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<b>NAMMCO/31/NPR/ JP-2022-23</b>	<b>Japan Progress Report on Large Cetaceans – April 2022-March 2023</b>
<b>Submitted by</b>	Japan
<b>Action requested</b>	For Information
<b>Background/content</b>	

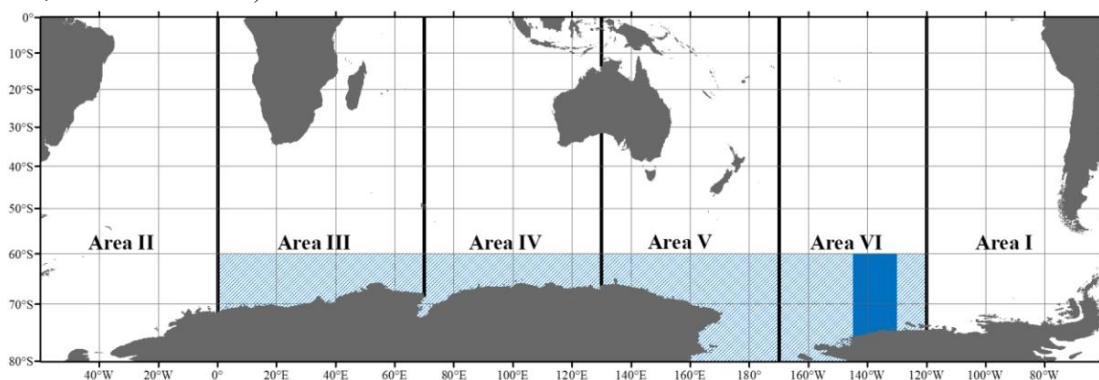
# Japan's Scientific Progress Report on Large Cetaceans in the fiscal year 2022 (April 2022 to March 2023), with statistical data for the calendar year 2022

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This document summarizes the data and samples of large cetaceans, which were collected by the Institute of cetacean Research (ICR), Fisheries Resources Institute (FRI) and Fisheries Agency of Japan (FAJ) in the fiscal year 2022 (April 2022 to March 2023), and statistical data for the calendar year 2022. Sighting data for abundance estimates of large cetaceans were collected in the North Pacific, Okhotsk Sea and the Antarctic during systematic sighting surveys. During the surveys, photo-ID, biopsy and satellite tracking experiments on large cetaceans were also conducted. A large number of biological data and samples were collected during the surveys for whales taken under the commercial whaling. Species and figures of bycatch and stranding of large cetaceans are based on the reports of prefecture governments to the FAJ, which compile information from individual fishermen, fishermen cooperatives and general public. Data and samples collected are being analyzed for contributing to the management of large cetaceans in the North Pacific.

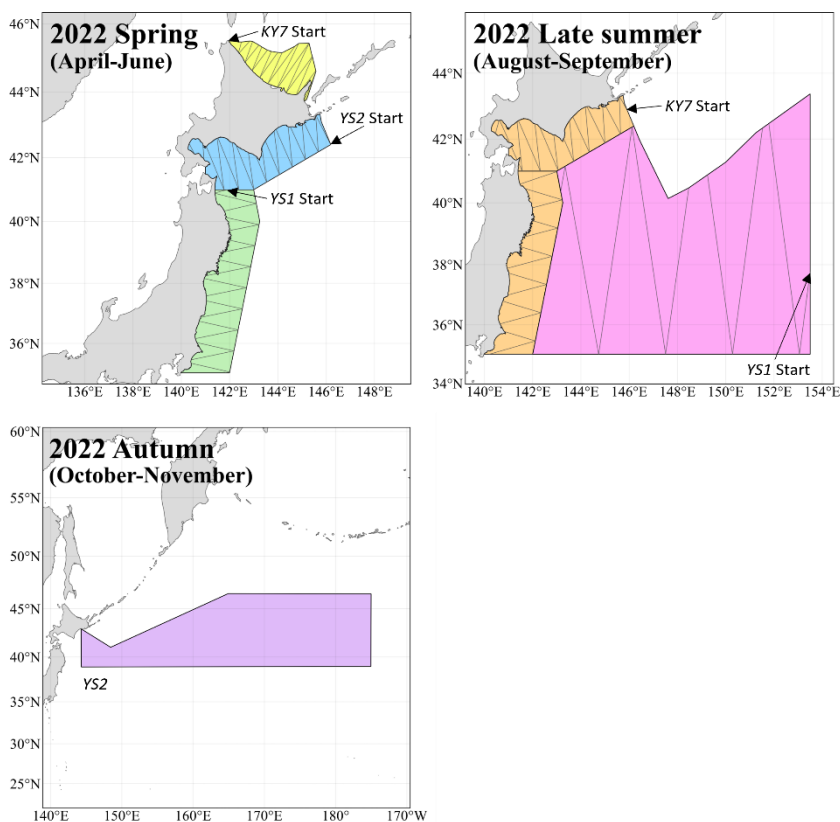
## 1. SIGHTING DATA

Dedicated sighting survey under the program Japanese Abundance and Stock structure Surveys in the Antarctic (JASS-A) in the Southern Ocean in the austral summer season 2022/23 (vessel: *Yushin-Maru No.2*, *Yushin-Maru No.3*).



Species	Date (research period)	Local area	No. of schools/No. of individuals	Contact person
Blue whale	YS2 (7 Dec/22-10 Mar/23) YS3 (8 Dec/22-10 Mar/23)	Area VIE + Transit	21/32	T. Tamura (ICR) tamura@cetacean.jp
Fin whale		Area VIE + Transit	93/209	
Sei whale		Transit	6/7	
Bryde's whale		Transit	1/1	
Antarctic minke whale		Area VIE + Transit	317/634	
Humpback whale		Area VIE + Transit	27/56	
Sperm whale		Area VIE + Transit	11/13	
Southern bottlenose whale		Transit	1/2	
Pygmy right whale		Transit	2/2	

Dedicated sighting surveys under national program in the North Pacific in 2022 and 2023 (vessels: *Yushin-Mar* (*YS1*), *Yushin-Mar* No.2 (*YS2*) and *Kaiyo-Mar* No.7 (*KY7*)).



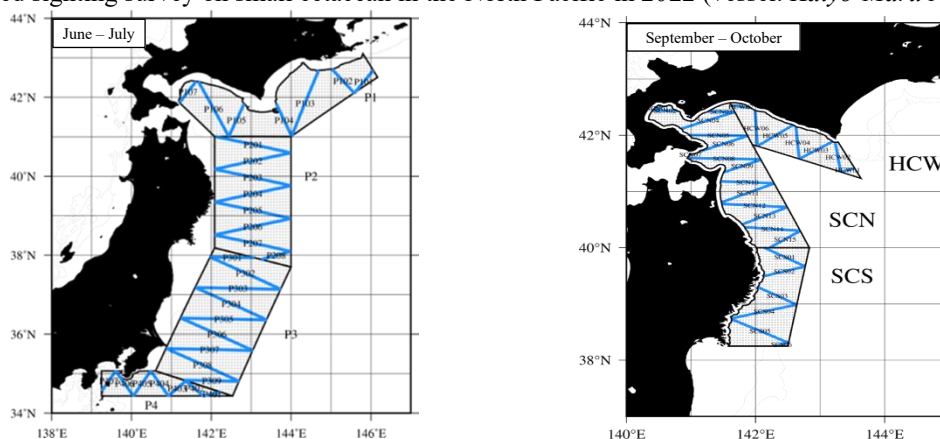
Species	Date (research period)	Local area	No. of schools/No. of individuals	Contact person
Blue whale	18 Oct – 09 Nov/22	Central North Pacific	3/3	T. Tamura (ICR) tamura@cetacean.jp
Fin whale	8 Apr – 7 Jun/22	Western North Pacific	96/153	
	3 Aug – 22 Sep/22	Western North Pacific	4/4	
Sei whale	18 Oct – 09 Nov/22	Central North Pacific	5/8	
	18 Oct – 09 Nov/22	Central North Pacific	32/44	
Bryde's whale	8 Apr – 7 Jun/22	Western North Pacific	14/19	
	3 Aug – 22 Sep/22	Western North Pacific	231/252	
	18 Oct – 09 Nov/22	Central North Pacific	3/3	
Common minke whale	8 Apr – 7 Jun/22	Western North Pacific	149/170	
	3 Aug – 22 Sep/22	Western North Pacific	2/2	
Humpback whale	8 Apr – 7 Jun/22	Western North Pacific	46/55	
	3 Aug – 22 Sep/22	Western North Pacific	2/3	
	18 Oct – 09 Nov/22	Central North Pacific	4/4	
N. P. right whale	8 Apr – 7 Jun/22	Western North Pacific	1/1	
Sperm whale	8 Apr – 7 Jun/22	Western North Pacific	35/66	
	3 Aug – 22 Sep/22	Western North Pacific	156/300	
	18 Oct – 09 Nov/22	Central North Pacific	7/9	

Dedicated sighting survey under the program International Whaling Commission-Pacific Ocean Whale and Ecosystem Research (IWC-POWER) in the North Pacific in 2022 (vessel: *Yushin-Maru No.2*).



Species	Date (research period)	Local area	No. of schools/No. of individuals	Contact person
Blue whale	2 Aug – 28 Sep/22	Southern Aleutian Islands + Transit	22/24	T. Tamura (ICR) tamura@cetacean.jp
Fin whale		Southern Aleutian Islands + Transit	56/78	
Sei whale		Southern Aleutian Islands + Transit	25/27	
Bryde's whale		Transit	3/3	
Common minke whale		Southern Aleutian Islands	3/3	
Humpback whale		Southern Aleutian Islands + Transit	18/53	
Sperm whale		Southern Aleutian Islands + Transit	41/41	

Dedicated sighting survey on small cetacean in the North Pacific in 2022 (vessel: *Kaiyo-Maru No.7*).



Species	Date (research period)	Local area	No. of schools/No. of individuals	Contact person
Bryde's whale	13 Jun – 28 Jul/22	Western North Pacific	5/6	S. Minamikawa (FRI) minamikawa_shingo69@fra.go.jp
	29 Sep – 16 Oct/22		10/11	
Fin whale	13 Jun – 28 Jul/22		1/1	
Common minke whale	13 Jun – 28 Jul/22		5/5	
	29 Sep – 16 Oct/22		1/1	
Sperm whale	13 Jun – 28 Jul/22		42/164	

## 2. MARKING DATA

### 2.1. Natural marking data

#### *JASS-A survey-Antarctic in 2022/23*

Species	Feature	Local area	No. of individuals photo identified	Contact person
Blue whale	Head, dorsal, lateral marking	Area VIE	26	T. Tamura (ICR) tamura@cetacean.jp
Humpback whale	Dorsal, fluke, lateral marking		11	

#### *National dedicated sighting surveys-North Pacific in 2022*

Species	Feature	Local area	No. of individuals photo identified	Contact person
Blue whale	Head, dorsal, lateral marking	Western North Pacific	2	T. Tamura (ICR) tamura@cetacean.jp
Humpback whale	Fluke, dorsal fin	Western North Pacific	7	
N. P. right whale	Head	Western North Pacific	1	

#### *IWC-POWER survey-North Pacific in 2022*

Species	Feature	Local area	No. of individuals photo identified	Contact person
Blue whale	Head, dorsal, lateral marking	Southern Aleutian Islands	16	T. Tamura (ICR) tamura@cetacean.jp
Fin whale	Dorsal fin		7	
Sei whale	Dorsal fin		8	
Humpback whale	Fluke, Dorsal fin		6	

### 2.2. Telemetry data

#### *JASS-A survey-Antarctic in 2022/23*

Species	Tag type	Local area	No. of individuals tagged	Contact person
Fin whale	Satellite	Area VIE	8	T. Tamura (ICR) tamura@cetacean.jp
Antarctic minke whale	Satellite		25	
Humpback whale	Satellite		2	
Pygmy right whale	Satellite		1	
Sei whale	Satellite	Western Central Pacific	2	

#### *National dedicated sighting surveys-North Pacific in 2022*

Species	Tag type	Local area	No. of individuals tagged	Contact person
Fin whale	Satellite	Western North Pacific	7	T. Tamura (ICR) tamura@cetacean.jp
Sei whale	Satellite	Western North Pacific	18	
Common minke whale	Satellite	Western North Pacific	1	
Bryde's whale	Satellite	Western North Pacific	5	

#### *IWC-POWER survey-North Pacific in 2022*

Species	Tag type	Local area	No. of individuals tagged	Contact person
Sei whale	Satellite	Southern Aleutian Islands	1	T. Tamura (ICR) tamura@cetacean.jp

*Abashiri coastal tagging and biopsy surveys-Okhotsk Sea in 2022*

Species	Tag type	Local area	No. of individuals tagged	Contact person
Fin whale	Satellite	Off Abashiri	5	T. Tamura (ICR) tamura@cetacean.jp

### 3. BIOPSY SAMPLES

*JASS-A survey-Antarctic in 2022/23*

Species	Local area	No. of individuals photo identified	Contact person
Blue whale	Area VIE	8	T. Tamura (ICR) tamura@cetacean.jp
Fin whale		20	
Sei whale		2	
Antarctic minke whale		28	
Humpback whale		16	
Pygmy right whale		2	
Sei whale	Western Central Pacific	4	

*National dedicated sighting surveys-North Pacific in 2022*

Species	Local area	No. of individuals photo identified	Contact person
N.P. right whale	Western North Pacific	1	T. Tamura (ICR) tamura@cetacean.jp
Fin whale		1	
Sei whale		16	
Bryde's whale		6	
Common minke whale		6	

*IWC-POWER survey-North Pacific in 2022*

Species	Local area	No. of individuals photo identified	Contact person
Blue whale	Southern Aleutian Islands	4	T. Tamura (ICR) tamura@cetacean.jp
Fin whale		4	
Sei whale		6	
Humpback whale		2	

*Abashiri coastal tagging and biopsy surveys-Okhotsk Sea in 2022*

Species	Local area	No. of individuals photo identified	Contact person
Fin whale	Off Abashiri	17	T. Tamura (ICR) tamura@cetacean.jp

### 4. DIRECT CATCHES OF CETACEANS

#### 4.1. Biological samples from commercial whaling

*Offshore component (2022)*

Species	Area	Samples and data	No. of individuals	Contact person/institute
Sei whale	Western North Pacific	Body length and sex	25	FAJ
		Photographic record and external character	25	T. Tamura (ICR) tamura@cetacean.jp
		Record of external parasites	25	
		Measurements of blubber thickness (two points)	25	

		Body weight	25	
		Skin tissues for DNA analysis	25	
		Muscle, liver and blubber for various analysis	25	
		Collection of blood plasma	24	
		Mammary gland; lactation status, measurement and histological sample	15	
		Collection of ovary	15	
		Foetal sex (identified by visual observation)	3	
		Photographic record of foetus	3	
		Foetal length and weight	3	
		Foetal skin tissues for DNA analysis	3	
		Eye lens of foetus for age determination	1	
		Testis; weight and histological sample	10	
		Stomach contents and convenient record	25	
		Observation of marine debris in stomach	25	
		Earplug for age determination	25	
		Eye lens for age determination	25	
Bryde's whale		Body length and sex	187	
		Photographic record and external character	187	
		Record of external parasites	187	
		Measurements of blubber thickness (two points)	187	
		Body weight	187	
		Skin tissues for DNA analysis	187	
		Muscle, liver and blubber for various analysis	187	
		Collection of blood plasma	183	
		Mammary gland; lactation status, measurement and histological sample	107	
		Collection of ovary	107	
		Foetal sex (identified by visual observation)	22	
		Photographic record of foetus	22	
		Foetal length and weight	22	
		Foetal skin tissues for DNA analysis	22	
		Testis; weight and histological sample	80	
		Stomach contents and convenient record	187	
		Observation of marine debris in stomach	187	
		Earplug for age determination	187	
		Eye lens for age determination	187	

*Coastal component (2022)*

Species	Area	Samples and data	No. of individuals	Contact person/institute
Common minke whale	Western North Pacific	Body length and sex	58	FAJ
		Photographic record and external character	58	S. Minamikawa (FRI) minamikawa_shingo69@fra.go.jp  T. Tamura (ICR) tamura@cetacean.jp
		Body scar record	58	
		Measurements of blubber thickness (two points)	58	
		Skin tissues for DNA analysis	58	
		Muscle, liver and blubber for various analysis	58	
		Mammary gland; lactation status and measurement	34	
		Uterine horn; measurements and endometrium sample	34	
		Collection of ovary	34	
		Foetal sex (identified by visual observation)	14	
		Photographic record of foetus	14	
		Foetal length and weight	14	
		Foetal skin tissues for DNA analysis	14	
		Eye lens of foetus for age determination	14	
		Testis; weight and histological sample	24	

	Stomach contents and convenient record	58	
	Earplug for age determination	58	
	Eye lens for age determination	58	
	Baleen plate for age determination (body length ≤ 6 m)	12	

## 5. FISHERIES BYCATCHES OF CETACEANS

Species	No. of animals	Location <sup>1)</sup>	Fate <sup>2)</sup>	Gear <sup>3)</sup>	Target fish species <sup>4)</sup>	Source or contact
Common minke whale	3	Hokkaido	K	FPN	NA	FAJ
	8	Iwate	K	FRN		
	2	Miyagi	K	FPN		
	2	Kanagawa	K	FPN		
	7	Toyama	K	FPN		
	9	Ishikawa	K	FPN		
	4	Fukui	K	FPN		
	1	Kyoto	K	FPN		
	4	Wakayama	K	FPN		
	1		R			
	1	Shimane	K	FPN		
	1	Yamaguchi	K	FPN		
	3	Kochi	K	FPN		
	10	Nagasaki	K	FPN		
	2	Oita	K	FPN		
	3	Miyazaki	K	FPN		
1	Kagoshima	K	FPN			
Humpback whale	1	Miyagi	R	MIS		
	1	Oita	K	FPN		

1) Recorded at the place of fishing gears.

2) Fate of whale: K = kept for sale or specimen, R = released alive

3) Described using "FAO FISHING DESCRIPTION AND CODES", that is, stationary uncovered pound nets (FPN) and miscellaneous gear (MIS).

4) Target fish species: NA = not available

## 6. STRANDING OF CETACEANS

Species	No. strandings	Prefecture	Source or contact
Common minke whale	6	Hokkaido	FAJ
	1	Iwate	
	1	Yamaguchi	
Bryde's whale	1	Tokyo	
	1	Shizuoka	
	1	Oita	
Fin whale	1	Fukui	
Humpback whale	3	Hokkaido	
	1	Ibaraki	
	1	Tokyo	
	3	Kochi	
	1	Kagoshima	
	2	Okinawa	
Like humpback whale	1	Shizuoka	



Sperm whale	1	Hokkaido
	1	Shizuoka
	1	Ehime
	2	Saga
	1	Nagasaki
	1	Kagoshima

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- Takahashi, M., Tamura, T., Bando, T. and Konishi, K. 2022. Feeding habits of Bryde's and sei whales in the western North Pacific inferred from stomach contents and skin stable isotope ratios. *Journal of Sea Research* 184: 102204.
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