transfer of elephant populations to Appendix II as specified in Resolution Conf. 7.9, provided that the suggested annotation is adopted.

Reference

Frankel, O.H. and Soulé, M.E. (1981), Conservation and evolution. Cambridge University Press. Cambridge, UK. 327 pp.

Annex:

List of People Interviewed by the Panel

- Dr P. Botha, Department of Environmental Affairs and Tourism
- Mr J. Coetzee, Loskop Dam Nature Reserve
- Dr A. Faul, Department of Agriculture
- Mr H. Grove, Department of Environmental Affairs and Tourism
- Dr A. Hall–Martin, National Parks Board
- Mr S. Johnston, North West Conservation Authority
- Mr J. Kellerman, SA Department of Foreign Affairs
- Lt Col P. Lategan, Endangered Species Protection Unit, South African Police
- Mr D. Lourens, SA Customs
- Ms S. Meintjes, Department of Environmental Affairs and Tourism
- Dr P. Mulder, Transvaal Nature and Environmental Conservation
- Mr M. Te Water Naudé, SA Department of Foreign Affairs
- Dr J. Neethling, Cape Nature and Environmental Conservation
- Mr B. Reilly, Transvaal Nature and Environmental Conservation
- Mr P. van Staden, Marakele National Park

Doc. 9.47 (Rev.) Annex 7

Report of the Panel of Experts on the African Elephant on the Proposal of the Sudan to Transfer the Population of *Loxodonta africana* from Appendix I to Appendix II

1. Terms of Reference of the Panel

   The task of the Panel, as specified in Resolution Conf. 7.9, is to evaluate the proposal of the Sudan to transfer the population of *Loxodonta africana* of that country from CITES Appendix I to Appendix II, taking into account the following:

   a) with respect to the status and management of the elephant population concerned:

      i) the viability and sustainability of the population and potential risks;

      ii) the Sudan's demonstrated ability to monitor the subject population; and

      iii) the effectiveness of current anti–poaching measures; and

   b) with respect to the Sudan's ability to control trade in ivory from African elephants:

      i) whether total levels of offtake from both legal and illegal killing are sustainable;

      ii) whether control of ivory stocks is adequate to prevent the mixing of legal and illegal ivory;

      iii) whether law enforcement is effective; and

      iv) whether enforcement and controls are sufficient to ensure that no significant amounts of ivory taken or traded illegally from other countries are traded within or through the territory of the Sudan.

2. Composition of the Panel

   The following were appointed to the Panel:

   – Jonathan Barzdo, CITES Secretariat, Geneva, Switzerland;

   – Peter Dollinger, Swiss Federal Veterinary Office, Liebefeld–Berne, Switzerland;

   – Holly T. Dublin, Chairman of the IUCN/SSC African Elephant Specialist Group, Nairobi, Kenya.

   Two further candidates declined to serve on the Panel.

   The Government of the Sudan appointed:

   – Ahmed Mohamed Elobeid, CITES Management Authority of the Sudan.

3. Summary of the Panel's Activities

   In June 1994, on receipt of the supporting statement of the proposal, the Secretariat, on behalf of the Panel, sent to the CITES Management Authority of the Sudan a request for a considerable quantity of additional information about surveys, legal and illegal killing of elephants, legislation, stocks of ivory, marking systems, and legal and illegal trade.

   The supporting statement was then reviewed by all the Panel members outside the Sudan. They submitted their preliminary comments to the Secretariat. These were copied to the other members, including the member appointed by the Sudan who was asked to respond to the comments and questions raised.

   In August 1994, the Sudan provided documents with some of the information that had been requested. On 15 September the Panel member from the Sudan sent his response to the preliminary comments of the other members. A few days later, he met with another member (H. Dublin) and with a representative of the CITES Secretariat. It was agreed that it was not necessary for the Panel to visit to the Sudan.

   Consequently, the following evaluation is based on the information that was provided to the Panel by correspondence and on the information available from other sources.

4. The Status and Management of the Sudan's Elephant population

   a) The viability and sustainability of the population and potential risks

Information provided in the supporting statement and additional documentation submitted by the Sudan do not allow a rigorous assessment of these conditions. In order to carry out such an evaluation, it would be necessary first to know the current status and distribution of the Sudan's elephant population.

The supporting statement states that there are approximately 40,000 elephants in 13 game reserves and five national parks in the Sudan. While some details are provided from earlier work done in some areas of the elephant's range, these data are considered to be very out–of–date, the last figure cited being over ten years old. The African Elephant Specialist Group of IUCN/SSC currently considers ten years to be the accepted cut–off for population estimates to be maintained in their database.

Owing to logistical, financial and political constraints, it is not possible for the Government of the Sudan to provide a valid assessment of the elephant population of the country. This is of particular note for the southern areas, where most of the country's elephants are believed to survive. There is therefore no reliable estimate for the Sudan's national elephant population or for any sub–population within the country. This fact alone makes it impossible to provide an evaluation of the viability and sustainability of the national population.

The remaining elephants in the Sudan almost certainly face risks. The supporting statement states that there has been no poaching in the past seven years in southern Sudan and that continuing rebel activities in that area have not adversely affected elephant populations. Likewise, other hearsay reports originating from the rebel leaders imply that their forces are not involved in the illegal killing of elephants. However, the Panel has received information that Sudanese rebel forces, estranged members of the rebel forces and political refugees have been implicated in both neighbouring Zaire and the Central African Republic. Moreover, the Panel is aware of allegations that non–rebel traders have been involved in the movement of ivory across the southern borders of the Sudan. In other parts of Africa, where major civil instability exists, elephants have been the target of illegal activity. In some countries, the sale of ivory has been linked to the financing of armed struggles in a number of African elephant range States in recent years. The longer the civil war in the Sudan persists, therefore, it is likely that rebel activities will lead to the loss of elephants in southern Sudan if they have not already.

b) The range State's demonstrated ability to monitor the subject population

For a number of reasons, the proponent is not able to monitor the population referred to in the proposal. Most of these reasons are inextricably linked to the years of civil strife in the Sudan. The repercussions of continued civil unrest include: an inability to secure the necessary funds to carry out monitoring activities; a shortage of equipment, including transportation and communication systems; and an inability to gain access to, and to census, elephant sub–populations in any of the southern protected areas.

Documents supplied to the Panel by the proponent state that while they do have the necessary trained personnel or qualified experts to conduct regular survey work, they are constrained only by the factors listed above. Without interviewing the current staff, it is not possible for the Panel to assess their qualifications or ability to carry out reliable censuses.

Owing to the obvious constraints imposed by political, financial and logistical problems in the Sudan, the Panel does not believe that the proponent has demonstrated its ability to monitor the subject population. In fact, the Panel was informed by the Management Authority of the Sudan that "the country has not the capacity at present to monitor the population of African elephant and enforce the law effectively".

c) *The effectiveness of anti–poaching measures*

While the supplementary documentation provided by the proponent states that 52 armed poachers were killed and another 1,520 arrested by wildlife rangers in parks and protected areas between 1983 and 1990, no details were provided on the existing capacity for anti–poaching in either northern or southern Sudan. Specifically, the supporting statement does not provide information on the number or distribution of staff deployed on law–enforcement activities or on their *modus operandi* in the field.

Contrary to the supplementary information, the supporting statement states that there is no known poaching activity in the southern elephant range. However, there is no compelling evidence to support this contention. In additional information provided to the Panel, the proponent stated that the Government of the Sudan was currently not able to enforce the law effectively, owing to a lack of necessary funds and equipment, and to the lack of government control over a large proportion of elephant range in the country.

In concluding on this topic, the Panel is not able to verify what anti–poaching measures are being taken in the Sudan, or their effectiveness. Under the current circumstances of continued civil instability, the Government of the Sudan is not able to guarantee effective protection of its remaining elephant population.

5. The Ability to Control Trade in Ivory from African Elephants

a) Are total levels of offtake from both legal and illegal killing sustainable?

The supporting statement says that the elephant population of the Sudan has been reduced by 70% since the late 1970s. It also reports that 3,349 tusks, plus tusks with a total weight of 1,182,746 kg were exported from 1979 to 1987, a quantity corresponding to more than 13,000 elephants a year. Obviously this offtake has not been sustainable.

The supporting statement says that there is at present no poaching in the Sudan, and the Panel was informed that wildlife regional directors and Customs officers have indicated that there is no local trade and no illegal export. However, in contradiction of this, as is indicated in section 4.c) above, the Management Authority of the Sudan has also provided information on the killing and arrest of poachers from 1983 to 1990. The Panel is also concerned that information from the southern Sudan might be incomplete.

b) Is control of ivory stocks adequate to prevent the mixing of legal and illegal ivory?

In order to answer this question, the Panel requested the following details from the Management Authority of the Sudan: whether there is any stock of ivory other than that declared in the proposal; how the ivory is kept; how the stock was obtained and what is its origin; how the access to the ivory is controlled; whether any ivory is released from the stock; how it is marked; what system is proposed for controlling the ivory.

In response the Panel was informed, "The stockpile of the Sudan now kept in Khartoum has been checklisted (sic) remarked and weighed voluntarily by TRAFFIC East/Southern Africa." "There is no stock beside the

10,884 tusks, with the exception of 700 pieces weighing approximately one tonne in handcraft workshops." The Management Authority also stated, "The Sudan is aware of the new sophisticated techniques for ivory determination, but it has not been introduced yet. We are planning to establish that technique in the coming conference of the Organization for Conservation of African Wildlife." An inventory of the Government stock was supplied to the Panel.

The Management Authority did not provide any information on: how the ivory in stock was obtained; the origin of the ivory in stock; how it is kept and controlled; and whether any ivory is released.

If the proposal were adopted, any ivory that was not of Sudanese origin could not be imported from the Sudan for primarily commercial purposes as it would be from animals in Appendix I of CITES. It is therefore worth noting that the origin of the tusks in the stockpile is not clear and it might consist of some specimens that could be traded legally and others that could not.

As the supporting statement refers (in section 3.1) to a small ivory carving industry, which is reported to consume a negligible amount of ivory, the Panel also asked for information on: the source of ivory used for carving; the amount of ivory used each year; the number of carvers; the registration of carvers; the disposal of carvings; and the controls on the use of ivory and on the sale of carved ivory.

The Panel was informed: that the Sudanese carving industry consumes about a tonne of ivory each year, mainly from Government stock sold at public auction; that all private stocks of raw ivory have been marked; that possession, carving or trafficking of unmarked ivory is prohibited; that the Wildlife Conservation General Administration keeps a record of the number of carvers, the number of curio shops, the number of carved pieces and the number of pieces being carved and that it checks these records regularly. The Management Authority also stated, "No trade in worked ivory is taking place in the Sudan. The Management Authority issued quite few permits for household and pre–Convention souvenirs" and "No export or import of raw or worked ivory is allowed at present."

The supporting statement says that the 10,884 tusks in stock have been locked away by the wildlife authority since 1988, and that the intention is to allow the export of this stock. The Panel was also informed that there have been no confiscations since 1988, suggesting that there have been no additions to the stock. The source of the one tonne of ivory carved each year is therefore far from clear.

The Panel is concerned that some of the statements of the proponent appear to be contradictory. It has not received any information on how the stockpile of ivory is controlled. Moreover it is concerned that there are continuing sales of ivory from Government stock by public auction, although the stock concerned is not apparently the one referred to in the supporting statement. In addition, as the source of the ivory in the Government stockpile has not been clarified, it is not evident how much of it originates in the Sudan.

c) *Is law enforcement effective?*

The Panel asked the Environmental Investigation Agency (EIA), TRAFFIC East/Southern Africa and the World Conservation Monitoring Centre (WCMC) whether they had any evidence of illegal trade in ivory into or from the Sudan. EIA did not reply. However information supplied by TRAFFIC and by WCMC indicates that there has been a continuing low level of seizures in importing countries, at least up to 1993, of ivory carvings and tusks that have come from the Sudan. The numbers involved do not give cause for concern.

What is more worrying is the problem of control within the Sudan. A report given to the Panel by the Management Authority of the Sudan, entitled 'African Elephant Status in the Sudan', dated 1991, contains the following statement: "Additionally, our limited logistics support, in itself a disaster factor, is unlikely to improve before the end of hostilities and with the loss to Government control of our remaining elephant areas in southern States we can but prepare ourselves for the inevitable struggle that is certain to come when once again people move around more freely." These words refer to the protection of elephants in the Sudan, but they reflect a difficulty that extends to the control of movement of people and goods.

d) Are enforcement and controls sufficient to ensure that no significant amounts of ivory taken or traded illegally from other countries are traded within or through the territory of the Sudan?

The Management Authority of the Sudan provided to the Panel a copy in Arabic of the legislation to implement wildlife trade controls, the Wildlife and National Parks Act 1986. As the Panel members outside the Sudan do not understand Arabic, a copy of a 1975 draft of the Act in English was also provided. With respect to provisions relating to international trade, there is a close correlation between the draft of the Act and the text of the Convention. The draft Act also includes provision for a certificate of legal ownership to authorize possession and sale of any trophy of a protected animal, and this is defined so as to cover raw and worked ivory. A dealer's permit is also required, in the draft, to authorize the carving of ivory and the trade in raw or worked ivory. The Management Authority of the Sudan has confirmed that these provisions are in the final Act.

The concern of the Panel is that it has no information on how these provisions are enforced and that the problems mentioned above in relation to enforcement of laws in the southern part of the Sudan are likely also to hamper controls on trade in ivory. However, the Panel has received no information to indicate that significant levels of illegally obtained ivory are passing into or through the Sudan.

6. Conclusions

The Panel concludes that the proposal clearly does not meet the conditions specified in paragraphs h) and i) of Resolution Conf. 7.9 for the following reasons:

a) with respect to the status and management of the elephant population concerned:

i) the viability and sustainability of the population and potential risks

the inadequacy of the data preclude an evaluation of the viability and sustainability of the population, and there are certainly risks from the continued civil war;

ii) the Sudan's demonstrated ability to monitor the subject population
the Sudan is not able to monitor the population effectively;

iii) the effectiveness of current anti–poaching measures
the Panel can not verify what measures are being taken, nor their effectiveness;

b) with respect to the Sudan's ability to control trade in ivory from African elephants:

i) whether total levels of offtake from both legal and illegal killing are sustainable
past offtake has not been sustainable and no information is available about recent offtake;

ii) whether control of ivory stocks is adequate to prevent the mixing of legal and illegal ivory
no information is available about the control of ivory stocks;

iii) whether law enforcement is effective
enforcement is hampered by rebel activities in the south of the Sudan;

iv) whether enforcement and controls are sufficient to ensure that no significant amounts of ivory taken or traded illegally from other countries are traded within or through the territory of the Sudan
although the legislation appears to be adequate, and no evidence of significant levels of illegal trade has been received, the Panel also received no evidence to indicate that enforcement and controls are adequate.

Doc. 9.47.1

Consideration of Proposals for Amendment of Appendices I and II

Other Proposals

COMPLEMENTARY INFORMATION FROM IWC

The attached documents have been provided by the International Whaling Commission to complement the comments which constitute Annex 5 to document Doc. 9.47 (Rev.).

International Whaling Commission

Chairman
Dr P. Bridgewater (Australia)

Vice-Chairman
Dr Louis Botha (South Africa)

Secretary
Dr. Ray Gambell OBE

The Red House,
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Your Ref

Our Ref RG/VJH/25550

28 October 1994

DATE RECEIVED: - 2 NOV. 1994
ITEM BY:
COPY BY: DATE:
ACTION:
FILE:
FILE:

Mr Jaques Berney
Deputy Secretary General
CITES
Case postale 456
CH-1219 Chatelaine/Geneva
SWITZERLAND

Dear Jaques

In a letter dated 1 August 1994 the IWC Secretariat sent information from the IWC on the proposal by Norway to transfer the Northeastern and Central Stocks of North Atlantic minke whales from CITES Appendix I to Appendix II.

Norway has contacted the IWC Secretariat on this matter. Norway reacts strongly to the Secretariat's response on the grounds that in its view it is not a fair or neutral description of the g(0) situation with respect to these stocks.

After consultation with Norwegian representatives, the Secretariat's earlier response is supplemented by fuller documentation which is enclosed.

A Extract from the Chairman's Report of the 46th [1994] Annual Meeting of the IWC concerning the *Estimation of g(0)*

B Extract from the 1994 Report of the Scientific Committee (IWC/46/4), item 9.3.1 *Estimation of g(0)*

C Annex H. Report of the Working Group on Abundance Estimation [1994]

D Extract from the 1992 Report of the Scientific Committee (IWC/44/4) item 7.2.2 *Estimates of abundance - Estimation of g(0)*

E Annex F - Report of the Sub-Committee on North Atlantic Baleen Whales [1992] item 4.2 *Estimates of abundance*

With best wishes for your meeting next month,

Yours sincerely

Ray

Dr R. Gambell
Secretary to the Commission

Encs

cc Mr K. Klepsvik

A.

Extract from Chairman's Report of the 46th (1994) Annual Meeting

Methodology

Estimation of g(0)

The Scientific Committee reviewed in detail the sources of differences in the estimation of g(0) - the probability of sighting a whale on the trackline - in northeastern Atlantic minke whale sighting surveys. A new estimate of 0.587 (CV 0.063) based on a sub-set of the data compared with 0.36 (CV 0.079) used previously by the Committee. It identified five potential factors which contribute to the differences. The underlying causes raise a number of important issues which will be fully addressed at next year's meeting.

In the Technical Committee the Netherlands asked whether this problem would have an effect on the existing estimates of North Atlantic and Southern Hemisphere minke whales. In response the Chairman of the Scientific Committee clarified that in the case of North Atlantic minke whales this may indeed have consequences for the estimate. However, if g(0) is re-estimated for Southern Hemisphere and North Pacific minke whales, where at present it is assumed that $g(0)=1$, then, the estimated g(0) shall be <1. Upon a question from Norway the Chairman of the Scientific Committee pointed out that no new estimates of abundance had been suggested in the Scientific Committee for the northeastern Atlantic minke whale stock. The USA emphasised the importance of the g(0) issue.

The Scientific Committee also commented on its recognition of the problems of investigating avoidance or attraction behaviour which could bias shipboard line transect estimates for North Atlantic minke whales.

In the Commission there was extensive questioning of the Chairman of the Scientific Committee by the Commissioners on the details of the g(0) issue and its implications for the assessment of the northeast Atlantic minke whale stock. Ireland sought clarification of the Report of the Scientific Committee, while the Netherlands refuted the claim by Norway that the estimate made at the Glasgow meeting in 1992 is still valid, believing there is no generally accepted abundance estimate. The UK associated itself with these remarks. Germany noted that a special working group will address the problem and received confirmation that until the Scientific Committee has resolved the issue, we do not know the exact status of the stock. Spain also noted the uncertainty involved. Ireland received confirmation that if the alternative value of g(0) is correct, the estimate of numbers would be dramatically reduced.

Norway expressed surprise at these questions, pointing to the statements that the Scientific Committee had no business to discuss on this stock, and no new estimate of abundance had been suggested. The Chairman of the Scientific Committee reiterated that there is an estimate of g(0) from two years ago, and a new analysis and estimate this year. It was not possible to resolve the cause of the difference this year, and it was not deemed appropriate to take the next step to make a new estimate of abundance while there is uncertainty of the value of g(0) to use. The Netherlands repeated its intervention, concluding that the most important issue was the consequential effect on the abundance estimate, which could result in very different catch limits if the RMP is applied, possibly even zero if the revised estimate of g(0) is nearer the new value calculated. Norway maintained that the original abundance estimate has not been challenged in the Scientific Committee and still stands until a different result is produced, but Ireland understood that additional data and analysis now indicates uncertainty about g(0).

B.

Extract from the 1994 Report of the Scientific Committee (IWC/46/4)

9.3 Methodology

9.3.1 Estimation of g(0)

SC/46/NA8 contains a re-analysis of some of the data from independent observer experiments used in Schweder *et al.* (1993) for estimating $g(0)$ in the 1988/89 Northeastern Atlantic minke whale sighting survey. The paper presented (1) additional developments in the basic theory for estimating $g(0)$ developed by Schweder and Host (1992) and in Schweder *et al.* (1991; 1992; 1993); (2) simulation results on the performances of the estimator; and (3) a detailed discussion of the input data with respect to the classification of surfacing into trials or non-trials and the problems of identifying duplicate surfacing and whales. SC/46/NA8 was seen to represent a significant contribution to the development and application of the method used for estimating $g(0)$ in Schweder *et al.* (1993).

For the data set that was used in SC/46/NA8 (i.e. the 1989 survey plus the 1990 experimental data), $g(0)$ was estimated to be 0.587 with a CV of 0.063 compared to 0.36 (CV 0.079) in Schweder *et al.* (1993) which used the 1989 survey data and the combined 1989 and 1990 experimental data sets. The Committee reviewed in detail the source of the difference in the estimates of $g(0)$ and identified five potential factors in the two analyses which contribute to the difference in the estimates. These are:

(1) the data set used in the analyses (i.e. Schweder *et al.* used the combined data set from the 1989 and 1990 independent observer experiments while SC/43/NA8 only used the data from 1990);

(2) the method used for classifying surfacing into successes, failures and not-trials;

(3) the model used for estimating the two dimensional detection function;

(4) the fitting method and criteria used when initial sightings data were included in the estimation (SC/43/NA8 used the traditional likelihood approach fitted to the two dimensional frequency distribution while Schweder *et al.* used a simulated likelihood method fitted to three marginal statistics); and

(5) inclusion of measurement errors in angles and distances into the $g(0)$ estimation procedure (the Schweder *et al.* method included measurement error and SC/46/NA8 did not).

A complete evaluation of how each of these differences contributed to the overall difference in $g(0)$ was not possible because a set of comparable estimates of $g(0)$ in which only one or a sub-set of each the differences was varied was not available.

The inclusion or non-inclusion of the 1989 experimental data could be a substantial cause of the difference in the estimates of $g(0)$. The only estimates that were available for direct comparison of $g(0)$ from the 1989 and 1990 data were estimates in Schweder *et al.* (1991; 1992) based only on the Bernoulli trial data. In this case, $g(0)$ for the 1989 data set was 0.427 and 0.547 for the 1990 set. It was agreed that it was preferable to use as complete a data set as possible. If further analyses along the lines of SC/46/NA8 were to be conducted, then the 1989 data should also be taken into account in the analyses in order to be able to compare the results with the estimate of $g(0)$ from Schweder *et al.* (1992). However, it was noted that with the 1989 data there may be a higher proportion of cases in which definite judgements as to duplicate status cannot be made because the protocol of the 1989 experiment was quite different from that of the 1990 experiment.

In order to estimate $g(0)$ from the independent observer data, it is necessary to classify each surfacing identified by platform 1 into one of the following four categories (although cases C and D do not need to be explicitly distinguished from one another):

(A) Surfacing not seen by platform 2 and whale also not seen previously by platform 2 (Bernoulli trial with a 'failure' outcome);
(B) surfacing seen by platform 2 and whale not previously seen by platform 2 (Bernoulli trial with a 'success' outcome);
(C) surfacing not seen by platform 2, but whale previously seen by platform 2 (no Bernoulli trial);
(D) surfacing seen by platform 2, but whale also previously seen by platform 2 (no Bernoulli trial).

The method used and the resulting differences in the classification of the surfacings into successes, failures and non-trials is one factor which contributed to the difference in the $g(0)$ estimates. SC/46/NA8 and Schweder *et al.* used different approaches for performing this classification. Table 5 provides a summary of the number of success and failures that were identified by the two classification methods for the 1990 independent observer data.

There was extensive discussion of the source of the difference in Table 5. One of the major factors appears to be in how the two methods classified potential duplicate whales from non-simultaneous surfacing in which estimated positions suggested that the surfacings were in close proximity to each other. Another important source of the difference in the classification was the treatment of surfacing where the radial sighting distance and/or angles were missing. Two other sources for the differences in classification were also identified: (1) how surfacing with possible inaccurate times were evaluated; and (2) sequences of surfacing in which one team identified a pod of two whales and the other team identified surfacing of single whales which could be interpreted as the same whales.

Table 5

Comparisons of the estimated number of Bernoulli failures from the 1990 g(0) independent observer experiments based on the classification procedure used in SC/46/NA8 and Schweder *et al.*, 1993.

	SC/46/NA8	Schweder *et al.*, Ulltang's judgement
Success	44	40
Failures	151	183
Total	195	223

There was discussion, but no agreement, concerning the merits of the different classification approaches. The importance of explicitly identifying the criteria used to classify surfacings was noted and it was recommended that a full description of the criteria should be included in any future analyses. It was noted that uncertainties will exist with any classification system and that some errors in classification (i.e. false duplicates and missed duplicates) will occur, especially in high density areas. Accurately collected data on times and position of each observed surfacing will minimise the extent of the uncertainty. The Committee **recommends** that any future estimates of $g(0)$ need to include quantitative analyses of the error in duplicate classification and their effects on the estimates of $g(0)$. It was also recognised that this may not be a simple task and that methods and procedure need to be developed for performing such analyses.

Comparisons of estimates of $g(0)$ for the two different classification methods could only be made for the 1990 data base and only on the Bernoulli trial data. In this case, the effect of the different methods for classification appears relatively small. The classification method used in SC/46/NA8 resulted in $g(0)$ estimates of 0.634 and 0.590 for two different models, while the classification method in Schweder *et al.*, yielded estimates of 0.65 and 0.547 for the same two models. However, this comparison cannot be generalised with respect to the overall effect that the two different classification methods might have on the estimates of $g(0)$, if the 1989 data were included in the analyses or if the initial sighting survey data were also included in the analyses.

Superficially, the comparisons indicated in the previous paragraph might seem to suggest that the overall difference in the $g(0)$ estimates reported by Schweder *et al.* (1993) and SC/46/NA8 reflect essentially

different choices of data rather than the consequences of alternative methodologies. However it was noted that the inclusion of the survey data along with the Bernoulli trials data did not have a substantial effect on the estimates of $g(0)$ in SC/46/NA8. This is in contrast to the results in Schweder *et al.* (1993) in which the inclusion of the combined data had a large effect on the estimate of $g(0)$. The reason for this difference in sensitivity was not clear and further analyses are required.

It was agreed that additional information was needed to evaluate the merits of the different models for the two dimensional detection function. However, the resulting estimates of $g(0)$ for the different models were similar. Overall, it was thought that the difference in model selection was not a major cause of the difference in the $g(0)$ estimates.

It was noted that the development of an automated system for identifying duplicate sightings of independent observers would be useful. Further, the analytical use of measurement error in estimated surfacing times, distances and angles in classifying sightings as duplicates in SC/46/NA8 was considered an important and useful step in developing an automated process. However, there was disagreement as to whether field trials to estimate measurement error in sighting distances and angles was representative of actual sightings conditions in a survey mode. In general errors in angle and distance estimates in field trials would tend to be less than measurement errors that occur during sighting surveys.

The discussion of SC/46/NA8 highlighted the importance of accurate and careful data collection procedures and methods for duplicate identification when independent observer experiments are to be used for estimating $g(0)$. The Committee agreed that it was important that a set of guidelines be developed for future surveys and analyses and agreed to consider the draft guidelines given in Annex H, Appendix 3, at next year's meeting.

The underlying causes of the differences in the estimates of $g(0)$ in SC/46/NA8 and Schweder *et al.* (1993) raise a number of important issues. The Committee agreed that these matters should be fully addressed at next year's Scientific Committee meeting. In order to insure that sufficient progress was made on this matter during the year, an intersessional working group was formed. The extensive list of tasks that will be undertaken by this group are given in Annex P. Polacheck was appointed convenor of this group. Members of the Working Group who will be attending the sighting survey planning meeting in Tromso in November 1994 agreed to review progress to date and plan any additional work.

NEW APPROACHES

SC/46/O 23 presents a theoretical development of estimators for $g(0)$ and effective strip width (ESW). While the derivation is different, the estimates in SC/46/O 23 are similar to those used previously (e.g. Butterworth and Borchers, 1988) and the proposed estimator of $g(0)$ would be positively biased due to unresolved problems of heterogeneity.

Annex H

Report of the Working Group on Abundance Estimation

Members: Polacheck (Chairman), Anderson, Best, Borchers, Butterworth, Cook, de la Mare, DeMaster, Donovan, Donoghue, Hammond, Holt, Komatsu, Lankester, Miyashita, Nishiwaki, Nomura, Oien, Palka, Papastavrou, Punt, Reilly, Schweder, Slooten, Smith, Walloe.

1. ELECTION OF CHAIRMAN

Polacheck was elected chairman.

2. APPOINTMENT OF RAPPORTEURS

DeMaster was appointed rapporteur.

3. ADOPTION OF AGENDA

The agenda was adopted (Appendix 1).

4. $g(0)$

4.1 North Atlantic minke whale analyses

SC/46/NA8 contains a re-analysis of some of the data from independent observer experiments used in Schweder *et al.* (1993) for estimating $g(0)$ in the 1988/89 Northeastern Atlantic Minke whale sighting survey. The paper presented (1) additional developments in the basic theory for estimating $g(0)$ developed by Schweder and Host (1992) and in Schweder *et al.* (1991; 1992; 1993); (2) simulation results on the performances of the estimator; and (3) a detailed discussion of the input data with respect to the classification of surfacing into trials or non-trials and the problems of identifying duplicate surfacings and whales.

With respect to the theory, SC/46/NA8 presented a Poisson approximation for the whale surfacing rates that can be used in estimating the likelihood for the surfacing detection probability function (SDPF). It also fitted the full two- dimensional hazard rate function when data on the initial sighting positions were included in the estimation procedure. Finally, it developed an additional model (referred to as the product model) for estimating the SDPF.

The simulation study examined the effect of model mis-specification for the SDPF, the use of the Poisson approximation, estimation errors in surfacing distances and angles and whale movements. The effects of model mis-specification and the use of the Poisson approximation were small. Estimation error and whale movements resulted in negative biases in the estimates of $g(0)$. The simulations were not an exhaustive set of tests for possible and/or expected deviations from the assumptions of the theory.

The paper noted that there was a greater number of recorded surfacing times with zero seconds (i.e. whole minutes) than would be expected if all times had been recorded on the tape as planned. The excess was presumed to represent times that were not on the tapes and which had been recorded to the nearest minute at best. This was taken into account in making duplicate judgements for these cases.

With respect to the treatment of the input data, SC/46/NA8 noted that it is necessary to classify each surfacing identified by one platform into one of the following four categories (although cases C and D do not need to be explicitly distinguished from one another):

(A) surfacing not seen by platform 2, and whale also not seen previously by platform 2 (Bernoulli trial with a `failure' outcome);
(B) surfacing seen by platform 2, and whale not previously seen by platform 2 (Bernoulli trial with a `success' outcome);
(C) surfacing not seen by platform 2, but whale previously seen by platform 2 (no Bernoulli trial);
(D) surfacing seen by platform 2, but whale also previously seen by platform 2 (no Bernoulli trial).

The paper discussed the problems in preforming such classifications and developed a set of criteria which were used for classifying the 1990 independent observer data. The criteria were based on estimates of the time of surfacing, the position of the surfacing relative to vessel, the orientation of the whales and the number of whales in each surfacing, combined with information on the uncertainties associated with each of these estimates. The paper presented summary statistics for these various criteria for surfacings classified into the different categories.

The Working Group noted that SC/46/NA8 represents a significant contribution to the development and application of the method used for estimating $g(0)$ in Schweder *et al.* (1993).

For the data set that was used in SC/46/NA8 (i.e. the 1989 survey plus the 1990 experimental data), $g(0)$ was estimated to be 0.587 with a CV of 0.063 compared to 0.36 (CV 0.079) in Schweder *et al.* (1993) which used the 1989 survey data and the combined 1989 and 1990 experimental data sets. The Working Group reviewed in detail the source of the difference in the estimates of $g(0)$ and identified five potential factors in the two analyses which contribute to the difference in the estimates. These are:

(1) the data set used in the analyses (i.e. Schweder *et al.* used the combined data set from the 1989 and 1990 independent observer experiments while SC/46/NA8 only used the data from 1990).

(2) the method used for classifying surfacings into successes, failures and not-trials;

(3) the model used for estimating the SDPF;

(4) the fitting method and criteria used when initial sightings data were included in the estimation (SC/46/NA8 used the traditional likelihood approach fitted to the two dimensional frequency distribution while Schweder *et al.* used a simulated likelihood method fitted to three marginal statistics); and

(5) inclusion of measurement errors in angles and distances into the $g(0)$ estimation procedure (Schweder *et al.* method included measurement error and SC/46/NA8 did not).

A complete evaluation of how each of these differences contributed to the overall difference in $g(0)$ was not possible because a complete set of comparable estimates of $g(0)$ in which only one or a sub-set of each of the differences was varied was not available.

The Working Group agreed that the inclusion or non-inclusion of the 1989 experimental data could be a substantial cause of the difference in the estimates of $g(0)$. The only estimates that were available for direct comparison of $g(0)$ from the 1989 and 1990 data were estimates in Schweder *et al.* (1991; 1992) based only on the Bernoulli trial data. In this case, $g(0)$ for the 1989 data set was 0.427 and 0.547 for the 1990 set. The Working Group agreed that it was preferable to use as complete a data set as possible. However, it also noted that the protocol of the 1989 experiment was quite different from that of the 1990 experiment. In particular, observations took place from two separate vessels in 1989, while in 1990, observations took place from a single vessel. Also, the reduced precision of the recorded surfacing times in 1989 compared to 1990 and the variability in the distance between the ships makes identification of duplicate surfacings and whales more difficult.

The Working Group agreed that if further analyses along the lines of SC/46/NA8 were to be conducted then the 1989 data should also be taken into account in the analyses in order to be able to compare the results with the estimate of $g(0)$ from Schweder *et al.* However, it was noted that with the 1989 data there may be a higher proportion of cases in which definite judgements as to duplicate status cannot be made.

The method used and the resulting differences in the classification of the surfacings into successes, failures and non-trials is also a factor which contributed to the difference in the $g(0)$ estimates. Schweder reviewed the classification procedure used in Schweder *et al.* (1993). The procedure was based on examination of detailed plots of estimated surfacing position relative to the observers position. A full set of detailed plots for the 1990 experiment was made available to the Working Group plus a tabular listing of all surfacings and their classification based on one of the four independent evaluations of these plots. Table 1 provides a summary of the numbers of successes and failures that were identified by the two classification methods.

There was extensive discussion of the source of the difference in Table 1. One of the major factors appears to be how the two methods classified potential duplicate whales from non-simultaneous surfacings in which estimated positions suggested that the surfacings were in close proximity to each other. SC/46/NA8 identified most of these as duplicate whales (10 cases). The method used in Schweder *et al.* made no explicit assumption about such surfacings, but the classification method generally (if not always) identified these surfacings as coming from different whales. Another important source of the difference in the classification was the treatment of surfacings where the radial sighting distance and/or angles were missing. SC/46/NA8 excluded all such surfacings from its analysis, while Schweder *et al.* included some of these surfacings when they were part of a sequence of surfacing. In such cases, the position of the surfacing was interpolated based on the other surfacings in the sequence with positional information. Two other sources for the differences in classification were also identified - (1) how surfacings with possible inaccurate times were evaluated and (2) sequences of surfacing in which one team identified a pod of two whales and the other team identified surfacings of single whales which could be interpreted as the same whales. These latter two differences resulted in SC/46/NA8 classifying an additional four pairs of duplicates that were not judged to be duplicates in the data set provided by Schweder.

There was discussion, but no agreement, concerning the merits of the different classification approaches and on the use of plots of sightings and vessel position to classify sightings. The Working Group noted the importance of explicitly identifing the criteria used to classify surfacings and recommended that a full description of the criteria should be included in any future analyses. The Working Group noted uncertainties will exist with any classification system and that some errors in classification (i.e. false duplicates and missed duplicates) will occur, especially in high density areas. Accurately collected data on time and position of each observed surfacing will minimise the extent of the uncertainty. The Working Group strongly recommended that any future estimates of $g(0)$ need to include quantitative analyses of the error in duplicate classification and their effects on the estimates of $g(0)$. It also recognised that this may not be a simple task and that methods and procedures need to be developed for performing such analyses.

The only direct comparisons that could be made of the effect on $g(0)$ for the two different classification methods was for the 1990 data based only on the Bernoulli trial data and for the r-x and the r-log$x$ models. In this case the effect of the different methods for classification was relatively small. The classification method used in SC/46/NA8 resulted in $g(0)$ estimates of 0.634 for the r-x model and 0.590 for the r-log x model. The classification method in Schweder *et al.* yielded estimates of 0.65 and 0.547 respectively (Schweder and Host, 1992; Schweder *et al.*, 1992). However, the committee noted that this comparison could not be generalised with respect to the overall effect that the two different classification methods might have on the estimates of $g(0)$ if the 1989 data were included in the analyses or if the initial sighting data were also included in the analyses. This is because of the differences noted above in how the 1989 data were collected and because of possible interactions when the initial sightings data are included in the analyses. The sensitivity of the $g(0)$ estimate to the inclusion of the initial sightings data set may depend on the exact Bernoulli data set used which is determined by the classification method.

Based on comparisons of results in SC/46/NA8 and Schweder and Host (1992), there also may be an interaction between the classification method used and the estimation procedure (i.e. the use of the traditional or simulated likelihood and the fitting criteria) when the initial surfacing data are used. Results in SC/43/NA8 suggest that the estimate of $g(0)$ is relatively insensitive to the inclusion of the initial sighting data from the 1989 survey when only the 1990's experimental data are used with the classification method developed in that paper. In contrast, results in Schweder and Host (1992) suggest that the estimate of $g(0)$ is sensitive to the inclusion of the 1989 survey when only the 1990 experimental data are used with the classification method from Schweder *et al.* (1992; 1993). SC/46/NA8 used the traditional likelihood method with the two dimensional fitting criteria while Schweder and Host (1992) used the simulated likelihood estimation method with the marginal fitting criteria (as noted below, Appendix 3 indicates that the estimates of $g(0)$ are insensitive to the fitting criteria for the results in SC/46/NA8). It is not clear why the results in SC/46/NA8 and Schweder and Host (1992) exhibit this apparent difference in sensitivity to the inclusion of the initial sightings data and further analyses are required. It should be noted that the results in Schweder and Host (1992) were preliminary and that subsequent changes that have been made to the fitting procedure could yield different results.

Concerning the identification of duplicate sightings, it was noted that the development of an automated system for identifying duplicate sightings by independent observers would be useful. Further, the analytical use of measurement error in estimated surfacing times, distances and angles in classifying sightings as duplicates in SC/46/NA8 was considered an important and useful step in developing an automated process. However, there was disagreement as to whether field trials to estimate measurement error in sighting distances and angles was representative of actual sightings conditions in a survey mode. It was noted that in some experiments there appeared to be substantial errors in the measurement of the 'true' angles used to calibrate the observer estimates. The Working Group agreed that in general errors in angle and distance estimates in field trials would tend to be less than measurement errors that occur during sighting surveys.

Concerning differences in model selection for the detection function, it was agreed that additional information was needed to evaluate the merits of each model. This information included, but was not limited to, a comparison of the predicted detection function and the histogram of observed perpendicular distances, and a comparison of the reduction in the Bernoulli likelihood relative to the combined likelihood. Some of this information was made available during the Working Group's meeting for the analyses in SC/46/NA8 (Appendix 2). Based on these findings and those in SC/46/NA8, the Working Group agreed that for these data both the product and the r-log$x$ model provided similar fits to the data, with the product model providing a slightly (but not significantly) better fit to the Bernoulli data alone, and the r-log$x$ model providing a somewhat better fit to the combined experimental and survey data. The resulting estimates of $g(0)$ for the different models were similar (e.g 0.584 for the product model compared to 0.543 for the r-log$x$ model when the combined data are used). Overall, the Working Group thought that the difference in model selection did not have a major effect on the $g(0)$ estimates. Nevertheless Butterworth suggested investigation of the introduction of an additional parameter into the distance component of the product model used in SC/46/NA8, to allow for the possibility that the detection function decreased closer to the vessel.

Concerning the effect of the difference in fitting criteria, calculations were performed during the meeting which indicated that the choice of fitting criteria had little effect on the $g(0)$ estimates (Appendix 2) or the resulting goodness of fit. The fitting criteria used in SC/46/NA8 yielded a reasonably 'good' fit to the marginal distributions of perpendicular and forward initial sightings data (Appendix 2).

The $g(0)$ estimates in SC/46/NA8 did not account for measurement error in angles and distance. Schweder *et al.* included measurement error when estimating $g(0)$.

The Working Group also noted that the inclusion of the survey data along with the Bernoulli trials data did not have a substantial effect on the estimates of $g(0)$ in SC/46/NA8. It had the largest effect when the r-log$x$ model was used to fit the SDPF, with $g(0)$ being reduced from 0.590 when only the Bernoulli trials data were used to 0.543 when the combined data were used. This is in contrast to the results in Schweder *et al.* (1993) in which the inclusion of the combined survey and Bernouilli trial data had a large effect on the estimate of $g(0)$.

The discussion of SC/46/NA8 highlighted the importance of accurate and careful data collection procedures and methods for duplicate identification when independent observer experiments are to be used for estimating $g(0)$. The Working Group felt it was important that a set of guidelines be developed for future surveys and analyses. A small group was set up to draft a set of recommendations. Their recommendations were adopted by the Working Group and listed in Appendix 3. These recommendations may need to be considered for incorporation into the Guideline for surveys under the RMP (IWC, 1994b).

In addition to the above, during the course of the discussion a need for research and information on the distribution of swimming speeds and its impact on identifying duplicate sightings from independent platforms was identified. Appendix 4 contains information on swimming speeds for North Atlantic minke whales that was supplied to the Working Group.

Butterworth advised the Working Group that he hopes to investigate the possibility that comparison with analyses for Southern Hemisphere minke whales might provide insight in regard to likely values for, or biases in, estimates of $g(0)$ for North Atlantic minke whales.

4.2 New Approaches

The Working Group also reviewed SC/46/O 23. It was noted that the paper presents a theoretical development of estimators for $g(0)$ and effective strip width (ESW). The Working Group agreed that the proposed approach was biased due to unresolved problems of heterogeneity and that the bias would be positive. While the approach begins from the perspective of discrete detection function in two dimensions (i.e. the same approach discussed under 4.1), the papers uses approximation that reduces the problem to a one-dimensional continuous function. While the derivation is different, the estimators in SC/46/O 23 are similar to those used previously (Butterworth and Borchers, 1988). However, to some extent stratification by pod size and sighting conditions, as recommended by the author, may reduce some of the effects of heterogeneity at the expense of increased variance. However, the basic effect of heterogeneity due to diving behaviour cannot be eliminated by this approach (Schweder *et al.*, 1991b).

5. AVOIDANCE/ATTRACTION

SC/45/NA8 was reviewed by the Working Group. This paper suggested that vessel-attraction behaviour could be biasing ship board line transect estimates for North Atlantic minke whales. The Working Group noted that there was no quantifiable data available for assessing whether attraction or avoidance behavior does occur. It was noted that occasional observed examples of attraction behaviour cannot be used to conclude on average whether attraction, avoidance or no reaction is occurring. It was also pointed out that behaviour observed in relationship to stationary or slow moving vessels cannot be extrapolated to the expected behaviour in relation to survey vessels travelling at 10-12 knots.

It was suggested that simulation models might be helpful in elucidating the possible magnitude and direction of bias that could be introduced into abundance estimates due to the response of minke whales in the North Atlantic to survey vessels. The range of such simulations might be constrained by incorporating existing estimations of the observed two dimensional hazard rate function. However, such simulations would likely require better information on minke whale behaviour in order to provide useful results. Schweder noted that at least six continuous tracks of radio-tagged minke whales were currently being analyzed and may provide useful information on possible vessel reaction behavior. Results from these radio tagging studies would be available at next years Scientific Committee meeting.

There was some discussion regarding whether information on avoidance/attraction of southern hemisphere minke whales to survey vessels could be applied to the North Atlantic. There was general agreement that the comparative approach was unlikely to produce reliable results. Rather, some direct approaches were identified: (1) radio-tracking studies of individual animals; (2) independent platforms of observation for observing the response of individual animals approached by survey vessels; (3) analyses of information on swimming directions at the time of initial sighting and (4) analyses of implied swimming tracks derived from linking observed surfacing sequences (e.g. using the data from the $g(0)$ independent observer experiments). The Working Group noted that there were problems with all of these approaches. There was no agreement on what would be the best approach for investigating this problem or what priority should be placed on determining if significant reaction behavior occurs in North Atlantic Minke whales with respect to approaching survey vessels. Improved methods for estimating whether attraction or avoidance behavior is occurring would be desirable.

6. NEW ABUNDANCE ESTIMATES

The Working Group noted several abundance estimates as identified in working papers under this agenda item. The Working Group did not have time to review these estimates and noted that if the Scientific Committee was to use them in its future work they would need to be reviewed. The following documents pertain to the corresponding agenda items: (6.1) fin whales (eastern North Atlantic) - SC/46/NA6; (6.2) humpback whales (eastern tropical Pacific) - SC/46/NP4; (6.3) North Pacific minke whales - SC/46/NP6.

7. SURVEY PLANS

7.1 North Atlantic minke whale

A cooperative project between the Institute of Marine Research and the Norwegian Computing Centre (Research Council of Norway) has been initiated to conduct a survey for North Atlantic minke whales starting in July 1995. The intention is to survey the same area as covered by Norwegian vessels in 1989 (see SC/46/NA4) and also the western part of the Norwegian Sea including the Jan Mayen area. No decision has yet been taken with regard to methodology and coverage, other than that the survey will be a vessel survey and two independent teams of observers will be on each vessel. Comments on the potential use of adaptive survey designs have been solicited. Duplicate identifications will be automated to a large extent using objective criteria. The first stage of the preparations for this research are scheduled to be completed by the end of 1994. Results from the survey will be available in the spring of 1996.

The Working Group supported the general survey as proposed and the plan to incorporate independent observers on each survey platform in order to estimate $g(0)$ as part of the normal survey operations. Smith noted that a cetacean survey in the western North Atlantic east to Sable Island, Canada has been scheduled for the summer of 1995 which will be focused on porpoises, dolphins, beaked whales, pilot whales and large whales such as right and humpback whales. There was agreement that the principal investigators directing these surveys should communicate with one another to ensure to the degree possible that the data were compatible and that survey effort was distributed in time and space in an efficient manner.

It was noted that Iceland also plans to conduct a survey for minke whales in 1995 (SC/46/NA10). The Working Group noted the desirability of having the results of such a survey available to the IWC. However, it felt that the mechanism for achieving this and any possible interaction of IWC with this survey was outside the terms of references of the Working Group and would be more appropriately discussed by the full Scientific Committee.

Several issues were discussed regarding the development of adaptive sampling techniques (i.e. where the distribution of searching effort is adjusted based on the encountered density of whales) for cetacean sighting surveys. The Working Group noted that the IWC would be interested in the general development of this methodology for cetacean surveys and there would be a need for the Scientific Committee to review the adaptive sampling methodology if it were to be used.

7.2 North Pacific minke whale

Sighting surveys in the North Pacific have been scheduled by the National Research Institute of Far Seas Fisheries (NRIFSF) of Japan for the summer of 1994. Line transect methods will be employed. The proposed area of study includes the Sea of Japan, the east China Sea, the Yellow Sea, and other areas in the western Pacific including the EEZ of some countries (see SC/46/O 22). The primary target species include minke whale, Bryde's whale, Dall's porpoise, short-finned pilot whale, and *Mesoplodon* spp. In addition to whale sightings, biopsy skin sampling will be conducted on an opportunistic basis. Research will not be conducted in the territorial waters of other countries without prior authorization.

In addition, a winter sighting survey is scheduled by NRIFSF in the North Pacific in the South China Sea and the western tropical North Pacific between January and March 1995. The objective of this cruise is to collect information on the wintering distribution of Bryde's whale, minke whale, and humpback whale.

The Working Group endorsed the general need for the summer surveys targeting minke whales in support of the work of the Management sub-committee in developing RMP implementation trials for the North Pacific Minke whales (IWC, 1994a). Concerns were expressed that the proposal as presented provided insufficient information to evaluate the survey design, but additional information was provided by the proponents during the discussion.

8. ADOPTION OF REPORT

The report was adopted as amended.

REFERENCES

International Whaling Commission. 1994a. Report of the Scientific Committee, Annex G. Report of the Working Group on North Pacific Minke whale management trials. *Rep. int. Whal. Commn* 44:120-44.

International Whaling Commission. 1994b. Report of the Scientific Committee, Annex J. Guidelines for conducting surveys and analysing data within the Revised Management Scheme. *Rep. int. Whal. Commn* 44:168-74.

Schweder, T. and Host, G. 1992. Integrating experimental data and survey data to estimate g(0): a first approach. *Rep. int. Whal. Commn* 42:575-82.

Schweder, T., Oien, N. and Host, G. 1991. Estimates of the detection probability for shipboard surveys of northeastern Atlantic minke whales, based on a parallel ship experiment. *Rep. int. Whal. Commn* 41:417-32.

Schweder, T., Oien, N. and Host, G. 1992. Estimates of g(0) for northeastern Atlantic minke whales based on independent observer experiments in 1989 and 1990, found by the hazard probability method. *Rep. int. Whal. Commn* 42:399-405.

Schweder, T., Oien, N. and Host, G. 1993. Estimates of abundance of northeastern Atlantic minke whales in 1989. *Rep. int. Whal. Commn* 43:323-31.

Table 1

Comparisons of the estimated number of Bernoulli failures from the 1990 $g(0)$ independent observer experiments based on the classification procedure used in SC/46/NA8 and Schweder *et al.* 1993.

	SC/46/NA8	Schweder *et al.* Ulltang's judgement
Success	44	40
Failures	151	183
Total	195	223

Appendix 1

AGENDA

1. Appointment of Chairman

2. Appointment of Rapporteurs

3. Adoption of Agenda

4. g(0)
   - 4.1 North Atlantic minke whale analyses
   - 4.2 New approaches

5. Avoidance/Attraction

6. New abundance estimates
   - 6.1 Fin whales - Eastern North Atlantic
   - 6.2 Humpback - Eastern Tropical Pacific
   - 6.3 North Pacific minke whales

7. Survey plans
   - 7.1 North Atlantic minke whales
   - 7.2 North Pacific minke whales

8. Adoption of Report

Appendix 2

NORTHEAST ATLANTIC MINKE WHALE $g(0)$: SUPPLEMENTARY INFORMATION ON ANALYSES PRESENTED IN SC/46/NA8

J.G. Cooke

Observed and predicted marginal distributions of sightings

Fig. 1. shows the observed and predicted frequencies of initial perpendicular distances (y-values) for sightings. The predicted frequencies are from the preferred model fit in SC/46/NA8: full data set (1989 survey plus 1990 experiment); product model with Poisson approximation; truncation at y = 0.5 n.miles and $\Theta = 90°$.

Fig. 2 shows the observed and predicted forward (parallel) distances of initial sightings (x-values). Although the original distances estimates are in terms of radial distances, the rounding is reflected in this graph to some extent. The peak in the bin 0.5-0.55 n.miles is due to sightings recorded as 1000m with angles from 0° to 20°.

Fig. 3. Shows the distribution of initial perpendicular distances to whales or pods considered to be duplicates according to the list in SC/46/NA8.

Fitting criterion for initial sighting positions

SC/46/NA8 used the likelihood of the two-dimensional frequency distribution of initial sightings positions as the fitting criterion. For comparison with the fitting criterion used in SC/44/NAB12, the fits were repeated by fitting to various marginal totals only.

The results are shown in Table 1. One of the statistics used in SC/44/NAB12 involves the proportion of sightings with $y > 0.5$ n.miles. To fit this statistic, the truncation at 0.5 n.miles was waived. For comparison, the results of using the two-dimensional fit without truncation are also shown. All other fits have truncation at y = 0.5 n.miles.

Since less than 4% of the sightings have $y > 0.5$ n.miles, the choice of statistics in SC/44/NAB12 is perhaps not too appropriate, but in this case it does not seem to affect the results.

With this data set the choice of fitting criterion does not seem to have much influence on the results.

Bernoulli likelihood for different data sets and fitting criteria

Table 1 also shows the log-likelihood of the Bernoulli trials for the various fits. The greatest log-likelihood, -98.87, is of course obtained when the Bernoulli trials alone are fit. The log-likelihood of the Bernoulli trials is reduced by 2.1 when the full survey data are fit and is not significant ($P \approx 0.1$, df ≈ 2). The mean x-value in the survey was 0.232 n.miles (SE 0.006) as against 0.254 (SE 0.012) in the experiment. The difference is not significant ($P \approx 0.1$) but may be sufficient account for the slight reduction in the $g(0)$ estimate compared with using the experimental data alone.

Table 1

Results of various fits.

Date set	Fitting criteria	Bernoulli log-likelihood	$g(0)$ estimate	s.e. of $g(0)$
Bernoulli only	-	-98.87	0.606	
Experimental	2-D	-99.89	0.620	
All data	2-D	-100.97	0.591	0.035
All data	mean X	-100.27	0.581	
All data	mean Y	-99.89	0.615	
All data	mean X, mean Y	-100.49	0.593	
All data	mean R	-100.73	0.593	
All data	mean X, mean R	-100.84	0.605	
All data (NT)	mean X, mean R, and P(Y > 0.5nm)	-101.76	0.631	
All data (NT)	2-D	-101.37	0.605	

Note: NT means no truncation at y = 0.5 n.miles All other entries have truncation at y = 0.5 n.miles (resulting in exclusion of about 4% of data points).

Fig. 1.

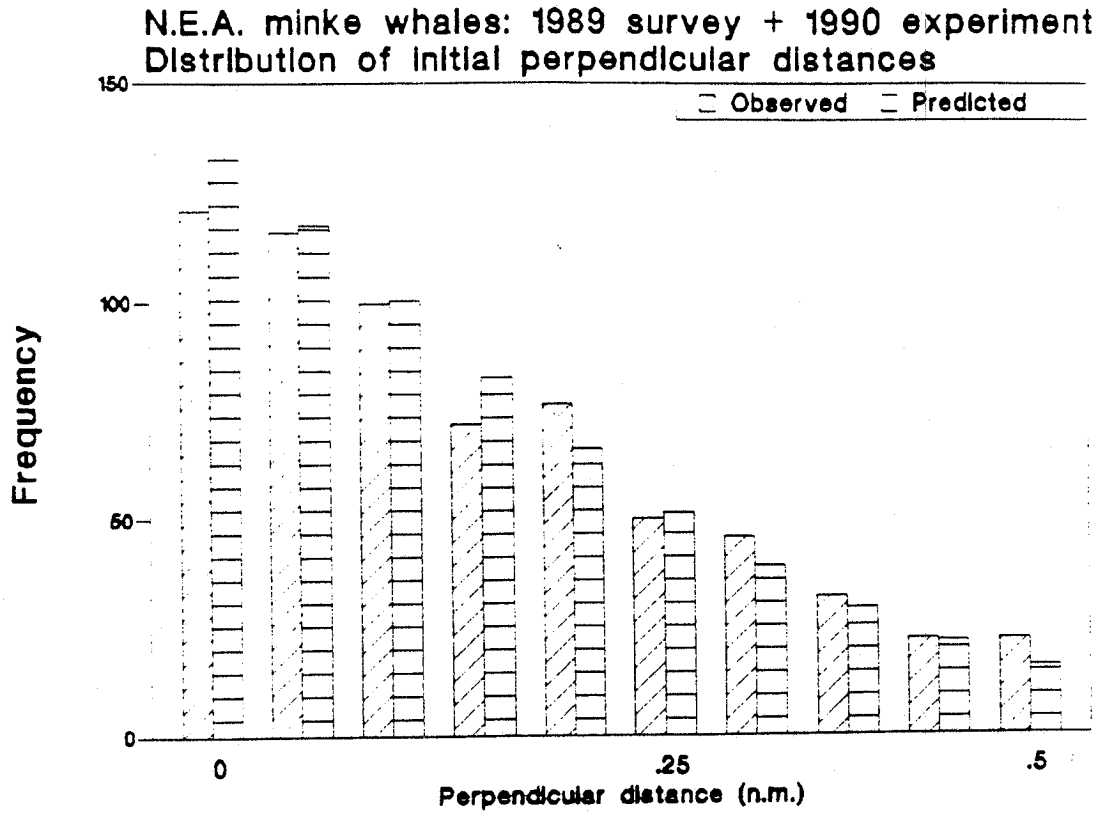

N.E.A. minke whales: 1989 survey + 1990 experiment
Distribution of initial perpendicular distances
Observed
Predicted
Frequency
150
100
50
0
0
.25
.5
Perpendicular distance (n.m.)

Fig. 2.

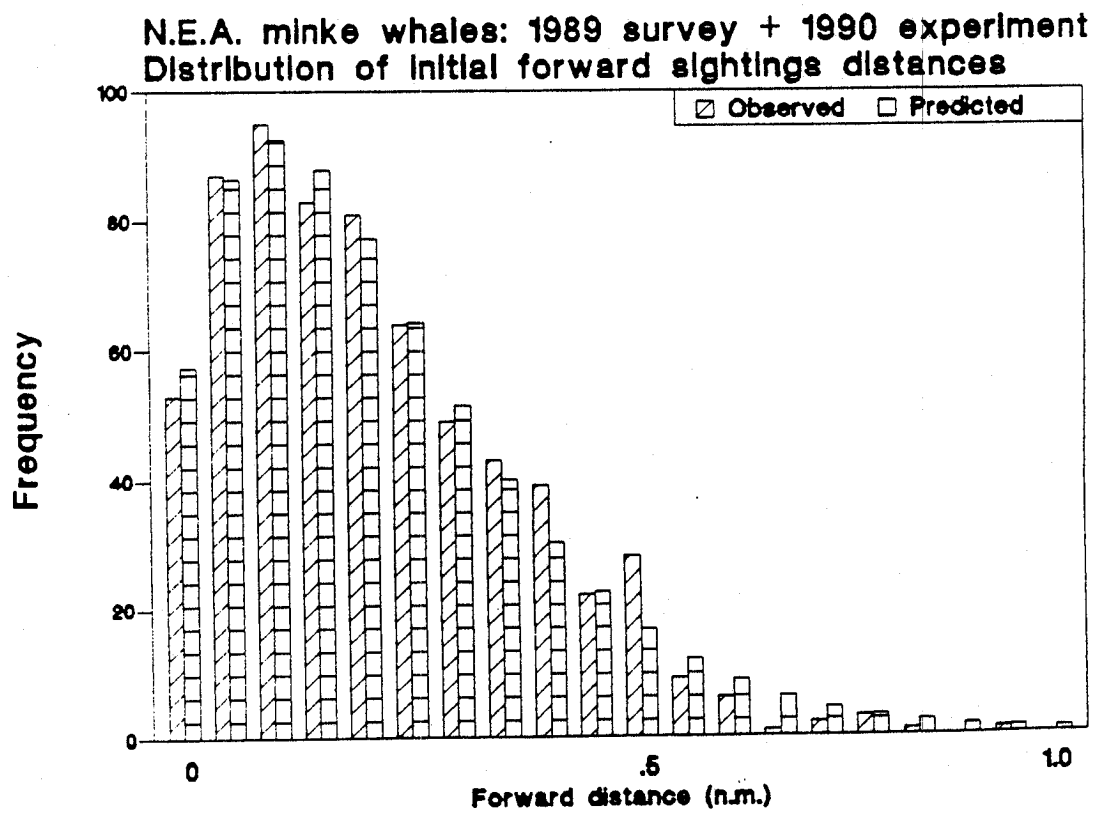
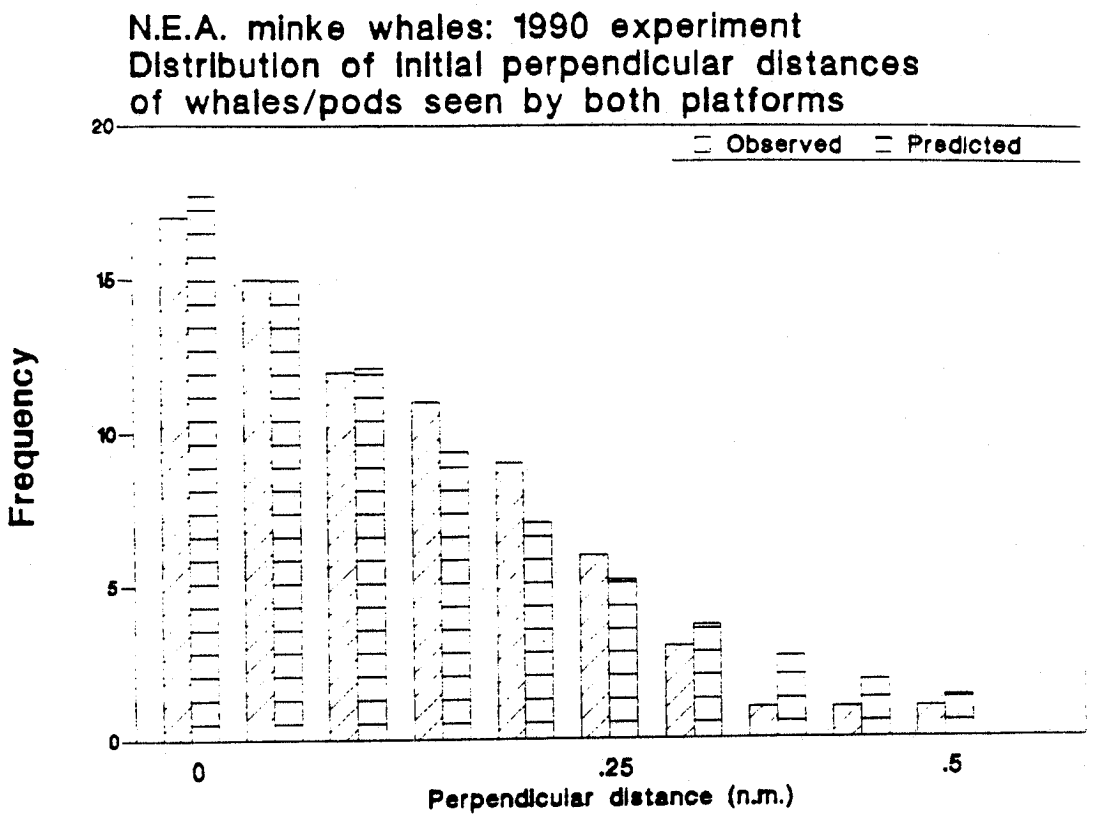

N.E.A. minke whales: 1989 survey + 1990 experiment
Distribution of initial forward sightings distances
Observed
Predicted
Frequency
100
80
60
40
20
0
0
.5
1.0
Forward distance (n.m.)

Fig. 3.


N.E.A. minke whales: 1990 experiment
Distribution of initial perpendicular distances
of whales/pods seen by both platforms
Observed
Predicted
Frequency
20
15
10
5
0
0
.25
.5
Perpendicular distance (n.m.)

Appendix 3

RECOMMENDED GUIDELINES FOR PROCEDURES AND DATA TO BE COLLECTED IN INDEPENDENT OBSERVER SURVEYS

Operational procedures and data recording

The group noted that standard procedures for accurate data capture on line transect surveys should be followed on IO surveys. It concentrated, however, on procedures and data specific to IO surveys in general, and IO surveys where the intended analysis involves estimation of two dimensional detection hazard functions in particular. The following recommendations were made in this regard:

Precise sighting times

Use of electronic recording devices is considered critical for obtaining precise sighting times, which are in turn critical for reliable duplicate identification.

As it is not always possible to record precise times, even when electronic recording devices are used, it is also important that there is a facility for recording the fact that a recorded time is not precise when this is the case.

Precise positions

Distance and angle estimation training should be conducted at the start and during surveys in the interests of obtaining as precise positional data as possible.

Estimates of the bias and precision of position estimates are essential for the evaluation of the duplicate status of sightings. Estimated distance and angle calibration experiments must be conducted to obtain these estimates. The observer making the estimates should be identified both in the calibration experiment data and in the survey data. Determination of the best design and conduct of these experiments requires further work. One factor to be considered is obtaining a sufficient range of combinations of angles and distances, bearing in mind typical distributions of angles and distances obtained during the survey.

Tracking procedures

Tracking teams should consist of more than one observer.

Data records for each pod/animal track should contain some information on the level of certainty that the resightings are of the same pod/animal. (For example, if there was uncertainty whether or not a particular cue in the series of cues comprising the track was from the pod/animal being tracked, this should be indicated.)

There is a trade-off between obtaining complete tracks from both platforms for reliable duplicate identification on the one hand, and maximising g(0) by not diverting search effort into tracking sightings on the other hand. More work needs to be done before the nature of this trade-off is properly understood.

Whale heading

Information on the direction of movement of pods/whales at the time of sighting should be recorded for each detected cue.

Pod fragmentation

Pod fragmentation (when a previously detected pod of more than one animal splits into more than one

pod/animal) and pod formation (when more than one previously detected pod/animal joins together to form a single, larger pod) should be explicitly recorded. Data forms should be designed to accommodate the recording of these data. The number of animals associated with a sighting/resighting should be recorded for every sighting/resighting. Explicit criteria for recording more than one cue as a single sighting/resighting should be specified and used in recording data. (For example, cues from different animals in a single pod should be recorded as a single sighting/resighting if they occurred within a specified small time period of each other.)

Additional data

Each sighting/resighting record in the data forms should have a field for comments, in which additional data (such as details of pod/animal behaviour) should be recorded.

Duplicate judgement reporting

The group recognised that there were many ways of making decisions on the duplicate status of sightings/resightings. It also noted that what may be a useful/reliable method of duplicate identification for one species/area/survey procedure, might be an inappropriate method for another species/area/survey procedure. It did not, therefore, address the question of how best to do duplicate classification, but instead restricted its attention to how the classification procedure and the associated data should be reported. The following recommendations were made in this regard:

Data from IO survey analyses which are or have been presented to the IWC should contain a full record of all sightings and resightings, together with the status of each of these. 'Status' in this context refers to the duplicate classification of each sighting/resighting (as Bernoulli trial with a 'failure', Bernoulli trial with a 'success', or no Bernoulli trial) as used in the analysis, as well as details of whether or not the sighting/resighting was excluded from the analysis altogether, or was excluded from a part of the analysis.

The criteria which were used for duplicate judgement should be specified as explicitly as possible, the object being to make each duplicate decision intelligible to someone not involved in the actual decision making.

Some descriptive data/statistics on the distribution of sightings/resightings with respect to the duplicate identification criteria should be presented. For example, if proximity in time was a primary criterion for duplicate identification, a histogram of times between resightings of the same pod/animals might usefully be presented.

It is required to classify each surfacing observed by a platform into one of the following categories (although C and D need not be distinguished from each other):
(A) surfacing not seen by platform 2, and whale also not seen previously by platform 2 (Bernoulli trial with a 'failure' outcome)
(B) surfacing seen by platform 2, whale not previously seen by platform 2 (Bernoulli trial with a 'success' outcome)
(C) surfacing not seen by platform 2, but whale previously seen by platform 2(no Bernoulli trial)
(D) surfacing seen by platform 2, but whale also previously seen by platform 2 (no Bernoulli trial).

Some quantitative analysis of the errors in duplicate judgement and their effect on the estimate of g(0) should be reported. For example, say a particular classification procedure yielded three classes of sightings; definite duplicates (because of simultaneous cues at similar positions, say), uncertains (no simultaneous cues, but potentially a resighting of a pod/animal previously seen by the other platform), and definite

non-duplicates (too far in space and time to be candidates for duplicates). Say also that the uncertains were then examined further and allocated to either the duplicate or non-duplicate class. In this example an analysis of duplicate judgement error might reasonably consist of classifying all uncertains as duplicates and estimating g(0), then classifying all uncertains as non-duplicates and estimating g(0). This would provide a crude estimate of the magnitude of misclassification errors and their effect on the estimate of g(0). Methods and procedures need to be developed for performing analyses of the errors in duplication judgement and their effects on estimates of g(0).

Appendix 4

Swimming speeds of minke whales feeding off the coast of northern Norway and Spitsbergen

Lars Walloe and *Arnoldus Blix*

Lars Folkow and Arnoldus Blix from the University of Tromso, Norway, record swimming speeds and dive sequences of minke whales as part of their work on minke whale energetics (a manuscript has been submitted to a journal of physiology but the investigations continue).

Three methods are being used to record swimming speed of minke whales with lengths of approximately 7-8m ('average-sized'):

(1) Instantaneous swimming speeds are recorded by *VEMCO* (Type V4PS - 4HI - CPU - 500 PSI) sonic swim speed and dive depth transmitter, a *V-11* hydrophone and a *VR-60* ultrasonic receiver. The transmitter is towed 10m behind the whale.

(2) Surfacing positions of whales with VHF-transmitters are determined by triangulation, and average horizontal speed between surfacings is calculated.

(3) On a few occasions horizontal swimming speed of whales with VHF-transmitters swimming on a constant course with a constant speed during night (sleeping?) has been estimated from the speed of the following boat.

Preliminary conclusions

(1) Range of speeds is 2-9 knots (1-4.5 ms^{-1})

(2) Respiratory rate is approximately constant for swimming speeds below 7 knots ('basal metabolism'), and it increases rapidly with increasing speed above 7 knots.

(3) 'Sleeping' whales are swimming at about 2 knots.

(4) During day-time 'normal' swimming speeds of minke whales are 4-7 knots both during feeding and when travelling between feeding areas.

REFERENCE

Folkow, L.P. and Blix, A.S. 1994. Daily energy expenditure in free living minke whales. Submitted.

D.

Extract from the 1992 Report of the Scientific Committee (IWC/44/4)

7.2.2 Estimates of abundance

Estimation of g(0)

SC/44/NAB17 reported the results of simulation studies of g(0) estimation using duplicate surfacings and survey data. Various models for g(0) were tested against different underlying 'true' distributions, and a new 'Composite Model' proposed. The author concluded that estimates can

Table 1

Agreed advice to the sub-committee on management procedures on possibility of interchange between minke whales between small management areas, (see Fig. 1). 'Yes' - strong evidence of exchange; areas can be combined for cascading without sensitivity trials. 'No' - strong evidence of no exchange; areas should not be combined. 'Maybe' - some evidence consistent with exchange, but not conclusive; sensitivity trials should be carried out before deciding whether to cascade. Annex F, Appendix 3 summarises the evidence used for these determinations.

Area Pair	Exchange	Area Pair	Exchange
WG - CG	Maybe	CIC - ES/EB/EC	No
WG - CIP	Maybe	CM - ES	Maybe
WG - CIC	No	CM - EB	Maybe
WG - ES/EB/EC	No	EB - ES	Yes
WG - adjacent	Maybe	EB - EC	Yes
CIP - CIC	Maybe	EB - EN	Maybe
CIC - CM	Maybe	EB/ES - EN	Maybe
CIC - EB	No	EC - EN	Maybe
CIC - CG	Maybe	EC - EB/ES	Yes

be biased if whales react to the vessel, or if the true g(0) model is a combination of objective and subjective functions and the fitted model does not have this structure. The Committee recognised that this paper represented a substantial contribution towards understanding and testing statistical behaviour of methods of estimating the surfacing detection probability function (usually called the hazard probability of sighting) for estimating g(0).

Estimates of abundance for minke whales in the northeastern North Atlantic were reported in SC/44/NAB12, from results of sighting surveys and experiments conducted by Norway between 1988 and 1989. g(0) was estimated by fitting a spatial model for the hazard probability of sighting to the survey data combined with independent observer data, using a recently developed method, maximum simulated likelihood (Schweder and Host, 1992, *Rep. int. Whal. Commn* 42:575–82). The model fitted the observed data well, and gave an estimated g(0) of 0.360. The authors considered that any biases in the estimate of g(0) were likely to be positive, which would result in negative bias in the abundance estimate of 86,736 (CV=0.1655; 95% CI 61,000–117,000).

There was extensive discussion of the results from SC/44/NAB12 and the implications of the simulation results from SC/44/NAB17 for the estimation of g(0) used in making the abundance estimate. It was questioned whether the maximum simulated likelihood method had been tested using simulation techniques to see if it actually did provide maximum likelihood estimates. In response, some additional simulation trials were conducted and presented. While limited in extent due to the short time available, these results supported the conclusion that the method was finding maximum likelihood estimates for the parameters of the hazard rate probability model.

Concerns were also expressed that the simulation results in SC/44/NAB17 indicated that, in some cases, if the underlying true hazard rate probability model was different from the model used to estimate g(0) in SC/44/NAB12, that g(0) could be substantially biased. It was suggested that estimates of g(0) using the Composite Model (SC/44/NAB17) be calculated and compared with the estimates of g(0) in SC/44/NAB12. This was not possible because not all of the data used in SC/44/NAB12 were immediately available, and it was not feasible to do the calculations in Norway because substantial modifications would have to be made to the existing software there.

Considerable debate followed on whether the inability of the Committee to perform the alternative estimation of g(0), which was a consequence of some of the data not being available, compromised the process by which it reviewed results and reached conclusions. The majority of members believed that it did not. They noted that the simulation results of SC/44/NAB17 could be, and had been, used to provide a sufficient basis for evaluating the necessity of performing the suggested calculations before a decision could be made about the acceptability of the g(0) estimate from SC/44/NAB12. The majority of the Committee considered that alternative calculations would, at most, suggest that the g(0) estimate was positively biased, which would result in a negatively biased abundance estimate. Moreover, it was emphasised that the process employed by the Committee to evaluate and review the estimation of g(0) in this case had been very extensive and thorough. Thus, with only a few members dissenting, the Committee agreed that the process used to review results over the past three years had been highly effective at arriving at a solution to the difficult problem of making an estimate for g(0). A minority believed that the unavailability of the data precluded a full evaluation of the estimation of g(0).

After these extensive discussions, and considering previous discussions, the Committee agreed that the estimates of g(0), and abundance and their variances presented in SC/44/NAB12 were the best currently available for the 1988 and 1989 shipboard surveys of the northeastern North Atlantic, and accepted them as such.

The matter of data availability was considered to be of substantial importance, notwithstanding differences of opinion about the immediate effects discussed above. This is discussed under Item 6.2.3.

E.

Annex F - Report of the Sub-committee on North Atlantic Baleen Whales (1992)

4.2 Estimates of abundance

4.2.1 Results of Norwegian surveys in northeast Atlantic

The sub-committee first examined the results in SC/44/NAB17 which reported the results of simulation studies of estimation of $g(0)$ using duplicate surfacings and survey data. The method used was similar to that in SC/44/NAB12 except that the likelihood was evaluated directly instead of by simulation. SC/44/NAB17 examined the sensitivity of $g(0)$ estimates to various factors, two of which were identified as particularly important. Estimates could be positively biased if the true surfacing detection probability function (also known as the hazard probability of sighting) is a combination of objective and subjective components, but the fitted surfacing detection probability function does not have this structure. An alternative surfacing detection probability function was suggested that performs reasonably well in both cases investigated (which did not include cases with a new model taken as the true one). Estimates can also be seriously biased if the whales react to the vessel in the sense that the probability of a

surfacing is temporarily increased or decreased by the proximity of the passing vessel. Estimating the integral of g(y) directly appears to provide better estimates of effective strip width than estimating $g(0)$ and fitting a model to g(y) directly.

Schweder noted that the likelihood model in SC/44/NAB12 differed from the model in SC/44/NAB17 in that the SC/44/NAB17 model did not include terms for error and bias in measurement.

The sub-committee recognised that this paper represented a substantial contribution towards understanding and testing the statistical behaviour of the surfacing detection probability function for estimating $g(0)$. The paper demonstrated the general value and need for conducting simulation studies when new and complex estimators are being developed. The sub-committee encouraged further work along these lines in relationship to surfacing-based methods for estimating $g(0)$. In discussion of the paper, suggestions were made that either a bootstrap or a Bayesian approach might be useful for incorporating model uncertainty into the variance estimates. A question was raised about the goodness of fit in the simulations for the distributions of first detection distances in those cases in which substantial biases in $g(0)$ occurred as a result of a mis-match between the generating and estimation model and, in addition, whether the use of information on goodness of fit might be useful for reducing or preventing biases as a result of model uncertainty. Further simulation work would be needed to answer this question. Concerns were also expressed that the lack of sensitivity in the simulation results when the wrong surfacing patterns were used with the correct mean surfacing rate may not be a general result but only a feature of the particular set of parameter values and dive sequences used in the simulation.

It was also queried whether the bias due to fitting the wrong hazard probability model was partially caused by the number of surfacings for individual whales included in the duplicate frequency likelihood being too small. Cooke responded that in the simulation model each observer saw an average of 1.3 surfacings per whale sighted.

The sub-committee then examined SC/44/NAB12 which provided estimates of abundance of minke whales in the northeastern North Atlantic from surveys and sighting experiments conducted by Norway between 1988 and 1990. Area specific abundance estimates for the northeastern Atlantic minke whales were calculated on the basis of shipboard survey data from 1988 and 1989 (Øien, 1990; 1991), independent observer experiment data from 1989 and 1990 (Schweder *et al.*, 1991; 1992), data on distance measurement errors (Øien and Schweder, 1992) and dive time data from 1989 and 1991 (Øien *et al.*, 1990; SC/44/NAB7). No significant differences were found between sighting rates in 1988 and 1989 in survey blocks common to the two surveys. The data from the two surveys have therefore been pooled. The new dive time data presented in SC/44/NAB7 were not significantly different from those obtained by Øen (1990). The previously used Icelandic dive time data (Joyce *et al.*, 1990) were found to show significantly higher surfacing rates than the six dive time series obtained in Norwegian waters. Coming from a genetically different stock (SC/44/NAB15), the Icelandic dive time data have now been excluded from the analysis, which then include dive time data from six whales radio tracked in Norwegian waters.

A complimentary log-log model for the hazard and logarithmic forward trackline distance, log (x), was fitted to the survey data combined with the independent observer data, by the method of maximum simulated likelihood (Schweder and Host, 1992). The model fitted both data sets well. The simulation model fitted to the observed data included measurement errors as observed by Øien and Schweder (1992). Thus, the co-ordinates of the fitted model are observed (with error) distances. For this reason, $g(0)$ was, in each simulation run, calculated in a different way than previously. The effective half widths (assuming $g(0)=1$) estimated from the survey data are given in observed and not true perpendicular distance. Therefore, an abundance estimate N, calculated under the $g(0)=1$ hypothesis is now correctly (at least within a scale model over survey blocks) adjusted to the estimate $N=N/g(0)$, where $g(0)$ is the estimate of $g(0)$. The hazard probability model fitted to the data gave an estimate of $g(0)=0.360$.

The parametric bootstrap method used by Schweder *et al.* (1991; 1992) was used to obtain a sampling distribution for $g(0)$. To account for sampling variability in the dive time data, a bootstrap sample of 2-hourly dive time series was drawn for each replicate simulation run. Dive time series used in that simulation run were then drawn randomly from the fixed bootstrap sample in pro-rata proportions from the night and day strata of 2-hourly dive time series. The sampling distribution for $g(0)$ turned out to be approximately normal with a standard deviation of 0.029. The 95% confidence interval for $g(0)$ is 0.304, 0.416. In addition to the complimentary log-log model for hazard probability linear in r and log (x), two other models were fitted (for one of the models, only verbal information was given). The two other models resulted in $g(0)$ estimates of 0.40 and 0.35 respectively. Verbal information was also given to the effect that the bias in the estimate of $g(0)$ due to error and variability in the duplicate judgments made for the independent observer data, is of negligible size. Finally, the bias due to whale angle not being included in the hazard probability model, was estimated to be +20% in the estimate of $g(0)$. The resulting abundance estimate for northeastern Atlantic minke whales was 86,736 whales, with a 95% confidence interval of 60,736 – 117,449 whales.

There was extensive discussion of the results from this paper and the implications of the simulation results from SC/44/NAB17 for the estimate of $g(0)$ used in deriving the abundance estimates. The question was asked if the simulated likelihood method had been tested using simulation techniques to ensure that it actually did provide maximum likelihood estimates. Schweder stated that he had previously tested the simulated likelihood method and software in this regard but not on exactly the same model being used to estimate $g(0)$. In response to concerns over this matter, some additional simulation trials were performed based on the same model for estimating $g(0)$ and presented to the meeting (Appendix 6). It was emphasised that because of time constraints, the number of iterations and amount of simulation included in each replicate to find the estimates was small. For this reason and because time did not allow for adequate testing and validation of the simulation procedure, the results should be interpreted with caution. The results supported the earlier tests of the simulated likelihood method and indicated that there was no reason to suspect that the method was not finding maximum likelihood estimates for the parameters of the hazard rate probability model.

Concerns were also expressed that the simulation results

underlying true hazard rate probability model was different from the r-log(x) model used to estimate $g(0)$ in SC44/NAB12, that $g(0)$ could be substantially biased. It was suggested that estimates of $g(0)$ using the Composite Model (SC/44/NAB17) for the hazard rate probability introduced in SC/44/NAB17 be calculated and compared with the estimates of $g(0)$ in SC/44/NAB12. This was considered relevant because the Composite model yielded substantially smaller biases in those cases where the r-log(x) model gave large positive biases in the simulation results. It was pointed out that results in SC/44/NAB12 suggested that any substantial bias due to selecting the wrong model would have been positive with respect to $g(0)$ and as such would have resulted in a negative bias in the abundance estimates.

There was disagreement within the sub-committee about the importance and desirability of attempting to perform calculations using the Composite Model during the meeting. Most members felt that the calculations did not need to be done as a prerequisite to accepting the abundance estimates because any bias in $g(0)$ would be positive, and that requiring them to be done would take up too much of the limited time available to the sub-committee. Further, they were concerned about the potential for errors when complicated analyses are done without sufficient time to allow for testing and validation of the results. Other members thought it would be worthwhile to perform the calculations in order to have additional information on the robustness of the estimates. However, it was not possible to perform any calculations during the meeting because some of the data were not immediately available, and it was not possible to do the calculations in Norway because substantial modification to the existing software there would have to be done.

Considerable discussion took place on whether the fact that the sub-committee was not able to perform the suggested alternative calculation of $g(0)$ compromised the process by which it reviewed results and reached its conclusion. The majority of members believed that it did not. They noted that SC/44/NAB17 could and had been used to provide a sufficient basis for evaluating the necessity of performing the suggested calculation before a decision could be made about whether or not the estimate of $g(0)$ in SC/44/NAB12 was appropriate. The results in SC/44/NAB17 indicated that the alternative calculations would at most suggest that $g(0)$ could be positively biased and as such there would not be a serious problem if the estimate of $g(0)$ from SC/44/NAB12 was used. Moreover, it was emphasised that the process employed by the Scientific Committee to evaluate and review the method used for estimating $g(0)$ in this case was very extensive and thorough. The method had received extensive review and discussion at the two previous meetings. This had resulted in an evolutionary process for arriving at the current estimate of $g(0)$ in which recommendations and concerns raised by the Scientific Committee have been incorporated to improve the estimate of $g(0)$. Thus, with only a few members dissenting, the sub-committee believed that the process used to review the results when taken in the context of the last three years had been highly effective at arriving at a solution to the difficult problem of providing an estimate for $g(0)$. A minority believed the unavailability of the data precluded a full evaluation of the estimation of $g(0)$. This point is returned to below.

Other technical questions concerning the estimate of $g(0)$ and its variance were raised. These centred around the that the estimate of $g(0)$ was still likely to be positively biased. The sub-committee could not agree on this latter point. It was noted that environmental and/or observer heterogeneity could result in positive or negative biases. Not taking into account whale orientation in the analyses probably introduces a positive bias in $g(0)$.

After these extensive discussions and considering previous discussions of $g(0)$ estimation problems over the last two years, the sub-committee agreed that the estimates of $g(0)$ and abundance and their variances presented in SC/44/NAB12 were the best currently available for the 1988 and 1989 shipboard surveys of the northwest Atlantic, and accepted them as such.

Concerns were expressed about the fact that the data from the Norwegian 1990 experiments were not available at the IWC Secretariat. This had precluded estimation of $g(0)$ by an alternate method to check the results of SC/44/NAB12, which some members regarded as very important. Data from the 1988 and 1989 survey and the 1989 experiment had been supplied to the Secretariat prior to the 1991 meeting. However, problems had been encountered when attempting to use these data and because of these difficulties the Working Group on $g(0)$ at the 1991 meeting had recommended that 'more thorough cross checks, validations and documentation of the sighting data supplied to the Secretariat are needed'. No action on this recommendation with respect to the Norwegian sighting data had been taken in the interim period. Data from the 1990 survey and experiment had not been supplied to the Secretariat. The sub-committee referred the question of data availability to the full Committee for discussion. Walløe stated that Norway would correct the outstanding problems with the data currently held by the Secretariat and would also supply the data from the 1990 sighting cruises.

While the sub-committee was reviewing its report, Allison reported that the 1990 data, and accompanying documentation, had arrived that day (June 16). She also provided a summary of North Atlantic data received by the Secretariat and reported that she had not been made aware of any problems with the Norwegian survey data except that she knew that documentation for the 1989 parallel ship experiment had been incomplete. Full documentation on the data for this experiment was also received that day (June 16).

4.2.2 Best estimates for implementation of RMP

After the sub-committee had completed discussion on $g(0)$, it agreed that the estimates of abundance given in SC/44/NAB12 (86,736; 95% CI 60,736–117,449) represented the best currently available estimates of abundance for minke whales in the northeastern North Atlantic and were acceptable for use in the implementation of the RMP.

However, concerns were expressed about the way the estimates of abundances had been allocated to the Small Areas in SC/44/NAB12. These estimates had been derived by prorating estimates for each survey stratum based on the proportion of that survey stratum which was contained in each Small Area. This can result in biased estimates if density is non-uniform across a survey stratum. The sub-committee noted that it was preferable to perform the proration based on the sighting rate. An *ad-hoc* Working Group was formed to investigate whether proration based on area was likely to be a serious problem in this case.

The sub-committee also noted that estimates of

accepted by the Committee based on the results of the NASS surveys. However, estimates had only been calculated based on survey strata used in those surveys and no estimates were available for the Small Areas as defined under Item 4.1. The *ad-hoc* Working Group was also directed to investigate whether it was possible to derive acceptable abundance estimates with associated variances and co-variances for the Small Areas in the Central North Atlantic based on area proration.

This Working Group reported that estimates from the Norwegian data were very similar from both the area-based (1) and sightings-based (2) proration schemes, the largest discrepancy being 25% for one Small Area (Appendix 7). This result appeared to hold for both 1988 and 1989 survey data. While the sub-committee agreed that, in principle, it was preferable to use method (2), it was acceptable in this case to forward the method (1) estimates and their variances, from SC/44/NAB12, to the sub-committee on management procedures. In the future, it appeared preferable that method (2) be used for pro-rating estimates from sighting survey strata to management Small Areas, but this issue was referred to the full Committee for further attention.

The Icelandic data required an *ad hoc* estimation for both methods (1) and (2) in order to evaluate the potential effects of area versus sightings proration because no estimates of abundance by Small Area were presented to the sub-committee. The Working Group stressed that the estimates presented in Table 3 of Appendix 7 were coarse approximations. Examination of Table 3 indicated that there were some substantial differences in results from the two methods. The sub-committee agreed that method (2) estimates, although crude, were preferable to those of method (1). While some members expressed reservations about using estimates resulting from such hasty, *ad hoc*, procedures for management purposes, the sub-committee agreed it was acceptable to forward these estimates to the sub-committee on management procedures, given the robustness of the RMP to errors in abundance estimates. Coefficients of variation were still required, so another *ad-hoc* Working Group, was formed to make these estimates, which are presented in Table 1 of Appendix 8. Taking note of some complications recorded in the report of that Working Group (Appendix 8), the sub-committee agreed to accept, and forward to the sub-committee on management procedures for implementation simulation trials, the Small Area abundance estimates and accompanying CVs from Table 1 of Appendix 8.

Doc. 9.47.2

Consideration of Proposals for Amendment of Appendices I and II

Other Proposals

AMENDED PROPOSAL FROM THE UNITED REPUBLIC OF TANZANIA

The attached document has been submitted by the delegation of the United Republic of Tanzania[1].

[1] *As indicated in the "Foreword", these supporting documents are not reproduced in the Proceedings. (Note from the Secretariat.)*

Doc. 9.47.3

Consideration of Proposals for Amendment of Appendices I and II

Other Proposals

DRAFT RESOLUTION ON THE CONSERVATION OF *COLLOCALIA* SPP.

The attached draft resolution (Annex) has been prepared and submitted by Italy and the following range States of the genus *Collocalia*: Brunei Darussalam, Indonesia, Malaysia, Philippines, Singapore and Thailand.

Doc. 9.47.3 Annex

DRAFT RESOLUTION OF THE CONFERENCE OF THE PARTIES

Conservation of Edible–nest Swiftlets of the Genus *Collocalia*

AWARE that swiftlets of the genus *Collocalia* build nests wholly or partially made of saliva and that trade in the nests of some species is of very high commercial value and is providing benefits for local communities;

RECOGNIZING the high priority that all range States place on the conservation and sustainable use of the swiftlets nests;

RECOGNIZING also that nest harvest from many caves in range States appears to be declining and that such declines may be related to various factors such as colonies disturbance and reduced breeding productivity;

NOTING that more scientific studies are urgently needed in order to assess the sustainability of nest harvesting with respect to the wild–breeding swiftlet populations;

CONSIDERING that the Conference of the Parties has competence to consider any species subject to international trade;

THE CONFERENCE OF THE PARTIES TO THE CONVENTION

URGES those Parties that are range States of the genus *Collocalia* to:

a) encourage scientific research to promote the sustainability of nest harvesting through standardized management programmes;

b) explore ways of enhancing participation of the bird-nest industry representatives in swiftlet conservation and sustainable use programmes; and

c) review regulations controlling harvest of wild–breeding swiftlet populations in accordance with the results of the scientific research carried out under the paragraph a);

DIRECTS the CITES Secretariat to convene a technical workshop in order to establish conservation priorities and actions for the sustainability of swiftlet–nest harvesting, and to invite the Chairman of the Animals Committee to participate in this workshop to be held within twelve months;

DIRECTS the Animals Committee to provide scientific guidance for the implementation of this Resolution; and

REQUESTS Italy to co–ordinate the interested Parties, intergovernmental and non-governmental organizations to provide fundings in order to implement this Resolution, particularly referring to the scientific researches and workshop.

Doc. 9.47.4

Consideration of Proposals for Amendment of Appendices I and II

Other Proposals

COMPLEMENTARY INFORMATION FROM URUGUAY

The attached document has been provided by Uruguay and is available in Spanish only[1].

[1] *As indicated in the "Foreword", these supporting statements are not reproduced in the proceedings. (Note from the Secretariat.)*