CONVENTION ON INTERNATIONAL TRADE IN ENDANGERED SPECIES
OF WILD FAUNA AND FLORA
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Twenty-eighth meeting of the Animals Committee
Tel Aviv (Israel), 30 August-3 September 2015

NDF GUIDELINES AND EXAMPLES FOR AQUATIC SPECIES

The attached information document has been submitted by the Secretariat at the request of Japan in relation to agenda item17.[*]

NDF Guidelines for Aquatic Species
by the Fisheries Agency of Japan

COP16 of CITES adopted a resolution on Non Detriment Finding (NDF) including non-binding guidelines. NDF issued by a scientific authority is a requirement when issuing export permits or introducing specimen from the Sea for a species listed in CITES Appendix I or II. Accordingly, the Fisheries Agency of Japan has established NDF guidelines for aquatic species for which the Agency is a scientific authority. NDF will be made in accordance with these guidelines.

1. NDF should be made as much as possible by each genetically independent stock (hereinafter referred to as a species). Regarding look-alike species, when identification of species is clearly possible, NDF is unnecessary.

2. NDF can be made when the specimen is:
    i)   collected before the listing in Appendix
    ii)   not a nature origin such as:
       a) Bred from parents collected before listing in Appendix
       b) Bred from parents which were imported under the CITES procedures
       c) Bred from parents which met the requirement of NDF
       d) Others (Bred under a robust technique which was proved to be able to make F2.)
    iii)   collected from a part of an individual by a method without affecting the survival of the individual (such as a specimen of biopsy sampling, an embryo, spermatozoa and so on)
    iv)   collected from a dead individual and it is reasonably considered that the death is not attributable to the specimen collector, e.g., a stranded whale. A by-caught individual is excluded from this category.

3. When a specimen does not meet any criterion of paragraph 2 above, NDF should be basically considered, taking into account the following information:
    i)   Biological characteristic and life history of the species
    ii)   Distribution range of the species (historical and present)
    iii)   Stock structure, status and trend of the species
    iv)   Threats to the species
    v)   Historical and present fishing situation and mortality rate of the species
    vi)   Introduced and proposed management measures for the species
    vii)   Compliance situation of the management measures
    viii)   Monitoring of the species status
    ix)   Conservation of the species
    x)   Continuity of the role of the species in the ecosystem
    xi)   Effects of illegal trade on the survival of the species

4. In collecting the information of paragraph 3 above, the following items should be examined. An applicant may be requested to submit relevant information as necessary.
    i)   Relevant scientific papers
    ii)   Ecological risk assessment
    iii)   Results of surveys at fishing grounds and markets
    iv)   Knowledge and expertise of local people involved
    v)   Views of experts
    vi)   Trade data

5. When NDF is considered based on the information in paragraph 3 above, as a first step, items iii), v) and vi) of paragraph 3 should be considered in accordance with the following criteria in order. If these three items meet requirements in the criteria, the other items in paragraph 3 should be considered to judge whether NDF can be made.
    i)   When a TAC of the species is established or calculated on scientific bases, the present total catch of the species including the export is less than the amount of the TAC.
    ii)   In case that establishment or calculation of a TAC of the species on scientific bases is difficult, but the stock trend can be estimated for a certain period based on catch or other data, the stock does not show a decreasing trend and the present total catch of the species including the export is less than the average past catch amount of the species. (The length of the period depends on biological characteristic of the species.)
    iii)   In case that establishment or calculation of a TAC of the species on scientific bases is difficult and 5. ii) above is not applicable, the stock is considered to be maintained through the management measures which have been introduced or will be introduced in the near future. In making judgment

of the effect of the management measures, the following information should be considered:
   a) Protected areas are effectively established.
   b) Time closure is effectively established.
   c) It is estimated that the fishing pressure has been decreased substantially because the number of fishermen to catch the species is regulated and the number has been substantially decreased over a long period.
   d) Regulation of fishing gear is effectively established.
   e) Individuals smaller than a certain size are protected.
   f) Other effective management measures (such as release of females, prohibition of bottom trawl, restriction of power of light and so on) are established.
   g) Combination of above mentioned measures brings the same conservation effect.
iv) In case that establishment or calculation of a TAC of the species on scientific bases is difficult and neither 5. ii) nor iii) is applicable, the annual catch amount of the species is considered negligible against the estimated stock size. In estimating the stock size, the minimum stock size should be estimated, taking into account, *inter alia*, the past catch record, the area of distribution, the stock size and productivity of look-alike species as well as the catch amount and the maximum fishing efficiency. The "negligible level" should in principle follow the table below, depending on the productivity of the species. When any parameter of the species falls under a less productivity category, the species shall be regarded as belonging to the category.

Parameters	Productivity		
	Low	Middle	High
Natural mortality rate（M）	$M < 0.2$	$0.2 \leqq M \leqq 0.5$	$0.5 < M$
Intrinsic rate of Natural increase（R）	$R < 0.14$	$0.14 \leqq R \leqq 0.35$	$0.35 < R$
von Bertalanffy growth rate（K）	$K < 0.15$	$0.15 \leqq K \leqq 0.33$	$0.33 < K$
Age at maturity（t mat）	$8 < T\,mat$	$3.3 \leqq t\,mat \leqq 8$	$t\,mat < 3.3$
Maximum age（t max）	$25 < T\,max$	$14 \leqq t\,max \leqq 25$	$t\,max < 14$
Generation interval（G）	$10 < G$	$5 \leqq G \leqq 10$	$G < 5$
Negligible level [1]（Recovery Index（Fr）=0.1）	0.7%	1.2.%[2]	1.8%[3]

   v) The species is considered to be maintained under the present fishing activities because of the stock enhancement activities for the species

   When the species does not meet any of the criteria above, NDF should not be made unless there are special reasons.

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[1] "negligible level" can be calculated as R*Fr/2 by the method of Wade 1998.

[2] Median value of R is used as there are ranges.

[3] 0.35 (lower limit) is used as R

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Trade of sharks listed in CITES Appendix ll Japan's Practice on NDF

Fisheries Agency of Japan

Shark species in Appendix II

Following shark species were listed in Appendix II before COP 16.

- Whale shark (*Rhincodon typus*)

- Basking shark (*Cetorhinus maximus*)

- Great white shark (*Carcharodon carcharias*)

Shark species listed in Appendix ll at COP16

At the COP 16 held in Bangkok in 2013, 5 shark species were listed in Appendix II.

- Oceanic whitetip shark (*Carcharhinus longimanus*)

- 3 species of Hammerhead sharks (*Sphyrna* spp.)

- Porbeagle (*Lamna nasus*)

What happened if a species was listed in CITES Appendices

- <u>Appendix I</u> includes species threatened with extinction. **Commercial trade is prohibited**

- <u>Appendix II</u> includes species not necessarily threatened with extinction, but in which trade must be controlled in order to avoid utilization incompatible with their survival. **Trade is only permitted with export permit.**

- <u>Appendix III</u> includes species that are protected in at least one country, which has asked other CITES Parties for assistance in controlling the international trade. **Trade is only permitted with export permit or certificate of origin.**

What must be done to export Appendix II-listed sharks ?

● In order to export products of sharks listed in Appendix II <u>"export permit" is necessary</u>.

● To issue an export permit, the following two findings must be made.

- A Scientific Authority of the State of export has advised that such export would not be detrimental to the survival of that species (**<u>Non Detriment Finding: NDF</u>**);

- A Management Authority of the State of export was satisfied that the specimen was not obtained in contravention of the laws of that State for the protection of fauna and flora
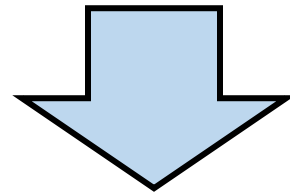
NDF Guideline

- A Resolution on the NDF guidelines was adopted at COP16. While they provided guidance, it depends on each CITES member to decide how to do it.

- Several workshops have been already held to address this issue and more workshops would be held in the future.

- CITES Secretariat is expected to disseminate the results of workshops.

- Japan established its NDF Guideline for aquatic species last year, and would like to share the Guideline.

Outline of Japan's NDF Guideline - 1

In case the specimen is:

- Collected before the listing in the Appendix
- Case of not a nature origin
- Such as biopsy sample, embryos spermatozoa and so on
- Collected from death individual (By-catch is excluded from the criterion)

⬇

NDF can be made

Outline of Japan's NDF Guideline - 2

● NDF should be considered based on following information

- ✓ Biological characteristic and bionomics of the species
- ✓ Distribution range of the species (historical and present)
- ✓ Stock structure, situation and trend of the species
- ✓ Threats to the species
- ✓ Historical and present fishing situation and mortality rate of the species
- ✓ Management measures which have been introduced and suggested on the species
- ✓ Compliance situation of the management measures
- ✓ Monitoring situation of the stock situation
- ✓ Conservation situation of the stock
- ✓ Continuity of the role of the species in the ecosystem
- ✓ Influence of illegal trade on the survive of the species

Not all the information are necessarily available, but important thing is to collect as much information as possible

Outline of Japan's NDF Guideline - 3

●When NDF is made, following items should be studied

- ✓ Related scientific papers

- ✓ Ecological risk assessment

- ✓ Results of fishery and market survey

- ✓ Knowledge and expertise of local related people

- ✓ Views of experts

- ✓ Trade data

Outline of Japan's NDF Guideline - 4

1. Is a TAC of the species established or estimated?

YES

If present total catch of the species including the export was less than the amount of TAC, NDF could be made

NO

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Outline of Japan's NDF Guideline – 5

2. Can the stock situation be estimated during certain period?

YES

NO

If stock abundance was not decreasing trend and present total catch of the stock was less than the average in the past catch amount, NDF could be made

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Outline of Japan's NDF Guideline – 6

3. Is the stock considered to be managed through the management measures which have been introduced or will be introduced in the near future?

YES

NO

NDF can be made with reference to management measures listed below

Protected areas, time closures, limitation of number of licenses, gear restriction, protection of small individuals, and so on

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Outline of Japan's NDF Guideline – 7

4. Is an annual catch amount of the stock considered as a negligible level in the estimated total stock amount?

YES

NO

NDF can be made with reference to the used formula

NDF can not be made unless there are special reasons

Difficulty on making NDF in Some Cases

●If stock assessment could be conducted and TAC was established, it would not be difficult to make NDF.

●However, species with a limited scientific information, such as by-catch species, this is not feasible.

Examples of making NDF for shark species (Whale shark - 1)

The Management Authority of Japan received an application to export two whale sharks which were caught by set nets.

✓ On average about 1 or 2 whale sharks are caught by set nets in Okinawa Prefecture annually for more than three decades.
✓ Size of the by-caught whale sharks has been unchanged.

➡️ <u>The stock of whale shark is perhaps stable.</u>

✓ Fishing effort of the set nets is unknown.
✓ There are limited data on whale shark catch except Okinawa Pref.

➡️ <u>It is difficult to make stock assessment of the whale shark.</u>

Examples of making NDF for shark species (Whale shark - 2)

✓ Exporting two whale sharks may not be detrimental to the survival of the species. However there is no clear evidence.

✓ How much exports of whale sharks will not be detrimental to the survival of the species?

✓ There are limited data of catch of whale shark in other countries.

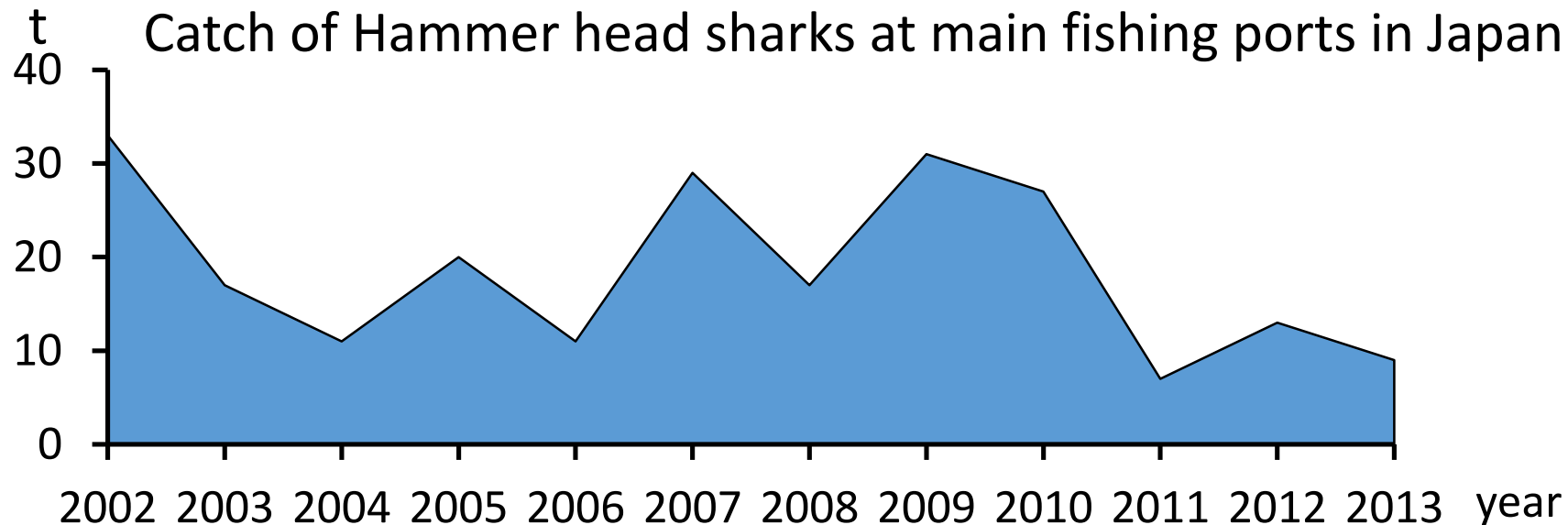⇨ It is difficult to set the upper limit of the export of whale sharks.

⬇
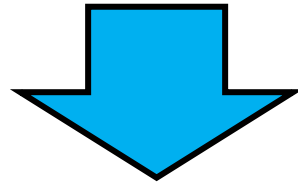
The Fisheries Agency of Japan was not able to make NDF for the export of whale sharks

Examples of making NDF for shark species (Hammerhead shark -1)

The Fisheries Agency of Japan received a request to export a live Scalloped hammerhead.

✓ Japan has the data of catch and CPUE of hammerhead sharks. The data shows that the stocks of hammerhead sharks is expected to be stable.

Catch of Hammer head sharks at main fishing ports in Japan

Examples of making NDF for shark species (Hammerhead shark -2)

✓ Japanese fishing effort on hammerhead sharks (the number of vessels) is managed and has not been increased.
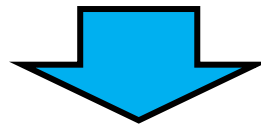
➡ <u>The fishing effort on hammerhead sharks is regulated.</u>

✓ Stock structure of hammerhead sharks is unknown.
✓ There are limited data of hammerhead sharks in other countries.
✓ Japanese data does not separate three hammerhead shark species (there is no data on Scalloped hammerhead).

➡ <u>It is difficult to estimate stock situation of Scalloped hammerhead.</u>

⬇

The Fisheries Agency of Japan was not able to make NDF for the export of Scalloped hammerhead.

Examples of making NDF for shark species (Porbeagle - 1)

Japanese tuna longliners harvest Porbeagle in the high seas in the Northern Atlantic and land them at Spanish ports.

✓ Japan has the data of catch and CPUE of Porbeagle in the Atlantic.
✓ Japanese fishing effort on Porbeagle is regulated and has been decreased.

Catch of Porbeagle
This data was submitted to ICCAT
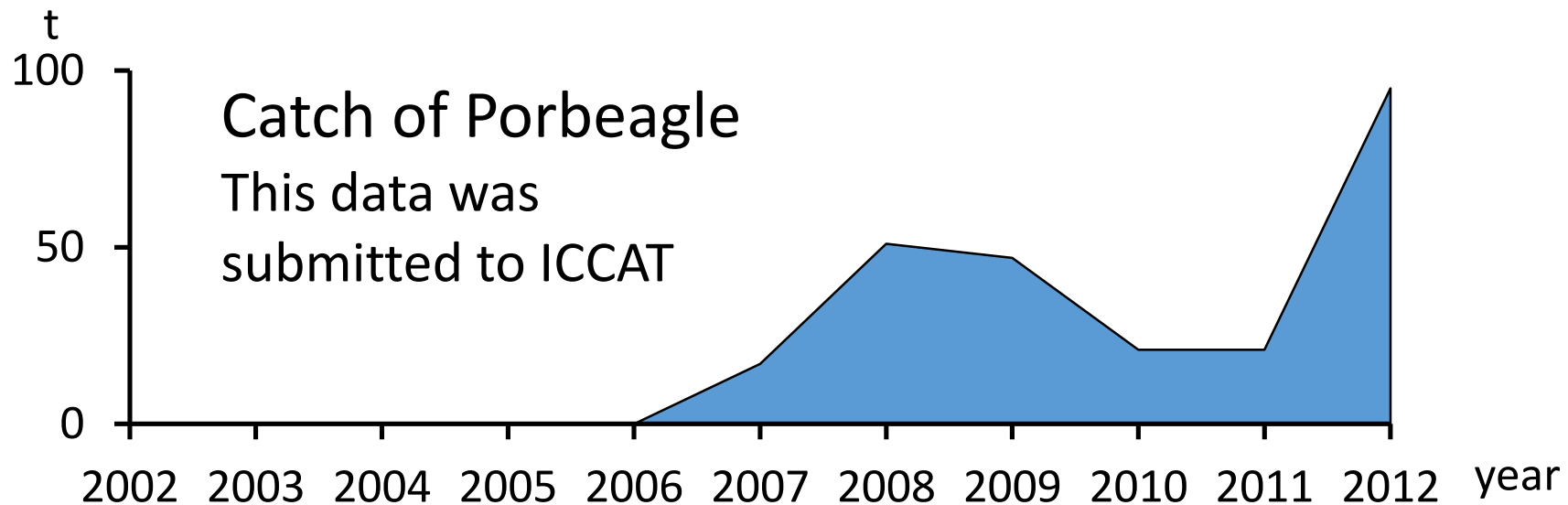
Examples of making NDF for shark species (Porbeagle - 2)

✓There is a scientific paper which indicates that the stock status of Porbeagle in the southern hemisphere is healthy.

(Distribution and trend in abundance of the porbeagle (*Lamna nasus*) in the southern hemisphere, Semba et al, 2013)

➡ NDF can be made for Porbeagle caught in the Southern Atlantic.

✓Several countries catch Porbeagle in the Northern Atlantic. When Japan makes NDF for this stock, it is necessary to consider the other countries' catch.

✓Stock assessment of this stock in the Northern Atlantic is difficult because of lack of data in the area.

⬇
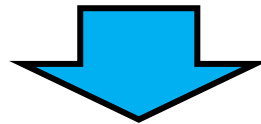
The Fisheries Agency of Japan was not able to make NDF for Porbeagle caught in Northern Atlantic.

Summary

- To export Appendix ll-listed sharks, NDF Guideline should be established by each Country as soon as possible. Japan would like to share its NDF Guideline as a reference.

- There are some difficulties to make NDF for shark species because of lack of necessary data.

- Not only information on the stocks of shark but also comprehensive data on fisheries is necessary to make NDF.

- Once a shark species is listed in Appendix II, international trade of the species is not easy due to severe implementation of Japan's requirements on NDF.