

Hokkaido University

Faculty of Fisheries Sciences •
Graduate School of Fisheries Sciences •
School of Fisheries Sciences

SUMMARY



2025.7



cover photo : Etopirika

photographer : Naoki HOSHI



HAKODATE Campus

Message from the Dean

Prof. Yasuaki TAKAGI

The future of Fisheries Sciences –
to better connect humans and the sea

Our mission is closely related to the 14th goal of the
Sustainable Development Goals (SDGs):

*‘Conserve and sustainably use the oceans, seas and marine
resources for sustainable development’*

To conserve marine resources and maintain a healthy ocean
for future generations, local and global fisheries must
become eco- and human-friendly, sustainable industries. We
are joining the global effort towards “blue transformation” of
these industries through fisheries research and education.



Admission policy

School of Fisheries Sciences



Our philosophy

The School of Fisheries Sciences contributes to human prosperity through systematic fisheries science education aiming at the sustained production and use of aquatic resources and environmental conservation.

Our goal

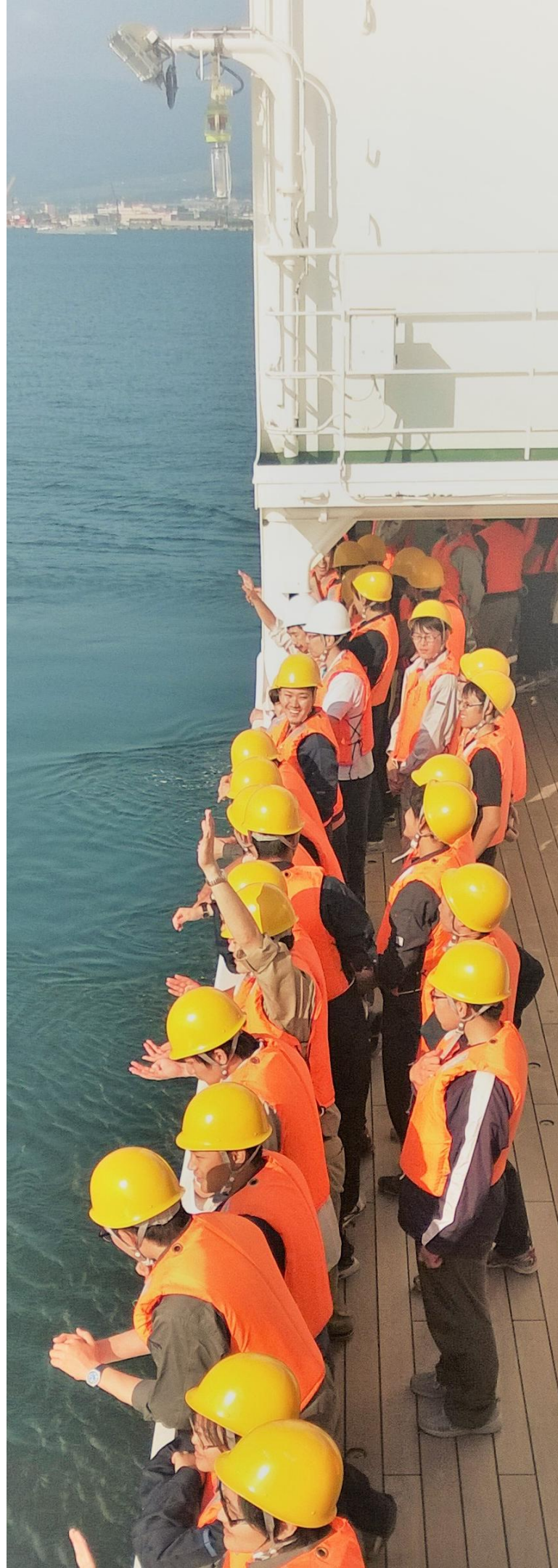
The School of Fisheries Sciences fosters talented persons with the skills needed to solve problems concerning the use and sustained production of aquatic resources, and environmental conservation through systematic teaching of a wide range of scientific fields in conjunction with technical knowledge about fisheries science.



Educational goals

1.
To foster creative talented persons who can contribute to human survival and prosperity through fisheries science in areas such as the oceans, environments, organisms, resources, and an associated wide range of disciplines
2.
To foster eager and internationally talented persons having knowledge about balancing environmental conservation and production on a global scale to enable the sustainable production of aquatic bioresources
3.
To foster leading talented persons who can contribute to society through the use of aquatic bioresources

Types of students that we seek



1. People who are strongly motivated to study aquatic environments, life, and resources, and to contribute to human society by balancing both biological production and the environment
2. People who are strongly motivated to learn about biological functions of aquatic organisms and/or chemical components to develop human society through research on efficient use of aquatic biological resources
3. People who are strongly motivated to have great impacts and/or take leadership in national and/or international organizations or projects on issues concerning the oceans, fisheries, and environmental policy and management

Admission policy

[Graduate School of
Fisheries Sciences]



Our goal

The school fosters creative and motivated people with advanced research capabilities, a broad outlook, and the energy to work at global scales through graduate education focusing on aquatic environments, natural resources, life and economics. For that purpose, it aims to acquire and teach the skills and knowledge needed to advance sustainable productions and efficient use of aquatic biological resources, and to conduct basic and applied studies to help conserve aquatic ecosystems.

Our philosophy

The school investigates the conservation of aquatic ecosystems, sustainable production, and efficient use of biological resources for the long-term development of human society. For that purpose, it aims to acquire and teach the skills and knowledge needed to advance sustainable production and efficient use of aquatic biological resources as the common property of mankind, and to conduct basic and applied studies to conserve aquatic ecosystems.

Educational goals

Through graduate education focusing on aquatic environments, resources, life, and economics, the school aims to nurture people who have advanced research capabilities, have a broad outlook, are inspired to work globally, and are creative and motivated through the following educational goals:

1.

To foster people who have a desire to strive for harmonious use of aquatic resources in conserving diverse aquatic environments that ensures rich biological production and human well-being

2.

To foster energetic people with advanced knowledge and skills for efficient use of multi-faceted aquatic biological resources and for returning these outcomes to human society through scientific investigations of aquatic organisms and their biological functions



Types of students that we seek

1. People who are strongly motivated to study aquatic environments, life, and resources, and to contribute to human society with their advanced knowledge and techniques on aquatic environments and biological sciences
2. People who are strongly motivated to study biological functions of aquatic organisms and/or chemical components to develop human society through research on efficient use of aquatic biological resources
3. People who are strongly motivated to have great impacts or take leadership in national and/or international organizations or projects on issues concerning marine, fisheries, and environmental policy and management using their expertise in advanced research and broad social experiences

Brief History

Visit our web site for more [details](#)

1907

- 1935 The Hakodate College of Fisheries was established.
- 1936 The Toya Lake Station for Environmental Biology was established.
- 1940 The Nanae Fish Culture Experimental Station was established.
- 1944 The Hakodate College of Fisheries was reorganized.
- 1949 The Training Ship "Hokusei-Maru" was converted from a navy boat.
- 1949 The Hakodate College of Fisheries was transferred to Hokkaido University.
- 1954 The Hakodate College of Fisheries, Hokkaido University was abolished

- 1907 The School of Fishery was established in the Sapporo Agriculture College.
- 1907 The Sapporo Agricultural College was made part of the Tohoku Imperial University.
- 1909 The Training Ship "Oshoro-Maru" was built.
- 1918 The School of Fishery, Tohoku Imperial University changed to the School of Fishery, Hokkaido Imperial University.
- 1927 The Training Ship "Oshoro-Maru II" was built.
- 1935 The School of Fishery, Hokkaido Imperial University was abolished.

1935

- 1940 The Department of Fisheries was established as a part of the Faculty of Agriculture, Hokkaido Imperial University.
- 1947 The Hokkaido Imperial University was renamed Hokkaido University.
- 1949 The Hakodate Technical School of Fisheries and the Department of Fisheries, Faculty of Agriculture, Hokkaido were combined to establish the Faculty of Fisheries, Hokkaido University.
- 1953 The Department of Fisheries, Faculty of Agriculture, Hokkaido University was abolished.

1949

- 1949 The Faculty of Fisheries was established in Hakodate.
- 1949 Four departments, i.e., General Fishery, Pelagic Fishery, Biology and Aquaculture, and Chemistry and Marine Products Technology, were established.
- 1953 The specialized Training Course in Pelagic Fishery (one year) was established.
- 1954 The Training Course for teacher's license in fisheries was established.
- 1957 The Training Ship "Hokusei-Maru II" was commissioned.
- 1962 The Training Ship "Oshoro-Maru II" was commissioned.
- 1963 The graduate school was named the Graduate School of Fisheries Science, and its term was set at five years.
- 1963 The Research Institute of North Pacific Fisheries was established.
- 1964 The Department of Chemistry and Marine Products Technology was divided into the Department of Chemistry and the Department of Food Science and Technology.
- 1966 The Department of General Fishery and the Department of Pelagic Fishery merged into the Department of Fishing Science.
- 1970 The Usujiri Fisheries Laboratory was newly established in Usujiri, Minami-Kayabe-cho.
- 1971 The Research Vessel "Ushio-Maru" was commissioned.
- 1976 The Training Ship "Hokusei-Maru III" was commissioned.
- 1983 The Training Ship "Oshoro-Maru IV" was commissioned.
- 1992 The Research Vessel "Ushio-Maru" was commissioned.
- 1995 The Research Institute of North Pacific Fisheries was abolished.
- 1995 The Faculty was reorganized into four departments: Fisheries Oceanography and Marine Science, Marine Production System Science, Marine Biological Science and Marine Bioresources Chemistry.

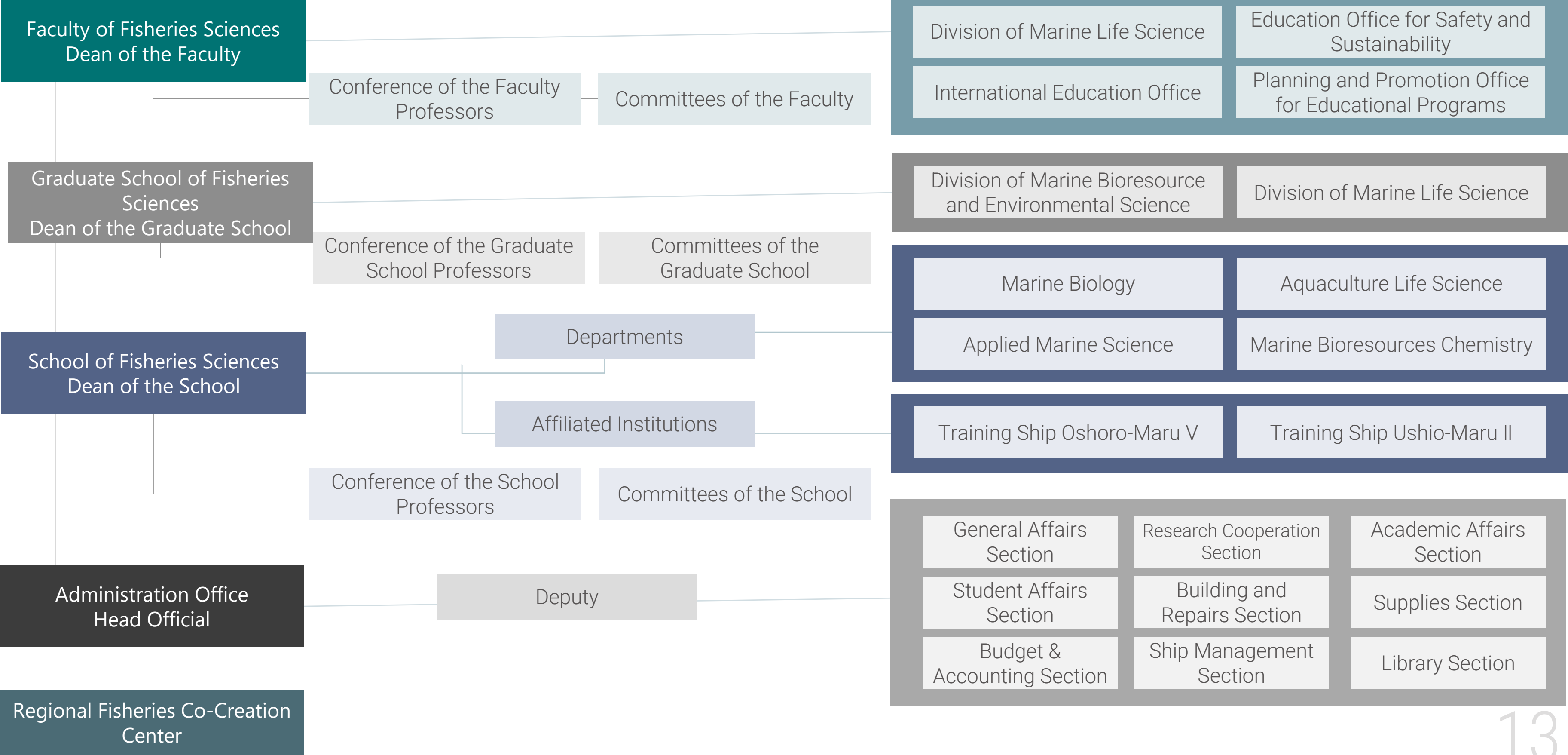
2000

- 2005 The Graduate School of Fisheries Sciences was divided into an Educational Part (Graduate School of Fisheries Sciences) and a Research Part (Faculty of Fisheries Sciences)
- 2006 The Faculty was reorganized into four departments: Marine Biology and Applied Marine Science, Aquaculture Life Science and Marine Bioresources Chemistry.
- 2013 The Laboratories of Marine Bioresource and Environment Sensing, Marine Industrial Science and Technology, and Marine Products and Food Science were abolished, and the Laboratories of Marine Environment and Resource Sensing, Fisheries Engineering, Interdisciplinary Sustainability Studies, Marine Food Science and Technology, and Marine Chemical Resource Development were established.
- 2014 The Training Ship "Oshoro-Maru V" was commissioned.
- 2022 The Training Ship "Ushio-Maru III" was commissioned.
- 2024 Fisheries Science Library and Museum Complex was established.

- 2000 The Graduate School of Fishery Science was consolidated from 4 divisions into 2 divisions comprising 11 core laboratories.
- 2000 The school was renamed the Graduate School of Fisheries Sciences.
- 2001 The Toya Lake Station for Environmental Biology, the Nanae Fish Culture Experimental Station and Usujiri Fisheries Laboratory were transferred to the Field Science Center for Northern Biosphere.
- 2002 The specialized Training Course in Pelagic Fishery was abolished.
- 2002 The Training Ship "Hokusei-Maru III" was decommissioned.
- 2002 The Ship's name changed to The Training Ship "Ushio-Maru II".

2005

Organization Chart



Executive officers

As of May 1, 2025



Prof. Yasuaki TAKAGI

Dean



Prof. Masashi HOSOKAWA

Vice Dean



Prof. Tohru MUKAI

Vice Dean



Prof. Yasuzumi FUJIMORI

University Senator

Division Chairs Assistant Charis

Prof. Hisashi IMAMURA

Chair, Division of Marine
Bioresource and
Environmental Science

Prof. Hideki KISHIMURA

Chair, Division of Marine
Life Science

Prof. Hideaki KUDO

Asst. Chair, Division of
Marine Bioresource and
Environmental Science

Prof. Takashi TODO

Asst. Chair, Division of
Marine Life Science

Department Chairs

Prof. Takashi MATSUISHI

Department of Marine
Biology

Prof. Hideaki KUDO

Department of Applied
Marine Science

Prof. Akira INOUE

Department of Aquaculture
Life Science

Prof. Hideyuki KURIHARA

Department of Marine
Bioresources Chemistry

No. of employees

Full Prof.	Assoc. Prof.	Lecturer	Asst. Prof.	Research Assoc.	Sub total	Officials	Technical Officials	Sub total	Total
29	21	0	24	0	74	26	35	61	135

As of May 1, 2025

Enrollment in 2025 Academic Year

□ School of Fisheries Sciences

□ : No. of returnee students

Enrollment Quota		Applicants	Applicants Accepted	Enrollees	Students from abroad
Department General	155	711 [2]	177	170	2
Comprehensive Selection	20	56	9	9	
General	40	—*	—*	—*	—*

*Not calculatable

□ Graduate school of Fisheries Sciences

No. of applicants and enrollees in autumn is not included

Degree	Quota	Applicants				Enrollees			
		Hokkaido University	Other University	Others	Total	Hokkaido University	Other University	Others	Total
Master	114	130	21	1	152	102	11	1	114
Doctor	19	18	5	0	23	17	4	0	21

Number of Students

As of May 1, 2025

Category			Enrollment Quota	Currently Enrolled
Undergraduate Students	1st year		215	—*
	2nd year		215	224
	3rd year		215	232
	4th year		215	200
	Sub-total		860	656（2-4年生）
Graduate Students	Master Course	1st year	114	115
		2nd year	114	133
		Sub-total	228	248
	Doctoral Course	1st year	19	30
		2nd year	19	19
		3rd year	19	38
		Sub-total	57	87
Auditors			—	0
Special Auditors			—	3
Credit Students			—	2
Research Students			—	5
Special Research Students			—	6
合計			—	1,007

*First-year undergraduate students are not included because they are students of the General Education Department.

Status of Students After Graduating

Graduating Students In 2024
As of May 1, 2025

☐ Undergraduate

Graduates	Number Pursuing further academic degrees	Number finding employment						Other
		Research Institution	Teacher	Public Sector	Private Sector	Other	Total	
191	150	1	0	5	27	0	33	8

☐ Master

Graduates	Number Pursuing further academic degrees	University Teacher							Other
		University Teacher	Research Institution	Teacher	Public Sector	Private Sector	Other	Total	
122	20	0	3	0	7	85	0	95	7

☐ Doctor

Graduates	Other								Other
	University Teacher	Research Institution	Teacher	Postdoc·Fellow	Public Sector	Private Sector	Other	Total	
5	0	0	0	4	0	1	0	5	0

Number of Graduates

As of May 1, 2025

Category	Years	Graduates
School of Fishery, Agricultural College, Tohoku Imperial University	1907-1918	279
School of Fishery, Hokkaido Imperial University	1918-1935	700
Hakodate College of Fisheries	1935-1944	672
Hakodate College of Fisheries	1944-1949	1,324
Teacher’s School of Fisheries Hakodate College of Fisheries	1945-1951	121
Advanced Course in General Fisheries Science, Faculty of Fisheries, Hokkaido University	1954-1966	59
School of Fisheries Sciences, Hokkaido University	1949-	13,640
Special Advanced Training Course in Pelagic Fisheries, Faculty of Fisheries, Hokkaido University	1953-2002	665
Graduate School of Fisheries Science, Hokkaido University （ Master）	1953-2000	1,181
Graduate School of Fisheries Science, Hokkaido University （ Doctor）	1953-2000	581
Graduate School of Fisheries Sciences, Hokkaido University （ Master）	2000-2005	590
Graduate School of Fisheries Sciences, Hokkaido University （ Doctor）	2000-2005	244
Graduate School of Fisheries Sciences, Hokkaido University （ Master）	2005-	1,910
Graduate School of Fisheries Sciences, Hokkaido University （ Doctor）	2005-	307
合計	—	22,273

※Numbers listed in “Doctor ” categories include both coursework and dissertation doctorate programs

Number of International Students

As of May 1, 2025
From 13 countries, 66 students in Total





International Academic Exchange

As of July 1, 2025

External funds

Data from FY 2024

Category	Number	Budget (Yen)
Grants-in-Aid for Scientific Research	40	89,520,000
Other grants	2	1,240,000
Donation	55	102,418,024
Collaboration	25	29,118,314
Contract Research	24	242,856,265
Contract Projects	7	8,701,019
Government subsidy	16	71,611,371
Academic consultant	9	4,852,084

□Selected grants-in-Aid for Scientific Research (KAKENHI) in 2025

- Scientific Research A The impact of climate change on marine surface phytoplankton: Elucidation using a generalized dissimilarity model
- Scientific Research A Understanding growth regulation and life history divergence mechanisms in salmonid fishes and their application to aquaculture and resource assessment
- Scientific Research B Co-evolutionary arms race between *Vibrio parahaemolyticus* and phages: creation and application of more powerful phages
- Scientific Research B Elucidation of the physical mechanisms that enable long-distance migration of migratory fish species
- Scientific Research C Mechanism of action of chondroitin sulfate oligosaccharides derived from marine by-products on the antioxidant function of cells
- Scientific Research C Research and development to balance career education for students and securing future fishermen
- Grant-in-Aid for Challenging Research(Exploratory) Development of technology for elucidating light-harvesting mechanisms through the creation of mutants of phycobilisomes, giant molecules involved in photosynthesis

Structure of our schools

【Scientific organization】	【Division】	【Laboratories】	【Keywords】	【Educational Organization】	【Educational Organization】
Faculty of Fisheries Sciences	Division of Marine Bioresource and Environmental Science	Marine Biology and Biodiversity	Planktology, Animal behavior and ecology, Systematic ichthyology, Taxonomy, Species diversity, Ecology, Behavior, Life history	Grad. Sch. of Fisheries Sciences	Department of Marine Biology
		Marine Bioresource Science	Marine ecology, Marine bioresources production, Population dynamics, Marine ecosystem, Stock fluctuation, Climate change, Fisheries activity, Evolutional ecology		
		Marine Environmental Science	Ship observation, Numerical simulation, Environmental DNA, Mesoscale eddy, Biodiversity, Connectivity of forest-human-river-ocean, Nutrients, Primary production, Polar region, Organic matter, Trace element, Ocean general circulation		
		Marine Environment and Resource Sensing	Satellite remote sensing, Marine environment monitoring, Hydroacoustic remote sensing, Quantitative echo sounder, Scientific sampling gear, Bycatch prevention, Biotelemetry		
		Fisheries Engineering	Engineering, Informatics, Technology, Fluid dynamics, Analytical approach, Tank experiment, Simulation, Measure and evaluation of behavior of aquatic animal		
		Humans and the Ocean	Aquatic bioresources, Fishery management, Ocean Policy, Macrophytes, Nekton, Innovative ports, Blue economy, Industrial-academic-government cooperation		
	Division of Marine Life Science	Aquaculture Biology	Life science, Comparative physiology, Endocrinology, Reproduction, Aquaculture, Tissue engineering, Metabolism, Genome engineering		Department of Applied Marine Science
		Aquaculture Genetics and Genomics	Aquatic animals and marine macroalgae, Breeding, Gene, Chromosome, Biotechnology, Reproductive control, Development, Environmental response		
		Marine Biotechnology and Microbiology	Marine microbiology, Marine molecular biology, Fish pathology, Marine enzymes, Motor protein, Muscular protein, Deep sea microbes, fish pathogenic viruses		Department of Aquaculture Life science
		Marine Bioresources Chemistry	Bioanalytical chemistry, Biomolecular chemistry, Biofunctional chemistry, Chromatography, Biological activity, Molecular biology		
		Marine Food Science and Technology	Marine food Science and technology, Food biochemistry, Food hygiene and safety science, Seafood process engineering, food wholesomeness, Health benefit of seafood, Seafood allergy		Department of Marine Bioresources Chemistry
		Marine Chemical Resource Development	Fisheries waste utilization, Sustainable use, Value adding, Zero emission, Aquaculture, Land cultivation, Enzymes & enzyme inhibitors, Marine polysaccharides, Genetic resources, Chemical Engineering		



Remarkable
education • science

Hakodate Mariculture project

Cabinet office [Grant for creation of local industry by closely co-working with local universities]

Our grant proposal entitled as ‘Transformation into sustainable fisheries and ocean city based on aquaculture – toward to regional carbon neutral aquaculture ’ has been accepted by cabinet office of the government of Japan. The grant proposal was submitted by Mayor of Hakodate, and Hokkaido University has been closely working with Hakodate and other colleagues as a core institute for the project. The project conducts research in complete aquaculture domain on Chinook Salmon, so-called King salmon, and on Kelp together, then these dual aquaculture system would lead us regional carbon neutral. Hokkaido University is going to establish ‘Regional Fisheries Co-creation Center at Hakodate’ which contribute to strengthen regional collaboration between industry, society and academia. The center also create a regional education system to produce talented person for local society.





LASBOS

【Learning and Study by Balance de Ocean System】



‘Balance de Ocean’ is an educational program that aims to cultivate future marine top-scientists. The program provides conventional classroom lectures and practical training, as well as online materials for reinforcement and enrichment, and to help students establish and develop their understanding of the ocean. The program also aims to contribute to the internationalization of the university through use of the online format.

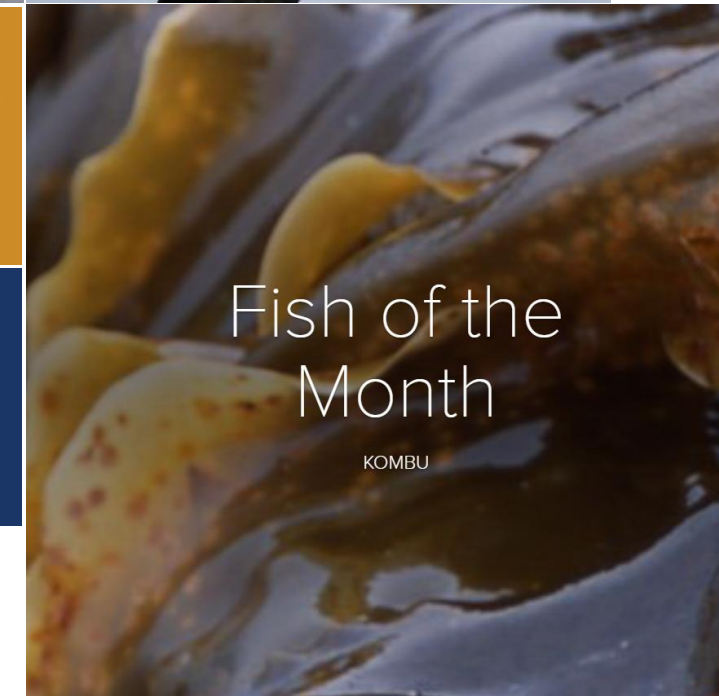
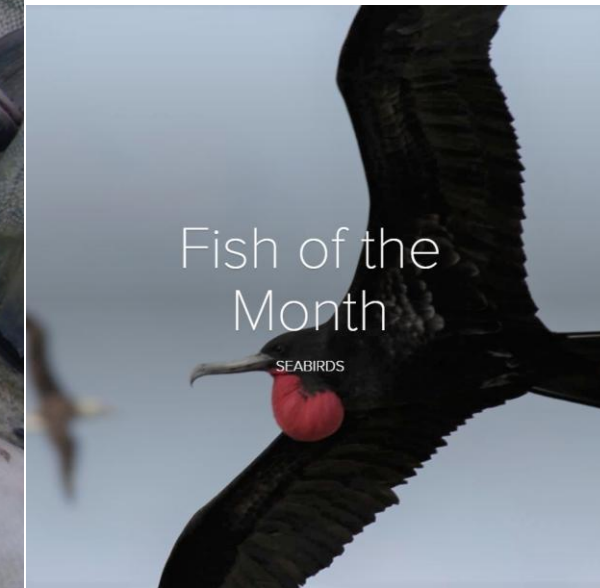
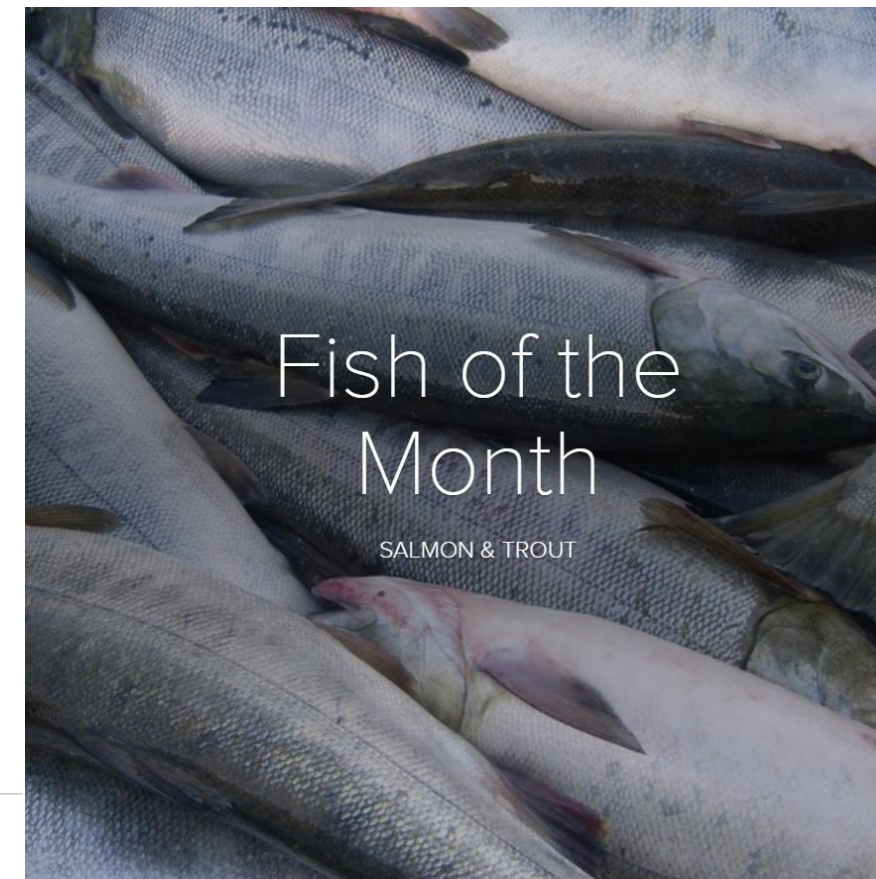
School of fisheries sciences ×SDGs



Numerous education and research is related to Sustainable Development Goals (SDGs) at school of fisheries sciences. Especially, LASBOS provides on-line teaching materials by transmitting research and educational information related to SDGs to students and the public. [LASBOS SDGs](#) introduces education and research from our school contribute to which goals of the SDGs. For example, ~40 subjects of education/research contribute to 14th goal of the SDGs 'Conserve and sustainably use the oceans, seas and marine resources for sustainable development'. Others also contribute to achievement for SDGs.

Fish of the Month [FoM]

“Fish of the Month (FoM)” is a creative web-based project posting up to date information on marine and aquatic life. This project aims making people understand greatness of coexisting of various organisms in the sea, by cooperation with private company. Scientific based valuable text with fine pictures are shown for marine organisms such as kelp, salmon and trout, seabird, and sea cucumber. These item would reach to ~20 contents by 2025. Due to involvement of SDGs view points for the way of informing, this project could also contribute to achievement of multiple target for SDGs.



ArCSII Arctic Challenge for Sustainability II



Polar region is one of the most sensitive area for on-going global changes, and thus is important area where scientific research is conducting broadly and densely. The Arctic waters especially is anxiety in changing its marine ecosystem (ex. fauna/flora and feeding activities) due to drastically sea-ice shrinking. Profs. M. Ueno and A. Yamaguchi are involved in the project as a principal investigator for a physical/chemical/biological observational research program “Variability of Arctic water environment and assembly of its general-purpose dataset” and “Impact of changing coastal Arctic water environment on human society”. These research results would be fed on better understanding of changing Arctic ecosystem and evaluation of social impact in future.



Transit observation on red tide in the eastern Hokkaido coastal water by *Ushio-maru*

※Press release on Oct. 2021 First time transit observation of red tide in the eastern Hokkaido coastal water (Prof. T. Iida, *Ushio-maru*)

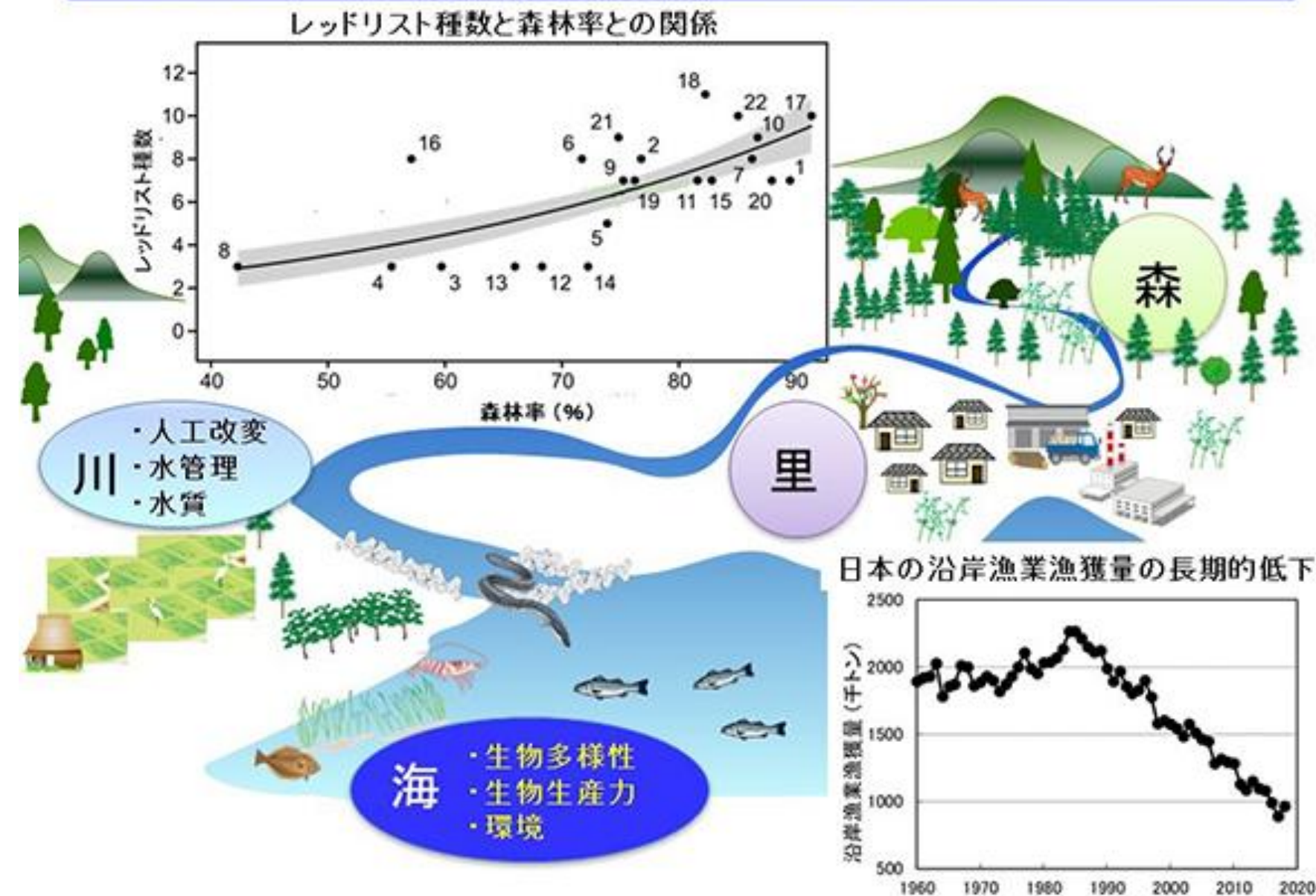
Protect fishery from “red tide”

Red-tide (harmful algal bloom) has been broadly observed in the eastern Hokkaido coastal water since mid Sept. 2021. The red tide might impact seriously on survive of salmon and sea urchin, resulting quit high economic damage on fishery in 2021. Training vessel *Ushio-maru* successfully observed the red tide in the eastern Hokkaido coastal water in Oct. 2021. We continue analysis on the data set and understand actual state of the red tide for future prospect.



Based on satellite data from JAXA
Density of Chl. *a* in the eastern Hokkaido coastal
water
Warm color shows high density

森林を守ることが海の生物多様性を守ることにつながる



Forest protection leads to protect marine biodiversity

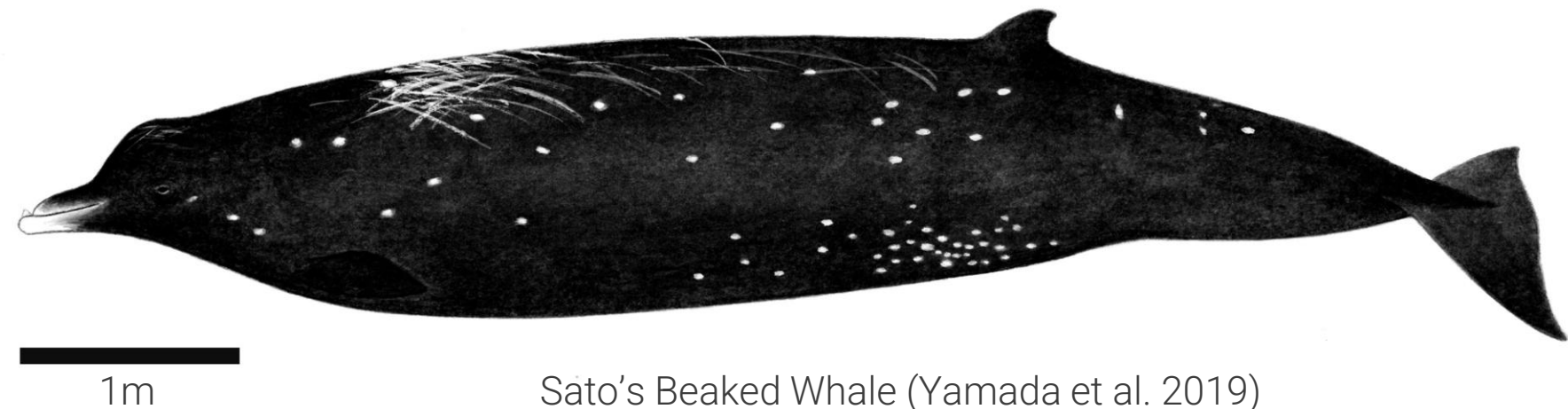
It is quite tough to understand relationship scientifically between forest - urban area - sea although the term of "forest is a lover of sea" is well-known. Prof. Akihide Kasai has partly explained on the mystery by observation of fish species composition using eDNA technique at multiple river mouth areas in Japan. There is a significant relationship between number of the red listed fish species and forest coverage ratio on river catchment area.

※Press release on Oct. 2021. Forest protection leads to protect marine biodiversity



New Species

Sato's Beaked Whale



Cetaceans (e.g. dolphins and whales) are at the apex of marine ecosystems and are sensitive to the influence of the ecosystem as a whole. Currently, 91 species of cetaceans are known, but new species are still being found. The research group Stranding Network Hokkaido, led by Professor Matsuishi Takashi Fritz, has been vigorously researching beached cetaceans in Hokkaido since 2007. In the course of this research, six specimens of cetaceans known to be Baird's beaked whales were analysed jointly with the National Museum of Nature and Science and were found to be different from the conventional Baird's beaked whales based on their genes and external morphology, and were recognised as the new species *Berardius minimus* in 2019.



Published paper Yamada et al. 2019 <https://doi.org/10.1038/s41598-019-46703-w>
Pressrelease https://www.hokudai.ac.jp/news/19090904_pr.pdf

Development of "Aquaculture Support Software: AQSim" to predict the profitability and environmental impacts of land-based aquaculture

【Comprehensive start-up support program (SBIR support)】

What form of land-based aquaculture is both economical and environmentally sustainable?



Use of AQSim

Simulation under various conditions before facility construction and breeding

- Optimization of feed amount/type, water temperature, and facilities → Reduction of costs and CO₂ emissions



- Adjustment of shipment timing based on market price trends → Profit maximization



- Preliminary consideration reduces the possibility of failure → Risk reduction

Low-cost, no-risk, sustainable land-based aquaculture facilities are clarified!

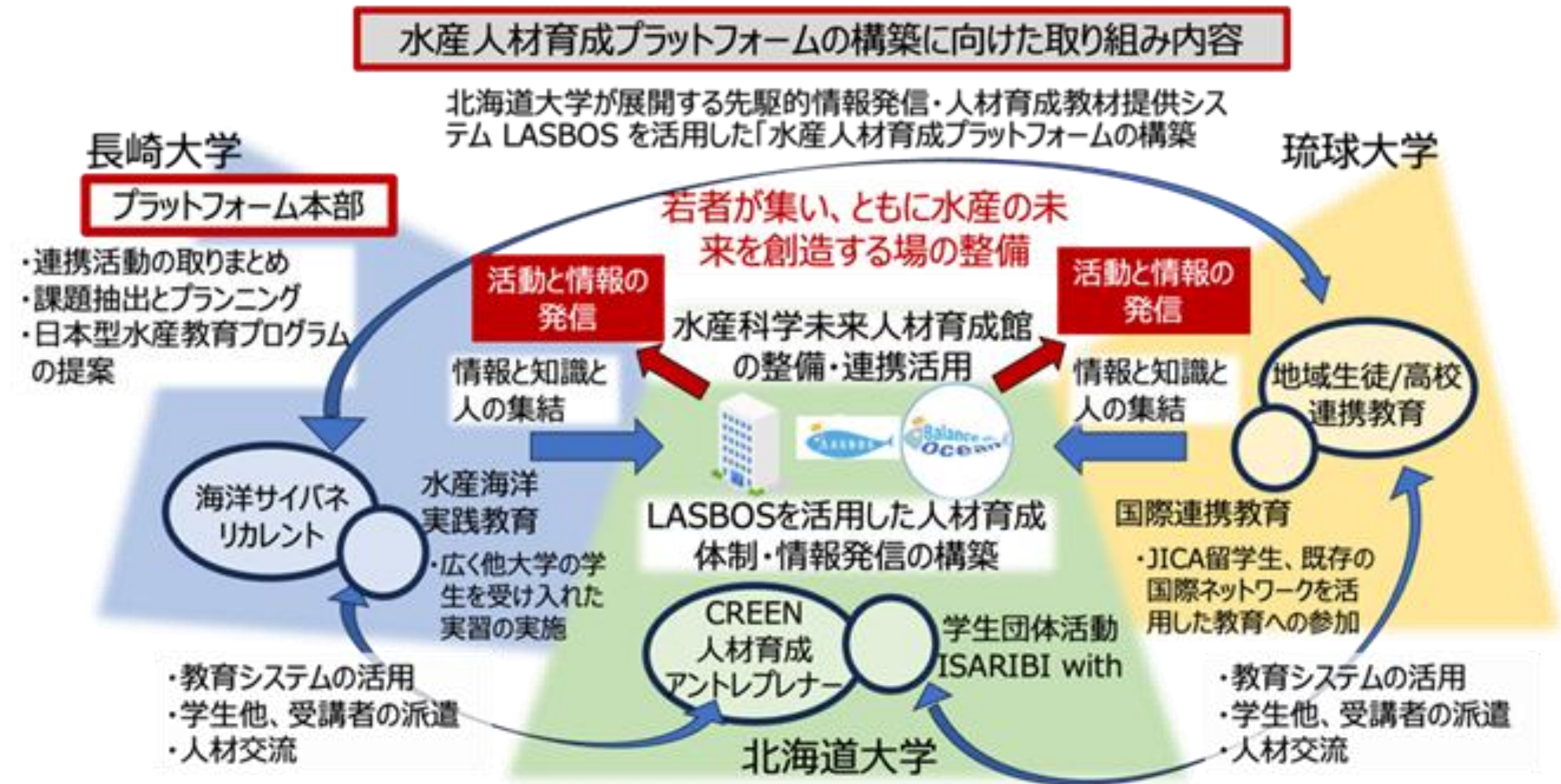
The purpose of this project is to develop "Aquaculture Simulator" (AQSim) software to help establish sustainable land-based aquaculture from both management and environmental perspectives. Land-based aquaculture has been rapidly increasing in recent years, but its high cost, low profitability, and high greenhouse gas emissions have become problems. In this project, we will develop AQSim software to simulate virtual aquaculture facilities using a computer and predict profitability and greenhouse gas emissions. Using AQSim, we expect to contribute to sustainable food production by identifying aquaculture facilities that minimize greenhouse gas emissions while maximizing profitability, and by supporting decision-making by aquaculture operators and newcomers to the industry.



Human resource development project for regional revitalization centered on aquaculture

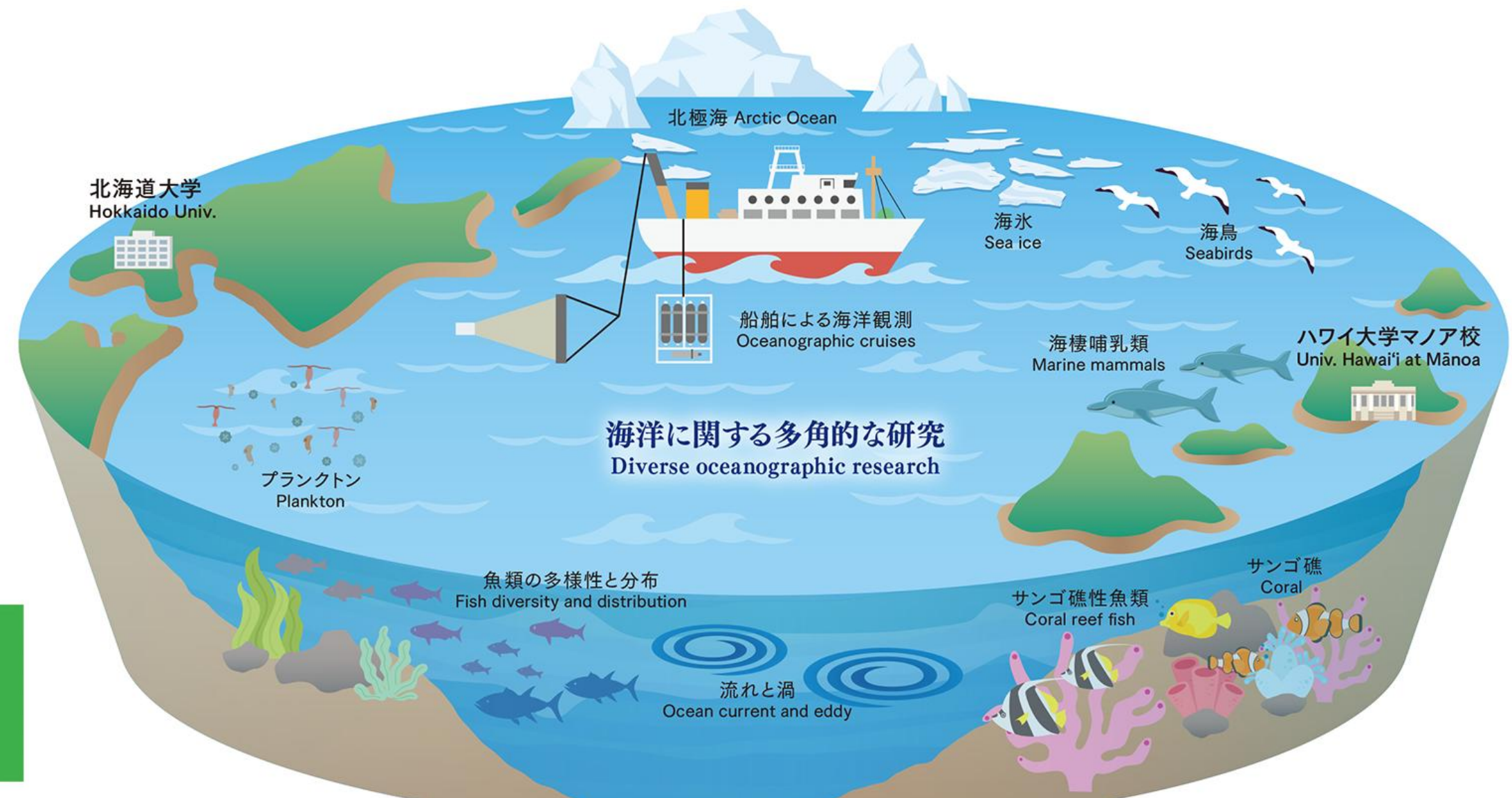
【COI-NEXT】

The Faculty of Fisheries Sciences, Hokkaido University, in collaboration with Nagasaki University and the University of the Ryukyus, which have a common issue of regional revitalization centered on aquaculture, has developed a platform and implementation system for human resource development through collaboration between the three universities, and has established 1) education for universities and graduate schools, 2) recurrent education for producers and businesses, 3) entrepreneurial education for starting a fishery business, and 4) elementary, junior high, and high school education to develop young people who will settle in the community. We are strengthening and complementing the human resource development programs of each university in the four areas of the above.



Uehiro Laboratory for Oceanography

This endowed laboratory was established in April 2025 with support from the Uehiro Foundation on Ethics and Education. We conduct research to understand and conserve marine environments in polar and subarctic regions, where the impacts of global warming are particularly pronounced. Our education program emphasizes fieldwork while fostering international perspectives through exchange with overseas institutions such as the University of Hawai'i at Mānoa. Through these efforts, we aim to nurture globally competent individuals who can contribute to building a sustainable society.





Affiliated
Institutions



Training Ship *Oshoro-maru*

1. Field of experiments and training

Physical Oceanography, Chemical Oceanography, Biological Oceanography, Marine Ecology, Marine Bioresource production, Fisheries Resource Measurement, Fisheries behavioral Research, Satellite Fisheries Oceanography, Acoustical Fisheries Oceanography, Fisheries and Marine Technology Fisheries Informatics and Engineering, Aquaculture Biology, etc.

2. Fishing methods

Stern trawling, Longline fishing, Drift gill-net fishing, Squid jigging, etc.

3. Main areas of research

- ① Physical, chemical, and biological studies of the marine environment, marine bioresource production
- ② Fluctuations in sea and fishery conditions, Changes in bioresources, Resource management
- ③ Applied physics of fishing-gear, fishing methods, and fishing-gear design
- ④ Maneuverability and stability of fishing boats
- ⑤ Ecology of fishes, cephalopods, seabirds, marine animals, and plankton
- ⑥ Efficiency and safety engineering of fishing machinery
- ⑦ Resource measurement, Hydroacoustic remote sensing
- ⑧ Metabolism, growth, and reproduction of fishes

■ Gross Tonnage: 1,598 tons ■ Stern-Trawler ■ Main-Engine: Propulsion motor×2, Max. continuous output 1,000:300kW×2 ■ Main generators: Main generators×3 ■ Propulsion: 4 blades controllable-pitch propeller ■ Service Speed: app. 12.5 knots ■ Range: app. 10,000 nautical miles ■ Complement: 99 persons ■ Completion: July, 2014



Training Ship *Ushio-maru*

1. Field of experiments and training

Physical Oceanography, Chemical Oceanography, Biological Oceanography, Marine Ecology, Marine Bioresource production, Fisheries Resource Measurement, Fisheries Behavioral Research, Marine Chemical Resource Development

2. Fishing methods

Stern trawling, Longline fishing, Gill-net fishing, Single-hook fishing, Squid jigging, etc.

3. Main areas of research

- ① Physical, chemical, and biological studies of the marine environment, marine bioresource production
- ② Fluctuations in sea and fishery conditions, Changes in bioresources, Resource management
- ③ Applied physics of fishing-gear, fishing methods, and fishing-gear design
- ④ Ecology of fishes, cephalopods, seabirds, marine animals, plankton, and benthos
- ⑤ Efficiency and safety engineering of fishing machinery
- ⑥ Resource measurement, Hydroacoustic remote sensing
- ⑦ Exploring the useful materials from marine organisms

■ Gross Tonnage :262 tons ■ Long Forecastle Type ■ Main-Engine:

Diesel-Engine 1330kW (1100hp) × 900min-1 × 1 set ■ Service

Speed: 11.0 knots ■ Range: 2,200 nautical miles ■ Complement: 33persons

■ Completion: October 2022



Dormitory(*Hokushin-ryo*)

- Address 1 - 9 -1, Nakamichi, Hakodate
041-0853, Japan TEL:+81-138-52-1160
- Inauguration March 1965
- Capacity 100 rooms (1 student per room)
※inc. 30 rooms for female students
- Guesthouse「Oshoro」 6 rooms
- Structure Reinforced concrete. 4 floors
- Area 3,147m²

Library

Our Library is one of the most famous library in Japan for holding various kinds of materials about fisheries sciences and marine sciences. We have 13 types of oceanographic survey reports such as the British Challenger expedition, other special collections. The library combined with Fisheries Science Museum and renewed as Fisheries Science Library and Museum Complex in 2024.

□Library Holdings

Classification	Japanese	Foreign	Total
Books	69,898	50,912	120,810
Journals	3,139	2,109	5,248



Research Institutes and Centers



Toya Lake Station

The Toya Lake Station is the only limnological station for fisheries sciences at a national university in Japan. The station has research facilities, a hatchery and accommodations. Landlocked sockeye salmon and masu salmon fry are released from the station, and many return after they mature by swimming through a fishway (artificial channel) that connects the station to the lake.



Usujiri Fisheries Station

The Usujiri Fisheries Station Faces the Pacific Ocean and is an excellent site for studying boreal coastal organisms. Many kinds of species are found near the lab during the year.



Nanae Freshwater Station

The Nanae Freshwater Station is located in Nanae town about 10 km north of the Hakodate campus. The station rears many sturgeon and salmonid species, including freshwater teleost fishes that are endangered in Japan. It also supports education and research at the Faculty of Fisheries.

Fisheries Science Museum



The purposes of the Museum are 1) To gather materials related to fisheries, particularly actual objects, specimens, models, and texts linked to northern Japan. 2) To organize, categorize, and store the documents and artifacts mentioned above. 3) To publish catalogs and reference books for educational and research purposes. and 4) To provide relevant data to researchers both within and outside Japan, while educating the general public about fisheries. Free for admission.

Main building of the Museum is now closed due to aging. It combined with our library and renewed as Fisheries Science Library and Museum Complex in 2024.

Land and Buildings



Classification	Land (㎡)	Buildings (㎡)
Faculty of Fisheries Sciences・Graduate School of Fisheries Sciences・School of Fisheries Sciences	88,974	32,617
Nanae-Hama Fisheries Research Facility	7,471	334
Dormitory (Hokushin-ryo)	7,987	3,147
Total	104,432	36,098

Getting to campus



□ From Hakodate train station

- Take a taxi (15 min., 1,700 yen)
- Take a bus #18 or 410 or 411 to the Hokudai Mae (北大前) bus stop (20 min., 260 yen), followed by a 2-minute walk
- Bus #22 or #23 bound for Esashi (江差) to the Hokudai Ura (北大裏) bus stop (20 minutes, 260 yen), followed by a 3-minute walk

□ From Goryokaku train station

- Take a taxi (10 min., 1,300 yen)
- By walk (30 min., ~1.8km)

□ From Nanaehama train station

- By walk (20 min., ~1.5km)

□ From Airport

- Take a taxi (30 min., 3,000 yen)
- Take the Teisan shuttle bus to the Hakodate Eki Mae bus stop in front of the Hakodate train station (20 min., 410 yen), then follow the directions from the Hakodate train station

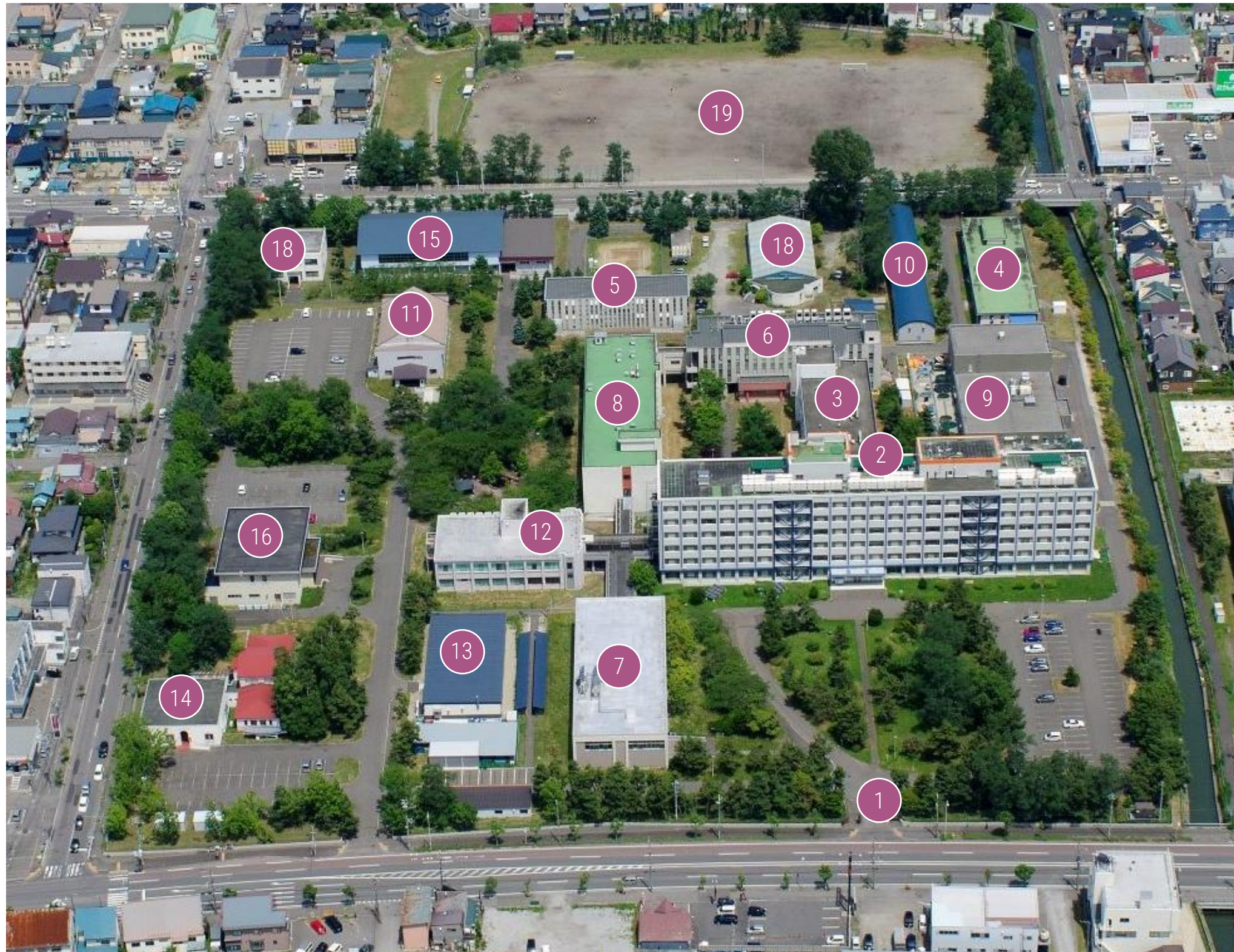
□ From Tsugaru-kaikyo ferry terminal

- By walk (10 min., ~800m)

□ From the Shin-Hakodate-Hokuto train station

- Take the Hakodate Liner to the Hakodate train station (17 min.). Then, follow the directions from the Hakodate train station

※Estimation time is subject of change due to traffic condition



Campus map

- ① Main gate
- ② Main building
- ③ Annex building
- ④ Marine Bioresources Research Building
- ⑤ Marine Frontier Research Building
- ⑥ Marine Science Creative Research Building
- ⑦ Lecture-room Building
- ⑧ Student laboratories
- ⑨ Controlled Environment Rooms
- ⑩ Towing tank Room
- ⑪ Auditorium
- ⑫ Fisheries Science Library and Museum Complex
- ⑬ Aquatic biological specimen house (Nakabe Hall)
- ⑭ Fisheries Science Center
- ⑮ Gymnasium
- ⑯ Student center
- ⑰ Student activities building
- ⑱ Swimming pool
- ⑲ Athletic field