

**PICES-2022**  
**Sessions Schedules**  
**(Talks)**

# Schedule at a Glance, September 26

## S1 Plenary Science Board Symposium

### Sustainability of Marine Ecosystems through global knowledge networks during the UN Decade of Ocean Science

- 11:00      **Fangli Qiao** (*recorded*)  
The intersection of UN Ocean Decade and PICES FUTURE in the North Pacific
- 11:30      **Jeanette Gann** (*recorded?*)  
Increasing Capacity and Incentives for Data Sharing within the UN Decade, and Strategies to Incorporate PICES Research and Data into Broader International Platforms
- 12:00      **Naya Sena**  
Identifying the Ocean Decade challenges: A common framework for Small Island Developing States
- 12:30      **Lunch**
- 14:00      **Emanuele Di Lorenzo**  
Co-Designing Climate Solutions under the U.N. Ocean Decade
- 14:30      **Gennady Kantakov** (*recorded*)  
Shall We Repeat Plastics Research
- 15:00      **Steven J. Bograd**  
SmartNet: The ICES-PICES Joint Program of the UN Decade of Ocean Science for Sustainable Development
- 15:30      **Vyacheslav Lobanov**  
Possible abiotic causes of catastrophic ecosystem event in Avachinskiy Bay of Kamchatka in 2020
- 16:00      **Coffee/Tea Break**
- 16:30      **John A. Barth**  
Mapping widespread hypoxia off the Pacific Northwest during the 2021 summer upwelling season: A necessary ingredient to informing sustainable use of the ocean
- 17:00      **Misty B. Peacock**  
Lifting the voices of Indigenous students to empower the next generation of ocean leaders
- 17:30      **S1 Ends**

## Schedule at a Glance, September 27

S3: Realizing scalable artificial intelligence in marine science		S7: Forecasting and projecting climate variability and change on northern hemisphere marine ecosystems using coupled next generation biophysical model		S5: Environmental variability and small pelagic fishes in the North Pacific: exploring mechanistic and pragmatic methods for integrating ecosystem considerations into assessment and management		HD-MEQ-Paper Session	
				8:55	<i>Introduction by Convenors</i>		
9:00	<i>Introduction by Convenors</i>	9:00	<i>Introduction by Convenors</i>	9:00	<b>Isaac C. Kaplan (Invited)</b> Options for including environmental variability into management of California Current fish species	9:00	<i>Introduction by Convenors</i>
9:10	<b><u>Jeong-Yeob Chae</u></b> Artificial neural network for ocean surface current prediction around the Korean peninsula using transfer learning	9:10	<b><u>Woo-Jin Jeon</u></b> ENSO prediction modulated by interactive phytoplankton feedback	9:10		<b>Sang-chul Yi</b> Economic valuation of fisheries monitoring programs: A case of the international fisheries observer program of Korea	
9:30	<b><u>Ho-Jeong Ju</u></b> Impacts of seasonal and interannual variabilities of sea surface temperature on its short-term deep-learning prediction model around the southern coast of Korea	9:30	<b><u>Hyung-Gyu Lim</u></b> Attribution and predictability of climate-driven variability in global ocean color	9:30	<b><u>Gloria S. Duran Gomez</u></b> Assessment of multiscale nutrient supply processes on biological productivity in the Tokara Strait along the Kuroshio	9:30	<b><u>Hana Matsubara</u></b> Comparative and historical study of international guideline and policy documents of Japan relevant to gender equality in fisheries
9:50	<b><u>Eun-Joo Lee</u></b> Reconstruction of Long-Term Gaps of Sea Level Using Neural Network Operator	9:50	<b>Daniele Bianchi</b> Sources of uncertainty in global projections of oceanic fish biomass under climate change	9:50	<b>Takeyoshi Nagai</b> Effects of the Kuroshio nutrient stream intrusion into the north of Yaku Island and Osumi Strait south of Kyushu	9:50	<b>Seung-Kyu Kim</b> Importance of terrestrial input on marine microplastics as traces recorded in sediments from rivers through estuaries to open seas
10:10	<b>Igor I. Shevchenko</b> <i>(recorded)</i> Bayesian inference for extracting information from abundance and catch at age time series	10:10	<b><u>Abigale Wyatt</u></b> Ecosystem impacts of marine heat waves in the Northeast Pacific	10:10	<b><u>Seonggil Go</u></b> Recruitment variability of chub mackerel ( <i>Scomber japonicus</i> ) with respect to varying water temperatures	10:10	<b>Suhendar I. Sachoemar</b> Strategic planning ciguatera research to build local warning networks for the detection and human dimension of ciguatera fish poisoning in Indonesia
10:30	<i>Coffee/Tea Break</i>	10:30	<i>Coffee/Tea Break</i>	10:30	<i>Coffee/Tea Break</i>	10:30	<i>Coffee/Tea Break</i>

## Schedule at a Glance, September 27

S3 Continued		S7 Continued		S5 Continued		HD-MEQ-Paper Continued	
10:50	<b>Yang Liu</b> <i>(recorded)</i> AIS data-driven automatic machine learning model for predicting suitable fishing vessel operating areas in Northwest Pacific	10:50	<b>Keith Rodgers</b> Future projections of fish biomass to 2300: uncertainty over global and regional scales	10:50	<b>Jinwoo Gim</b> Effect of climate change on the Korea chub mackerel stock in stock assessment via an age-structured model	10:50	<b>Arief Rachman</b> Potential threats of harmful algal blooms (HABs) and ciguatera fish poisoning (CFP) in the marine tourism park of Gili Matra islands, Indonesia
11:10	<b>Ferdenant Mkrtychyan</b> <i>(recorded)</i> The Problem of Learning to Make Statistical Decisions for Small Samples for Remote Monitoring Marine Ecosystems	11:10	<b>Hui Liu</b> Mechanistic modeling of dynamics and blooms of jellyfish in light of climate change in the northern Gulf of Mexico	11:10	<b>Kyuhun Kim</b> Evaluation of model specification and parameter identifiability in state-space stock assessment models with an application to the Korea chub mackerel ( <i>Scomber japonicus</i> ) stock	11:10	Discussion
11:30	<b>Annalisa Bracco</b> Using Machine Learning to evaluate ecosystem connectivity and biodiversity in marine ecosystems	11:30	<b>Cody Szuwalski</b> <i>(recorded)</i> The collapse of eastern Bering Sea snow crab	11:30	<b>Jeanette C. Gann</b> <i>(recorded?)</i> Responses to Phytoplankton Size and Community Composition by <i>Calanus</i> and <i>Pseudocalanus</i> During Late Summer in the Southeast Bering Sea: potential implications for age-0 pollock recruitment	11:30	<b>HD-MEQ Paper Session Ends</b>
11:50	<b>Emily Lemagie</b> Machine learning approaches for processing large datasets from the Prawler and Oculus glider autonomous platforms	11:50	Poster introductions	11:50	<b>Yanhui Zhu</b> Calibration of Multiple Fishing Vessels by Using Secondary Reflection from Sea Bottom		
12:10	Discussion	12:10	Wrap up	12:10	<b>Lunch</b>		
12:30	<b>S3 Ends</b>	12:30	<b>S7 Ends</b>				

## Schedule at a Glance, September 27

	<b>S5 Continued</b>
14:00	<b><u>Jhen Hsu</u> (Invited)</b> Evaluating the spatiotemporal dynamics of Pacific saury in the Northwestern Pacific Ocean by using a geostatistical modelling approach
14:30	<b>Chris Rooper</b> Evaluation of modeling methods for assessing and comparing the abundance of two size classes of eulachon in British Columbia
14:50	<b><u>Minkyung Bang</u></b> Future changes in the distributions of chub mackerel ( <i>Scomber japonicus</i> ) in the seas around Korea using a Maximum Entropy Model based on CMIP6: Importance of seasonal variation
15:10	<b>Matthew R. Baker</b> Shifting distribution and abundance of sand lance in the Arctic in response to the physical environment
15:20	Poster Contributions
15:40	Wrap up
16:00	<b>S5 Ends</b> <i>Coffee/Tea Break</i>

## Schedule at a Glance, September 28

<b>S2: Marine Ecosystem Services – Connecting Science to Decision Making</b>		<b>S9: The effects of ocean acidification and climate change stressors on the ecophysiology and toxicity of harmful algal species</b>	
9:00	<i>Introduction by Convenors</i>	9:00	<i>Introduction by Convenors</i>
9:05	<b>Kelly Biedenweg (Invited Recorded)</b> Integrating human wellbeing indicators in Puget Sound ecosystem restoration	9:05	<b><u>Nour Ayache (Invited)</u></b> Acclimation of various US Dinophysis isolates to changing light intensity: effects on growth, photosynthetic efficiency and toxin production
9:30	<b>Michael Townsend (Invited)</b> Implementing the marine ecosystem service concept	9:30	<b><u>Young Kyun Lim</u></b> Effect of marine heatwaves on the bloom of harmful dinoflagellate <i>Cochlodinium polykrikoides</i> in Korean coastal waters: Field and laboratory approaches
9:55	<b><u>Iwao Fujii</u></b> Toward the inter-regional cooperation for high seas resource conservation: Implications from the Asia-Pacific region	9:50	<b>Andrew R.S. Ross</b> Correlation between ocean temperature and the concentrations of harmful algal biotoxins measured in British Columbia coastal waters
10:15	<b><u>Monica Ogawa</u></b> Floating marine debris in Shiretoko, Japan: relationship between debris density, type and human activities	10:10	<b>Svetlana Esenkulova</b> Linkages among harmful algae, marine biotoxins in shellfish, and oceanographic conditions in the Strait of Georgia, Canada
10:35	<i>Coffee/Tea Break</i>	10:30	<i>Coffee/Tea Break</i>
10:55	<b><u>Jongyoon Baek</u></b> Evaluation of ecosystem services provided by Pacific oyster, <i>Crassostrea gigas</i> , farms in Hansan bay, South Korea	10:50	<b><u>Clare Ostle</u></b> Using the Continuous Plankton Recorder to detect and monitor the spread of Harmful Algal Blooms from the Pacific into the Arctic Ocean
11:15	<b>Michael Litzow</b> Climate attribution time series to support decision making by fisheries stakeholders	11:10	<b>William P. Cochlan</b> Climate Change and the Growth and Toxicity of <i>Pseudo-nitzschia</i> multiserotypes from the California Current Upwelling System: Effects of Ocean Acidification and Temperature
11:35	<b><u>Yeajin Jung</u></b> Blue carbon in South Korea: Knowledge gaps, critical issues, and novel approaches	11:30	Discussion
11:55	Discussion	11:45	<b>S9 Ends</b>
12:10	<b>S2 Ends</b>		

## Schedule at a Glance, September 29

S4: Application and best practice of imaging technologies for plankton and ecosystem monitoring		S8: Recognizing the importance of zooplankton to fisheries research		S6: Using eDNA to assess and manage Non-indigenous species in the North Pacific	
				8:55	<i>Introduction by Convenors</i>
9:00	<i>Introduction by Convenors</i>	9:00	<i>Introduction by Convenors</i>	9:00	<b>Michio Kondoh (invited)</b> ANEMONE: an eDNA-based biodiversity monitoring network
9:05	<b>Robert K. Cowen (Invited)</b> Advances in imaging technology and image analysis – applications in coastal systems	9:05	<b>Jennifer Boldt (Invited)</b> Linking zooplankton to fish: integrated ecosystem monitoring can inform ecosystem approaches to fisheries management		
9:30	<b>Robert Campbell</b> The Prince William Sound Plankton Camera: a profiling in situ observatory of plankton and particulates	9:30	<b>Hui Liu</b> Linking zooplankton to fisheries stock assessment and management in changing ecosystems: challenges and opportunities	9:40	<b>John Darling (recorded)</b> Environmental DNA as a tool for invasive species surveillance
9:50	<b>Wenjie Zhang (recorded)</b> An automatic deep learning based measurement of plankton size	9:50	<u><b>Akinori Minagawa</b></u> The food source of anguilliform leptocephali in the Satsunan area, southern Japan		
10:10	<b>Hongsheng Bi</b> A novel end-to-end deep learning system for classifying marine biological and environmental images	10:10	<u><b>Jieun Kim</b></u> Spatiotemporal trophic dynamics of four zooplankton taxa in the East/ Japan Sea revealed by stable isotopes and fatty acid composition	10:10	<b>Satoshi Nagai</b> Attempts to predict occurrences of plankton species by AI technologies in Mombetsu, Hokkaido, Japan
10:30	<i>Coffee/Tea Break</i>	10:30	<i>Coffee/Tea Break</i>	10:30	<i>Coffee/Tea Break</i>
10:50	<b>Ingibjorg Bjorgvinsdottir and Kristinn Sigurdarson</b> A new portable tow-yo imaging system for marine snow and plankton using image recognition and tracking technique	10:50	<b>Julie E. Keister</b> Evidence of the importance of zooplankton to salmon success in the southern Salish Sea, USA	10:50	<u><b>Sang-Eun Nam</b></u> Effects of antifoulants on the formation of marine biofouling communities monitored in Jangmok using environmental DNA metabarcoding approach
11:10	<b>Gaoge Chen (recorded)</b> A dual mode imaging method for phytoplankton a combination of shadowgraph imaging and fluorescence imaging	11:10	<b>Réka Domokos</b> Spatiotemporal variability of micronekton at two fronts in the central North Pacific	11:10	<b>Jinhui Wang</b> Assess Non-indigenous species in East China sea using traditional methods and eDNA
11:30	<b>Xiaojin Cui (recorded)</b> Increase depth of field for underwater microscopic imager	11:30	<b>Orio Yamamura</b> Unexpected mass-occurrence of walleye pollock <i>Gadus chalcogrammus</i> in the epi-pelagic layer at the edge of the ocean basin: the benefit from copepod bloom	11:30	<b>Thomas Therriault</b> Marine invasive species biosurveillance in the northeast Pacific by eDNA metabarcoding

## Schedule at a Glance, September 29

S4 Continued		S8 Continued		S6 Continued	
11:50	Discussion	11:50	<b><u>Tomoko Kusano</u></b> How to adapt larval growth of widely appearing fish to food availability in the Kuroshio?	11:50	<b>Chang-Bum Jeong</b> Metazoan diversity and seasonality through eDNA approaches: Surveillance of non-indigenous species in Jinhae Bay
12:10	<b>Lunch</b>	12:10	<b><u>Hirata Manami</u></b> Metabarcoding analysis on prey of fish larvae appearing in the Kuroshio and its neighboring waters	12:10	<b>Pengbin Wang</b> Detection and quantification of four main harmful algal species in the East China Sea (Yangtze river estuary) via quantitative real-time PCR
		12:30	<b>Lunch</b>	12:30	<b>Lunch</b>
14:00	<b>Dai Liu (recorded)</b> Copepoda in Yellow Sea coastal areas: influence factors for the distribution of density and size structure	14:00	<b>Mutsuo Ichinomiya</b> Seasonal influence of intrusion from the Kuroshio Current on microplankton biomass and community structure in the northern Satsunan area, western Japan	14:00	<b>Wooseok Gwak (recorded)</b> An eDNA-based approach to investigate species diversity and exotic species in fish
14:20	<b><u>Moritz S. Schmid</u></b> Planktonic trophodynamics in the Northern California Current - multiyear in-situ observations derived from underwater imaging	14:20	<b>Tomohiro Komorita</b> Temporal changes of micoplankton community after the inflow of the Kuroshio branch current in the Northern Satsunan region, southern Japan during mixing period	14:20	<b>Svetlana Esenkulova</b> Assessing winter Gulf of Alaska biodiversity and non-indigenous species using eDNA surveys.
14:40	<b><u>Junting Song (recorded)</u></b> Differential response of coastal plankton to tidal and diurnal variations	14:40	<b>Lidia Yebra (online live)</b> Molecular identification of the zooplanktonic diet of <i>Sardina pilchardus</i> larvae in the SW Mediterranean Sea	14:40	<b>Jang-Seu Ki</b> eDNA metabarcoding reveals high microalgae diversity in the East China Sea near Jeju Island and marine environments of Korea
15:00	<b>Atsushi Yamaguchi</b> Zooplankton community and size structure from surface to deep-sea for the various neighboring waters of Japan: Analysis by ZooScan	15:00	<b>Karyn Suchy (recorded)</b> Model-based zooplankton productivity and trophic transfer efficiency in the Strait of Georgia, Canada	15:00	General Discussion and Next Steps
15:20	<b><u>Yi Zhu (recorded)</u></b> Influence of freshwater on zooplankton distribution in Laizhou Bay	15:20	Discussion		
15:40	<b>David G. Kimmel</b> Automation of rapid zooplankton assessment for use in ecosystem based fisheries management	15:40	Poster Introduction and Closing Remarks		
16:00	<b>Coffee/Tea break</b>	16:00	<b>S8 Ends</b>	16:00	<b>S6 Ends</b>
16:20	Discussion				
16:40	Wrap up				
16:50	<b>S4 Ends</b>				



## Schedule at a Glance, September 30

				<b>POC-Paper Session</b>	
				7:55	<b><i>Introduction by Convenors</i></b>
				8:00	<b><u>Wonkeun Choi</u></b> Characteristics and mechanisms of marine heatwaves in the East Asian Marginal Seas: regional and seasonal differences
				8:12	<b><u>Subi Lee</u></b> Why are the marine heatwaves long-lasting in the East Korea Bay in the East Sea?
				8:24	<b><u>Mochamad Riza Iskandar</u></b> Tracking the pumice rafts from the recent eruption of the submarine volcano Fukutoku-Okanoba, Japan: a perspective from Satellites and Lagrangian Particles tracking
<b>BIO-Paper Session</b>		<b>FIS-Paper Session</b>		8:36	<b>Yusuke Uchiyama</b> Fate of river-derived microplastics from the South China Sea
8:40	<b><i>Introduction by Convenors</i></b>	8:40	<b><i>Introduction by Convenors</i></b>		
8:45	<b><u>Minju Kim</u></b> Fiddlers on the tidal flat: fiddler crabs change their tunes depending on the contexts	8:45	<b>Benjamin, Jeffrey, Laurel</b> Climate-driven changes in size-dependent overwintering success in age-0 Pacific cod ( <i>Gadus macrocephalus</i> )	8:48	Questions and Answers
9:00	<b><u>Seojeong Park</u></b> Don't tread on my tidal flats: assessment of human trampling effects on the endangered fiddler crab for coastal management	9:00	<b><u>Kosuke Oyama</u></b> Age, growth and reproductive biology of areolate grouper <i>Epinephelus areolatus</i> , southern Japan	9:00	<b><u>Jihwan Kim</u></b> Interannual variability of barotropic sea level difference across the Korea/Tsushima Strait and its relationship to upper-ocean currents variability in the western North Pacific
9:15	<b>Tomohiro Komorita</b> Characterization of the organic matter of biodeposits derived from marine aquaculture bivalves: a meta-analysis approach	9:15	<b>Jessica A. Miller</b> Thermal effects on early life stages of Gulf of Alaska Pacific Cod: shifts in reproductive phenology, size, and growth	9:12	<b><u>Youngji Joh</u></b> Stronger decadal variability of the Kuroshio Extension under simulated future climate change
9:30	<b><u>Seo Yeon Byeon</u></b> Multiple genetic sources for the golden tide Sargassum patches in northwestern Pacific: temporal variation in their genetic makeup	9:30	<b><u>Rachael Mallon</u></b> WANTED: Searching for Longfin Smelt in the Nooksack River and Bellingham Bay	9:24	<b><u>Fuad Azminuddin</u></b> <i>(recorded)</i> Destination of New Guinea Coastal Undercurrent in the western tropical Pacific: variability and linkages
				9:36	<b><i>Coffee/Tea Break</i></b>

## Schedule at a Glance, September 30

BIO-Paper Session Continued		FIS-Paper Session Continued		POC-Paper Session Continued	
9:45	<b><u>Emma Hinako Moritoshi</u></b> Mating systems and sexual patterns of red-belted anthias <i>Pseudanthias rubrizonatus</i> in different-sized groups in Kagoshima, Japan	9:45	<b><u>Sango Nishio</u></b> Gastric evacuation rate and maintenance ration of pothead flounder: Why do they feed at pelagic?	9:51	Questions and Answers
10:00	<b><u>Kate M. Colson</u></b> ( <i>recorded</i> ) Changes in pinniped prey consumption along the west coast of North America following protection from hunting and culling	10:00	<b>Steve Lindley</b> Emergence of thiamine deficiency in salmon in the California Current	10:01	<b><u>Hajin Song</u></b> Seasonal variability of deep western boundary current in the Philippine Basin from observation and numerical simulation
10:15	<b><u>Hyuntae Choi</u></b> Nitrogen isotope baseline isoscape using amino acid nitrogen isotope of copepod <i>Calanus</i>	10:15	<b>Andrey S. Krovnin</b> Association between Far East pink salmon catches and variations of heat content in the upper 100 m of the North Pacific during the wintering seasons, 1978-2021	10:13	<b><u>Yizen Zhong</u></b> ( <i>recorded</i> ) Seasonal Variation of the Surface Kuroshio Intrusion into the South China Sea Evidenced by Satellite Geostrophic Streamlines
10:30	<i>Coffee/Tea Break</i>	10:30	<i>Coffee/Tea Break</i>	10:25	<b>Jennifer Jackson</b> Identification of a Seasonal Subsurface Oxygen Minimum in Rivers Inlet, British Columbia, Canada
10:50	<b>Andrew W Trites</b> Prey consumption by marine mammal in the North Pacific Ocean	10:50	<b>Sei-Ichi Saitoh</b> Application of multiple satellite datasets to sustainable use of salmon resource under changing climate	10:37	<b><u>Guoqi Han</u></b> Seasonal and interannual variations in major shelf-scale currents off the west coast of Canada
11:05	<b><u>Minju Kim</u></b> Potential shift in mesozooplankton community structure in response to climate-driven changes during summer in the Ulleung basin	11:05	<b><u>Chuanyang Huang</u></b> Exploration of the variation in the northwest Pacific fishing ground using improved ocean color Chlorophyll-a data	10:49	Questions and Answers
11:20	<b>Hiroaki Saito</b> Diversity and Biogeography of Dinoflagellates in the Kuroshio Region	11:20	<b><u>Kirill Kivva</u></b> Pacific water propagation in the Sea of Okhotsk and walleye pollock fishery	11:01	<b>Bo Qiu</b> Bi-directional energy cascades in the Pacific Ocean from Equator to Subarctic Gyre
11:35	<b><u>Kirill Kivva</u></b> Role of sea ice retreat in formation of spring phytoplankton bloom in the Bering Sea	11:35	<b><u>Shintaro Ohno</u></b> A comparison study for behavior of Japanese and Chinese neon flying squid vessel in the North Pacific using Automatic Identification System	11:13	<b><u>Kang-Nyeong Lee</u></b> Barotropic Rossby waves induced by tropical instability waves in the Northeastern Pacific Ocean from observation and simulation
11:50	Wrap up	11:50	Wrap up	11:25	<b>Dong-kyu Lee</b> Peripheral upwelling induced by the merging of low-density water into a warm eddy and its effects on the biological and physical environment
12:00	<b>BIO-Paper Session Ends</b>	12:00	<b>FIS-Paper Session Ends</b>	11:37	Questions and Answers
				11:50	Wrap up
				12:00	<b>POC-Paper Session Ends</b>

**PICES-2022**  
**Sessions Schedules**  
**(Posters)**

**Poster Session, September 29, 18:30-21:00**

- S1-1 **Jill Prewitt**  
The Alaska Ocean Observing System: Critical Research Infrastructure for a Rapidly Changing Arctic
- S1-2 **Jean-Baptiste Thiebot**  
Consistent seabird migration route across years and populations reveals key areas for marine conservation in the North-western Pacific
- S1-3 **Aoi Sugimoto**  
How fisheries/marine science looks like in the past, present and future: From an ECOP's perspective in 2022
- S1-4 **Polina Lobanova (for Aleksandra Malysheva)**  
Development of the maximum specific rate of photosynthesis algorithm: a case study for the Atlantic Ocean
- S3-1 **Sangyeob Kim**  
Analysis of water quality fluctuations in Estuary using a Random forest
- S3-2 **Jisook Park**  
Seasonal to multiannual marine ecosystem prediction: Deep learning approaches
- S5-1 **Iára Andressa Torres Cabrera**  
Effects of spring-neap tides on the sea surface chlorophyll-*a* in relation to the Kuroshio path modulation during 2006-2021
- S5-2 **Elena Ustinova**  
Assessment for effect of climate regime shifts and extreme events on the spatial distribution of sardine, mackerels and saury in the Northwestern Pacific
- S6-1 **Soyeon Kwon**  
Invasion Success of *Asciidiella aspersa* (Chordata: *Tunicata*): A Population Genetic Approach predicts the Genetic Diversity of Populations Introduced in Korea
- S6-2 **Joengho Kim**  
Variation in genetics, morphology, and recruitment in the invasive barnacle *Amphibalanus eburneus* (Gould, 1841) in Korea
- S7-1 **Hyung-Gyu Lim**  
Oceanic and Atmospheric Drivers of Post-El-Niño Chlorophyll Rebound in the Equatorial Pacific
- S7-2 **Lijian Shi**  
Arctic sea ice concentration retrieval based on FY3 series MWRI sensors
- S7-3 **Khushboo Jhugroo**  
The role of stratification variability on biogeochemical properties across British Columbia's Queen Charlotte Sound shelf system
- S7-4 **Dmitry Lozhkin**  
Seasonal and interannual variability of the longwave radiation flux in the northwestern Pacific Ocean according to ERA5 reanalysis data
- S7-5 **Yu-Jhen Yang**  
IPCC AR6 simulates the impact of climate change under different scenarios on the marine environment and cephalopods in the southern Eastern China Sea
- S7-6 **Hwa-Jin Choi**  
Predictability of Metabolic index in an Earth System model
- S7-7 **Eun-Young Kim**  
Environmental impacts on fish catch in the Arctic/Subarctic EEZ assessed with reconstructed ocean biogeochemistry

## Poster Session, September 29, 18:30-21:00

- S8-1 **Gakuto Murata**  
Copepod community determined with metabarcoding analysis represents advection of coastal waters to the Kuroshio
- S8-2 **Shinsaku Kato**  
Distribution and feeding habits of skinnycheek lanternfish *Benthosema pterotum* larvae and juveniles in Kagoshima Bay, southern Japan
- S8-3 **Hiroki Oba**  
Growth and food requirement of chub mackerel *Scomber japonicus* larvae in the northern Satsunan area, southern Japan
- S8-4 **Toru Kobari**  
Protein synthetases activity of fish larvae appearing in the Kuroshio and its neighboring waters
- S8-5 **Liam D. Hubbert**  
A field-based intercomparison of biochemical methods for measuring zooplankton secondary production off the coast of Vancouver Island
- S9-1 **Wonho Yih**  
Coastal HABs driven by kleptoplastidy and bi-species interaction along the Teleaulax-Msodinium-Dinophysis prey chain
- BIO-P-1 **Mikhail A. Zuev**  
Helminths in the schoolmaster gonate squid *Berryteuthis magister* (Berry, 1913) off the northern Kuril Islands
- BIO-P-2 **Hyun-Jung Kim**  
Attached bacterial community dynamics with changes in core phytoplankton species based on the phycosphere concept
- BIO-P-3 **Dongwoo Kim**  
Spatial, vertical, size, and taxonomic variations in stable isotopes ( $\delta^{13}\text{C}$  and  $\delta^{15}\text{N}$ ) of zooplankton and other pelagic organisms in the western North Pacific
- BIO-P-4 **Egor S. Korneev**  
Macrozoobenthos of river estuaries of Sakhalin Island
- BIO-P-5 **Minbo Luo**  
Ecological characteristics of Zooplankton community in the Shengsi Sea Area of the East China Sea
- BIO-P-6 **Nam-II Won**  
Coastal reservoir utilization and estuarine restoration in Korea: recent cases and lessons
- BIO-P-7 **Daniel M. Labbé**  
Counting calories: Energy density and lipid content of zooplankton in the Northeast Pacific
- FIS-P-1 **Denis V. Izmyatinsky**  
Biomass of commercial bottom ichthyofauna in the northwestern part of the Japan/East Sea
- HD-  
MEQ-P-1 **Aoi Sugimoto**  
Fisheries in the time of pandemic: toward the sustainable future of seafood system
- POC-P-1 **Hyeonsoo Cha**  
The causes of the sea level rise in the East Asian marginal seas since 1993
- POC-P-2 **J.S. Saranya**  
Characteristics and types of evolution of marine heatwaves in the East Sea (Japan Sea)
- POC-P-3 **Seonghyun Jo**  
Modulation of Kuroshio intensity in the East China Sea on interannual time scales
- POC-P-4 **Yeongseok Jeong**  
Observations on Enhanced Mixing over the Steep Continental Slopes in the Southwestern East Sea (Japan Sea)

**Poster Session, September 29, 18:30-21:00**

- POC-P-5 **Day Hong Kim**  
Spatial Patterns of Long-term (1995-2021) Changing Surface and Subsurface Temperature and Salinity around the Korean Peninsula
- POC-P-6 **Saat Mubarrok**  
Evaluation of Thermocline Depth Bias in the Seychelles-Chagos Thermocline Ridge (SCTR) simulated by the CMIP6 models
- POC-P-7 **Heeseok Jung**  
Assessment of future changes in the sea surface temperature in the Northwest Pacific projected by CMIP6 models
- POC-P-8 **Sung Yong Kim**  
Submesoscale mapping of kinematic and physical ocean properties obtained from unmanned surface vehicles and Lagrangian surface drifters
- GP-1 **Mikhail Stepanenko**  
Potential trends in the Bering Sea pollock recruitment, abundance and spatial distribution in 2022-2032
- GP-2 **Roy Durlave**  
Studies on the use of locally (Coxs Bazar and Saint Martin) available alternative renewable seaweeds wastes as compost organic fertilizer resources.
- GP-3 **Chika Bright Ikele**  
Morphology and Abundance of Crabs (*Decapoda*) In Opi Aji Lake, Enugu State, Nigeria
- GP-4 **Joon Sang Park**  
Species diversity of epiplastic diatoms at the drifting Chinese plastic debris in Korean coastal waters
- GP-5 **Ji Nam Yoon**  
Summer distributional characteristics of phytoplankton related with multiple environmental variables in the Korean coastal waters in 2019
- GP-6 **Minji Lee**  
Assessment of attached phytoplankton to polypropylene according to season and nutrient conditions
- GP-7 **Kang Eun Kim**  
Interaction of Marine Nucleocytoplasmic Large DNA Viruses with Eukaryotic Plankton Communities in the Sub-Arctic Kongsfjorden: A Metagenomic Analysis of Marine Microbial Ecosystems
- GP-8 **Injoo Yoon**  
Assessment of regional progress towards the sustainable development goal 14 in the east sea based on the voluntary national reviews of participating countries
- GP-9 **Bushra Khalid**  
Higher thermal extremes and relationship of northern Indian Ocean's Sea surface temperature and atmospheric temperature over land in Pakistan
- GP-10 **Hiroki Yasuma**  
Microplastic ingestion by mesopelagic fish and acoustic quantitative estimate in the Pacific side of Hokkaido Island, Japan
- GP-11 **Noa Takayama**  
The characteristics of spatial distribution of Mesopelagic fishes by acoustic survey off eastern Hokkaido Island, Japan
- GP-12 **Kirill O. Tevs**  
The structure and dynamics of phytoplankton in coastal waters of Russky Island (Peter the Great Bay, Sea of Japan)
- GP-13 **Hiromichi Ueno**  
Stratification in the northern Bering Sea in early summer of 2017 and 2018

## Poster Session, September 29, 18:30-21:00

- GP-14 **Takahiro Tanaka**  
An acoustic glider observation for monitoring physical and biological environment in the upper ocean
- GP-15 **Daisuke Hasegawa**  
Developing High-Resolution Tow-Yo measurements
- GP-16 **Josep V. Planas**  
Characterization of the sex-determining genomic region in the Pacific halibut (*Hippoglossus stenolepis*) and identification of a putative gene responsible for sex determination
- GP-17 **Anastasiya Kim**  
Size-age composition and some characteristics of the population biology of *Ruditapes philippinarum* (Adams et Reeve, 1848) in the Salmon Bay (Aniva Bay, Okhotsk Sea)
- GP-18 **Ja-Myung Kim**  
Persistent continental shelf carbon sink at the Jeodo Ocean Research Station in the Northern East China Sea
- GP-19 **Ting-Yu Liang**  
Indicators of pelagic forage community shifts related with the abundance of economic tunas in the Indian Ocean
- GP-20 **Polina Lobanova for (Sofya Kuzmina)**  
Spatial and temporal variability of chlorophyll-a and its relation to physical and biological parameters: a case study for the European Arctic Corridor
- GP-21 **Hiroto Abe**  
Salinity regime of the northwestern Bering Sea shelf
- GP-22 **Hajime Tanaka**  
Japanese Consumers' Demand for Traceability Information -Tokyo Bay Fish Passport as a case study
- GP-23 **Michael Dadole Ubagan**  
Recruitment and settlement patterns of two invasive ascidians in South Korea
- GP-24 **Mariya Shihab Ahmed Alboasud**  
Upward expansion of subtropical echinoderms in South Korea
- GP-25 **Yunwi Heo**  
Biokinetics of fluorophore-conjugated polystyrene microplastics in marine mussels
- W1-1 **Seonock Woo**  
Genetic resources of deep-sea corals from seamounts in West Pacific by de novo RNA sequencing
- W1-2 **Andrey I. Alferov**  
Distribution of giant grenadier (*Albatrossia pectoralis*) at different stages of ontogenesis in the Bering Sea
- W1-3 **Albina Kanzeparova**  
Features of spatial distribution of dominant groundfish species on the Koko Seamount (Emperor Seamounts) in 2019
- W2-1 **Mikhail Kuznetsov**  
Acoustic research of spatial distribution and abundance of arctic cod in the southwestern part of the Chukchi Sea in 2003–2020
- W3-1 **Shion Takemura**  
How do young adult fishers feel and adapt ocean climate changes in Japan?
- W7-1 **Yutaka Watanuki**  
Plastics in the stomach of two species of albatrosses in the western North Pacific
- W7-2 **Xuelei Zhang**  
A high-quality chromosome-level genome of the Omura's whale (*Balaenoptera omurai*)

Observer-1 **Matthew Baker**

International partnership and collaboration on high seas research in the North Pacific

Observer-2 **Leslie Smith**

The Deep Ocean Observing Strategy: Exploring collective solutions to global deep sea challenges