

Proposed Schedule amendment to permit the catching of Bryde's whales from  
the Western Stock of the North Pacific

Submitted by Japan

This proposal is to add the following sub-paragraph (g) to existing paragraph 10 of the Schedule.

(g) Notwithstanding the other provisions of paragraph 10, the taking of up to 150 Bryde's whales from the Western Stock of the North Pacific shall be permitted for each year until 2010 season or until the quota based on RMS is decided, whichever is earlier.

\* Explanatory note: Adoption of this schedule amendment will require amendment to Table 2 of the Schedule.

Coastal Whaling of Bryde's Whales  
in Waters of North Western Pacific off Japan

submitted by Japan

<Proposal>

For the purpose of commencing coastal whaling of Bryde's whales from the western stock of the North Pacific in waters off the Sanriku and Hokkaido coasts from April 1, 2006, Japan proposes to amend the Schedule by adding a new paragraph 10(g):

(g) Notwithstanding the other provisions of paragraph 10, the taking of up to 150 Bryde's whales from the Western Stock of the North Pacific shall be permitted for each year until 2010 season or until the quota based on RMS is decided, whichever is earlier.

<Rationale for the resumption of coastal whaling>

The western North Pacific stock of Bryde's whale is classified as an initial management stock (IMS). Present abundance is estimated at 23,751, according to the Comprehensive Assessment (CA) agreed by the IWC Scientific Committee (IWC/SC) in 1995, and the stock is very robust.

CA work on the Bryde's whale stock in question was completed in 1996. The Revised Management Procedure (RMP) was completed in 1992, and accepted by the Commission in 1994. The RMP is designed to calculate an very conservative catch quota, which will ensure that there are no adverse effects on the stock. This, together with monitoring and control, means that we now have the management measures required for sustainable whaling without negatively impacting the stock.

The IWC work on the development of the Revised Management Scheme (RMS) has continued for more than ten years. Effective monitoring and control measures have been discussed exhaustively and effective and necessary measures are already available and established for implementation. Only unrealistic demands to delay its completion and implementation have prevented the IWC to finalize an RMS.

In view of the above, the Government of Japan will resume coastal whaling for the sustainable use of robust whale stocks, the management of fishery resources, and the revitalization of the impoverished coastal fishing and/or whaling communities. The resumption of coastal whaling will promote the local processing industries, and stimulate distribution of whale products and tourism, leading to more employment opportunities, which will help vitalize the local economy. The resumption of coastal whaling will also reinstate traditional practices associated with sales of whale meat, and revitalize traditional festivals and rituals of the regions.

<Operation of coastal whaling>

Land stations for the harvested whales will be set up in the ports of Kushiro (Hokkaido Prefecture), Kamaishi (Iwate Prefecture), and/or Ayukawa (Miyagi Prefecture). The stations will operate for the purpose of producing whale products, and all edible parts will be processed. An operators' cooperative based in the local community will be established for coastal whaling operations, in which those experienced in coastal whaling with ample expertise in the field, the local municipalities concerned as well as the parties concerned from fisheries will take part.

Whaling operations under this provision will also function as a feasibility operation of implementation of control measures envisioned under the RMS.

<Specifics of coastal whaling operations>

1. Whaling grounds

Areas north of lat. 35°N. in the range of Bryde's whales of the western North Pacific stock west of long. 160°W. in the North Pacific.

2. Whaling season

Whaling season shall be from April 1 to September 30.

3. Catch quota

The quota is 150 Bryde's whales.

#### 4. Operations

Whaling will be carried out using not more than three large-type whaling vessels. Harvested whales will be transported to the land stations. Land stations will be set up in the ports of Kushiro (Hokkaido Prefecture), Kamaishi (Iwate Prefecture), or Ayukawa (Miyagi Prefecture). The main purpose of the land stations will be to produce whale products using the harvested whales and control and monitor the whaling operations.

#### 5. Monitoring and control

##### (1) National inspectors

One national inspector shall be on board each whaling vessel during whaling operations. Another national inspector shall be stationed at each land station to oversee the processing of the harvested whales. The national inspector shall also perform duties as a biological researcher to collect the provided data.

##### (2) International observers<sup>1</sup>

If an IWC member country wishes, it may send one international observer, who can communicate in Japanese, to be stationed at the land station and to be put aboard each large-type whaling vessel to observe the whaling operation. The stationing of such international observers shall be in accordance with a bilateral agreement on international observers concluded between the Government of Japan and the country which wishes to send the said observer.

##### (3) Use of monitoring devices

All whaling vessels shall be equipped with VMS to monitor whaling operations from land bases so that national inspectors and international observers can check the operations.

##### (4) Explosive grenades shall be used to take whales.

##### (5) Biological information and materials will be collected and sampled from all harvested whales and the obtained data reported to the IWC in accordance with the provisions of the Schedule.

#### <Scientific basis for coastal whaling>

##### 1. Completion of the Comprehensive Assessment (CA)

The CA for Bryde's whales of the North Pacific was completed in 1996. Agreed abundance estimate for 1992 is 23,751. The population has been increasing since then.

##### 2. Whale stocks

As confirmed in the 1995 CA, there are three stocks of Bryde's whales in the North Pacific: the eastern North Pacific stock, the western North Pacific stock, and the East China Sea stock. The whaling grounds are areas north of lat. 35°N. in the North Pacific, and there is no danger of any takes from the East China Sea stock in the proposed area. Target stock of this whaling is the western North Pacific stock only.

##### 3. Catch quota

The western North Pacific Bryde's whale abundance is estimated at 23,751 animals for 1992 (IWC, 1996; Shimada and Miyashita, 1995) and 25,852 animals for 2000 (Kitakado *et al.*, 2005). Catch limits calculated by the RMP CLA are shown in Table 1 of Appendix 1. We have also calculated a quota using the alleged under-reporting of catch (1965-78) by Kondo (2001), to take into account the most pessimistic scenario.

According to the CLA, the catch limit for the western stock was 210 animals, with a tuning level of 0.62K and average MSYR as 2.5% (0-5% range), which are considered the most appropriate. The limit arrived at taking into account the alleged under-reporting of catch was also 210 animals.

Thus, the proposed quota of 150 animals is appropriate, even if the fifty samples taken as part of JARPN II are subtracted from the figure 210.

##### 4. Impacts of such takes on the stock

As shown in Appendix 2, we have analyzed abundance trend using the Hitter method, and assessed the effect of whaling on the stock. Calculation of the quota also took into account the underestimated catch report by Kondo (2001) by incorporating a doubling of the catches for the periods he referred. When the MSYR (1+) is placed at a biologically unrealistic 1%, the stock, in some cases, does show a moderate decline. However, when the MSYR (1+) is 2% or more, the stock shows an increasing trend even when the 90% lower limit is applied regardless of catch options. The results indicate that there will be no adverse impact on the stock even if a total of 200 animals are harvested annually in coastal whaling and for research purposes.

---

<sup>1</sup> This arrangement shall not be deemed to prejudice the position of the Government of Japan with regard to the arrangements in other international agreements and the sovereign rights in her EEZ.

## Appendix 1

### Catch limits using the CLA for western North Pacific Bryde's whales

Catch limits for western North Pacific Bryde's whales have been calculated using the Catch Limit Algorithm (CLA) program (IWC, 1994). A catch limit has been calculated for both the standard scenario and the pessimistic.

#### Scenarios for Bryde's whales

The same scenario as in the full-scale JARPEN II surveys has been used for the calculations, with three catch options as shown below. It has been assumed that there is only one stock in the western North Pacific. Abundance estimate of 23,751 animals (CV=0.200) for 1992 (Shimada and Miyashita, 1995) and that of 25,852 animals (CV=0.347) for 2000 (Kitakado *et al.*, 2005) have been used. Catch options are:

- (a) the same number of animals as in the 1996 comprehensive assessment;
- (b) coastal catch for 1965-78 doubled; and
- (c) coastal catch before 1987 doubled.

The most appropriate scenario is (a), and (b) and (c) are the pessimistic ones. Option (b) is based on Kondo (2001), which assumes that catches for 1965-78 were under-reported, and (c) assumes that any coastal catch had been under-reported before 1987.

#### Tuning levels

Catch limits have been calculated using four different tuning levels: 0.72K, 0.66K, 0.62K, and 0.60K. Tuning parameter estimates in Huseby and Aldrin (2000) was used. Norwegian catch limit for north Atlantic minke whales has been calculated using 0.62K as the tuning level (IWC, 2002).

#### MSYR (1+)

The prior distribution of MSYR (1+) was assumed to be uniform distribution over a) 0-5%, b) 0-10%, and c) 0-15%. Assumption (a) is similar to that used in Norway's catch limit calculations.

#### Results

The calculation results are shown in Tables 1a to 1c. When the range of MSYR (1+) is 0-5% and the tuning level is 0.62K (i.e. when the conditions given are the same as those of Norway's catch limit calculations), the catch limit for option (a) was 210 animals, 210 animals for (b), and 196 animals for (c). As the option (a) is base case, the most plausible option for the catch limit is 210 animals.

Table 1a Catch limit for Bryde's whales for option (a).

Tuning Levels	0.72K	0.66K	0.62K	0.60K
MSYR(1+)	( IPL=0.54 )			
2.5% in Ave. (0-5%)	113	169	<b>210</b>	233
5% in Ave. (0-10%)	183	262	321	352
7.5% in Ave. (0-15%)	197	282	345	379

Table 1b Catch limit for Bryde's whales for option (b).

Tuning Levels	0.72K	0.66K	0.62K	0.60K
MSYR(1+)	( IPL=0.54 )			
2.5% in Ave. (0-5%)	116	171	<b>210</b>	231
5% in Ave. (0-10%)	180	254	308	337
7.5% in Ave. (0-15%)	192	275	332	364

Table 1c Catch limit for Bryde's whales for option (c).

Tuning Levels	0.72K	0.66K	0.62K	0.60K
MSYR(1+)	( IPL=0.54 )			
2.5% in Ave. (0-5%)	87	149	<b>196</b>	222
5% in Ave. (0-10%)	184	280	351	390
7.5% in Ave. (0-15%)	202	304	384	425

## Appendix 2

### Examination of effects on the Bryde's whales of the western North Pacific

The possible effects of an annual take of 200 Bryde's whales (50 sampled in the JARPN II program and 150 harvested by coastal whaling) on the stock were examined using the Hitter method.

The same scenario used for the calculation of the catch quota has been used. As for sex ratio of Bryde's whales to be harvested in the future, it has been assumed that males and females will be included in equal proportions. The 2000 abundance estimate of 25,852 animals (CV=0.347) has been used (Kitakado *et al.*, 2005). As in the catch quota calculations, three scenarios have been considered regarding the catch:

- (a) the same number of animals as in the 1996 comprehensive assessment;
- (b) coastal catch for 1965-78 doubled; and
- (c) coastal catch before 1987 doubled.

The most appropriate scenario is (a), and (b) and (c) are the pessimistic ones. Option (b) is based on Kondo (2001), which assume that catches for 1965-78 were under-reported, and (c) assumes that any coastal catch had been under-reported before 1987.

The case where abundance in 2000 is assumed to be the 90% lower limit for the estimate has been also investigated as in past examinations for impacts on the stock using the Hitter method.

#### Results

The Tables 1a to 1c in this Appendix show the results of the Hitter-Fitter program.

When the MSYR (1+) is placed at a biologically unrealistic 1%, the stock, in some cases, does show a moderate decline. However, when the MSYR (1+) is 2% or more, the stock shows an increasing trend even when the 90% lower limit is applied regardless of catch options. The results indicate that there will be no adverse impact on the stock even if a total of 200 animals are harvested annually in coastal whaling and for research purposes.

Table 1 Effect of an annual take of 200 Bryde's whales on the stock by the Hitter method

a. Calculations based on the same number of animals as in the 1996 CA

i) Hit 1992 total population of 23,751 (best estimate)

Statistic	MSYR (1+) (%)					
	1	2	3	4	5	6
K (1+)	36,783	31,880	29,109	27,561	26,731	26,299
Depletion - 1988	59.2%	60.6%	62.0%	63.8%	65.9%	68.0%
Depletion - 2000	66.7%	74.6%	81.3%	87.0%	91.5%	94.8%
Depletion - 2005	68.6%	78.4%	85.9%	91.4%	94.9%	97.1%
Depletion - 2015	67.8%	79.4%	86.0%	89.3%	90.8%	91.5%
Depletion - 2025	67.4%	80.2%	85.8%	88.1%	89.1%	89.7%
Depletion - 2035	67.1%	80.6%	85.6%	87.5%	88.5%	89.1%
RY - 2005	188	237	212	159	112	79
MSY (+1)	221	383	524	661	802	947

ii) Hit 1992 total population of 17,148 (90% lower limit)

Statistic	MSYR (1+) (%)					
	1	2	3	4	5	6
K (1+)	27,335	22,935	20,119	18,218	16,922	16,063
Depletion - 1988	43.6%	42.7%	41.2%	39.9%	39.3%	39.6%
Depletion - 2000	51.0%	56.9%	62.2%	67.6%	73.2%	79.1%
Depletion - 2005	52.5%	61.2%	69.0%	76.2%	82.6%	88.1%
Depletion - 2015	50.1%	62.5%	72.1%	78.5%	82.3%	84.4%
Depletion - 2025	48.1%	64.0%	74.2%	79.2%	81.5%	82.5%
Depletion - 2035	46.0%	65.3%	75.4%	79.4%	80.9%	81.7%
RY - 2005	155	234	262	245	202	152
MSY (+1)	164	275	362	437	508	578

b. When the coastal catches for 1965-78 are doubled

i) Hit 1992 total population of 23,751 (best estimate)

Statistic	MSYR (1+) (%)					
	1	2	3	4	5	6
K (1+)	38,175	32,898	29,784	27,966	26,955	26,417
Depletion - 1988	56.6%	57.4%	58.4%	59.9%	61.9%	64.2%
Depletion - 2000	64.0%	71.6%	78.3%	84.4%	89.5%	93.3%
Depletion - 2005	66.0%	75.7%	83.6%	89.6%	93.8%	96.4%
Depletion - 2015	65.6%	77.6%	84.9%	88.7%	90.5%	91.3%
Depletion - 2025	65.6%	79.0%	85.4%	88.0%	89.1%	89.7%
Depletion - 2035	65.5%	80.1%	85.6%	87.6%	88.5%	89.2%
RY - 2005	198	262	243	187	131	91
MSY (+1)	229	395	536	671	809	951

ii) Hit 1992 total population of 17,148 (90% lower limit)

Statistic	MSYR (1+) (%)					
	1	2	3	4	5	6
K (1+)	28,873	24,276	21,268	19,180	17,695	16,645
Depletion - 1988	41.1%	39.6%	37.6%	35.5%	34.0%	33.1%
Depletion - 2000	48.1%	53.3%	57.8%	62.2%	67.0%	72.2%
Depletion - 2005	49.6%	57.6%	64.8%	71.5%	77.8%	83.6%
Depletion - 2015	47.6%	59.7%	69.5%	76.5%	80.9%	83.6%
Depletion - 2025	45.9%	62.0%	73.0%	78.8%	81.6%	82.8%
Depletion - 2035	44.2%	64.0%	75.2%	79.8%	81.6%	82.3%
RY - 2005	160	250	292	289	254	202
MSY (+1)	173	291	383	460	531	599

c. When the coastal catches before 1987 are doubled

i) Hit 1992 total population of 23,751 (best estimate)

Statistic	MSYR (1+) (%)					
	1	2	3	4	5	6
K (1+)	44,108	36,825	32,409	29,642	27,947	26,963
Depletion - 1988	47.6%	50.1%	47.7%	47.9%	48.8%	50.4%
Depletion - 2000	55.5%	65.2%	69.7%	76.3%	82.6%	88.3%
Depletion - 2005	57.7%	69.2%	76.7%	84.3%	90.3%	94.7%
Depletion - 2015	58.4%	73.6%	81.8%	87.5%	90.5%	91.9%
Depletion - 2025	59.3%	77.1%	84.5%	88.3%	89.8%	90.4%
Depletion - 2035	60.3%	79.6%	85.8%	88.3%	89.2%	89.7%
RY - 2005	253	360	368	310	229	159
MSY (+1)	265	442	583	711	838	971

ii) Hit 1992 total population of 17,148 (90% lower limit)

Statistic	MSYR (1+) (%)					
	1	2	3	4	5	6
K (1+)	35,338	29,054	25,028	22,240	20,210	18,689
Depletion - 1988	32.9%	31.3%	28.8%	26.0%	23.4%	21.2%
Depletion - 2000	39.8%	44.5%	48.1%	51.3%	54.4%	57.8%
Depletion - 2005	41.5%	49.0%	55.6%	61.7%	67.6%	73.3%
Depletion - 2015	40.3%	52.6%	63.5%	72.1%	78.3%	82.5%
Depletion - 2025	39.6%	56.7%	70.2%	78.4%	82.5%	84.4%
Depletion - 2035	38.8%	60.7%	75.0%	81.4%	83.7%	84.5%
RY - 2005	195	315	392	425	419	383
MSY (+1)	212	349	451	534	606	673