

International Marine Biology Course (IMBC) 2026

July 22-29, 2026

In late July, we organized the International Marine Biology Course (IMBC2026) at the Marine Biological Station, Sado Island Center for Ecological Sustainability, Niigata University. We provided an international hybrid practice course at SMBS from July 23 to 27 at Sado Island, supported by the “Sakura Science Exchange Program” under a grant from the Japan Science and Technology Agency. We have invited 24 students from Bangladesh, Hong Kong, India, Malaysia, Thailand, Viet Nam, and Japan to this in-person course. We have also invited four guest lecturers from Bangladesh, Viet Nam, Zambia, and Japan. As last year, we streamed some parts of this course for overseas participants. Thirty students from three countries have also joined online.

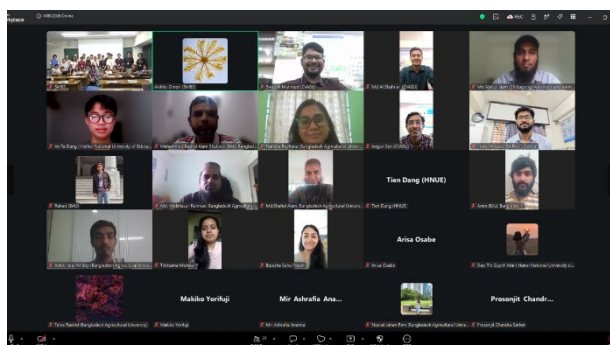
List of participants

University	In-person		Online
	Student	Researcher	
Bangladesh			
Bangladesh Agricultural University (BAU)	1	1	17
Chattogram Veterinary and Animal Science University (CVASU)	1		5
India			
Cochin University of Science and Technology (CUSAT)	2		
Malaysia			
Monash University Malaysia (MUM)	2		
Thailand			
King Mongkut's Institute of Technology Ladkrabang (KMITL)	2		
Viet Nam			
Hanoi National University of Education (HNUE)	2	1	8
Hong Kong			
The University of Hong Kong (HKU)	2		
Zambia			
Kapasa Mapasa University (KMU)			1
Japan			
Niigata University	7		
Chiba University	1		
Kanazawa University	1		
University of Osaka	1		
University of Tsukuba	2		
Ministry of the Environment (MOE)		1	
Total	24	3	31

The goals of IMBC2026 are to develop young researchers with monitoring techniques for marine environments and ecosystems, which are threatened by global warming or human activities. To achieve this goal, we provide knowledge of marine biodiversity and animal evolution through lectures, fieldwork, and lab work. All in-person course was conducted in the beautiful and well-preserved coastal environment of Sado Island. This year, we also conducted a tour to learn about the reintroduction program of the Japanese crested ibis (Toki, *Nipponia nippon*) as a model of coexistence between humans and nature. The list of activities in this program was as follows:

- Seven lectures in different fields of marine and aquatic biology
(Four of them were broadcast online)
- Animal sampling by snorkeling at a rocky shore
- Microplastic sampling from beach sand
- Plankton sampling from pier
- Classification, observation, and biological drawing of collected marine animals
(broadcast online)
- Group and individual presentation about marine animals
- Observing the bioluminescence of sea fireflies
- Visiting the Sado Japanese Crested Ibis Conservation Center and the Toki Terrace
- Visiting the Niigata City Aquarium “Marinepia Nihonkai”
- Visiting the National Museum of Nature and Science, Tokyo

On July 22, fourteen overseas participants arrived at Narita International Airport. They safely gathered at Ryotsu ferry terminal and met up with Japanese university students on July 23. After moving to SMBS, we started the first day of this course with in-person and online participants. Following the opening remarks, self-introductions, and faculty tour, SMBS staff provided two lectures about the marine environments of the Japan Sea and the taxonomic classification of marine animals. After the lecture, we held welcome parties for in-person course participants.



Group photo with online participants

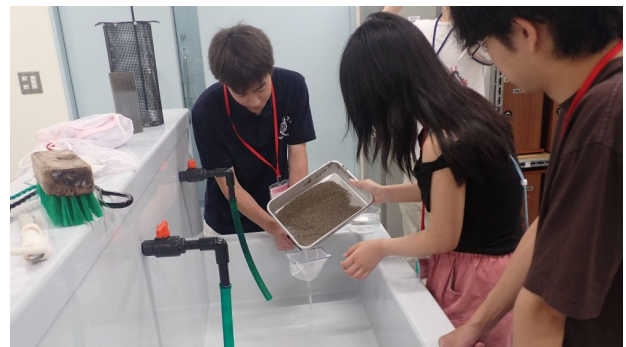


Discussion for group presentation

On the second day, we got started on field activities. Because half of the students had never caught animals underwater, the SMBS staff showed students how to use the equipment and collect animals. Unfortunately, it was cloudy and a little bit cold, but participants fully enjoyed the beautiful sea of Sado. Even beginners caught various animals, such as sea slugs, brittle stars, crabs, and fish, and they seemed to be into the sampling. In the afternoon, we first gave a brief lecture about the microplastic problems in the sea around Japan. Then we started microplastic sampling. Due to the bad weather, we conducted the sampling using beach sand collected in advance. Then we started observation items collected from sands under microscopes. Even in one or two scoops of a shovel, we found some fragments of plastic materials. After this activities, we started the hybrid lectures for both in-person and online participants. At first, Dr. Omori (SMBS) lectured about the characteristics of typical phyla in marine animals, introducing creatures caught by snorkeling at a rocky shore. Then, we listened to a lecture about ghost fishing in the Great Lakes by Mr. Lwabanya Mabo (KMU, Zambia). As Asian countries share the issues of debris from fishing activities and ghost fishing, participants were very interested in this report. After the hybrid lecture, in-person students start biological drawing and preparation for the presentation. At the end of the day, we observed the bioluminescence of sea fireflies (*Vargula hilgendorffii*). The blue illumination was so fantastic!



Animal sampling by snorkeling



Microplastic sampling from beach sand

On the morning of the third day, Dr. Tran Duc Hau (HNUE, Viet Nam) lectured about the species diversity of gobies in Viet Nam. We were amazed that gobies are found in a wide variety of environments in Viet Nam, and also learned that they are threatened by bycatching. After the lecture, we went to plankton sampling. Due to the sudden rain, we had to change from sampling on the research vessel to on land. However, thanks to this change, we could collect plankton at Tassha Bay and Himetsu Port, then compare their species composition. In the afternoon, we visited the “Sado Japanese Crested Ibis Conservation Center”. Dr. Kitahasi (MOE) lectured about the Toki’s reintroduction and preservation. Toki is one of the successful cases of recovery of an animal once extinct in the wild, and we learned the importance of cooperation with local residents to manage the conservation project. After the lecture, we observed wild Toki from “Toki Terrace”. Then we got back to SMBS through the geosight “Meotoiwa” and the industrial heritage site “Kitazawa Flotation Plant”. After dinner, we observed captured plankton and marine animals.

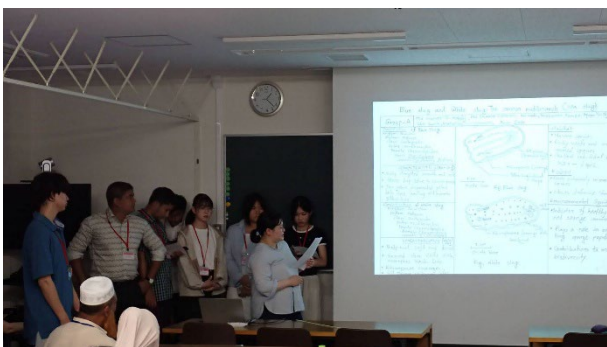


Plankton sampling at Himetsu Port



Lecture about reintroduction of Toki
(Sado Japanese Crested Ibis Conservation Center)

The fourth day was the final day of the practice conducted at SMBS. First, Dr. Md. Shahjahan (BAU, Bangladesh) lectured about the impacts of water pollution on fish physiology. From his study, we learned that environmental pollution and global warming will cause problems for aquaculture. After the lecture, students finished the preparation for the presentation. This year, students were divided into four groups and chose one phylum that they would introduce. Each group worked on preparing their presentation and discussed it enough. In the afternoon, we held the group and individual presentations. Every presentation and drawing was well-organized to show the characteristics of the phylum or species. Through these presentations, students gained a deeper knowledge of evolution and diversity in marine animals. After the presentation, we held an optional tour for world heritage site “Sado Gold Mine”. Last night at SMBS, we had a BBQ party to celebrate the success of this course. Participants talked until late at night and deepened their friendships.



Group presentation



BBQ party

On the morning of the fifth day, we closed the practical course at SMBS. We moved to Ryotsu Port and dismissed the Japanese students. After moving to Niigata City, we visited the Niigata City Aquarium “Marinepia Nihonkai”. The exhibition was well-designed to help visitors understand marine biota around the Japanese archipelago. On the sixth day, we moved to Tokyo and visited the “National Museum of Nature and Science”. Through the valuable specimens on the exhibits, we could study the diversity of the ecosystems and evolutionary history of marine animals. On July 29, all participants from overseas departed from Narita International Airport. They safely finished the long

trip and arrived at their final destination.

On August 23, the post-exchange meeting was held online. Students caught up with each other and share the impressions of this course. Then share the brief report on the microplastic problems in each country. By conducting the sampling in their own country in the same way as at Sado, they might deepend the understanding of this issue.

Through these 8 days of in-person course and post-exchange meeting, participants learned about the diversity and evolution of marine animals and experienced techniques for assessing marine ecosystems and biodiversity. This experience would be helpful for them to understand the impact of human activity on the marine environment and manage this problem in their future career. Moreover, students made strong friendships across borders. We hope all the participants enjoyed this course and will continue to communicate with each other. We would also be happy if online participants join this course on-site next year. Finally, we would like to express our gratitude to all those involved in this course. SMBS will continue to hold the international course in the future.



Group photo taken with Tascha Bay in the background